

Sleeping Beauty and the Lottery Miners:  
Resistance to Waged Labor Relations in Peru's Informal Artisanal and Small-Scale  
Mining Sector

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## Abstract

### Sleeping Beauty and the Lottery Miners: Resistance to Waged Labor Relations in Peru's Informal Artisanal and Small-Scale Mining Sector

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Over the last two decades, millions of people in the world have resorted to artisanal and small-scale mining (“ASM”) seeking economic refuge. While ASM has the potential to help economic development and the reduction of poverty, it remains informal. Developing countries worldwide have attempted to regularize the sector, though bureaucratic solutions have been largely lackluster and ineffective. Peru reflects this worldwide expansion in ASM. The windfall of mineral rents derived from informal gold mining has lured capital and machinery suppliers to what used to be a subsistence or family activity. Today, Peru's ASM sector is highly heterogeneous. On the one hand, there is a dominant stratum of powerful ASM entrepreneurs and, on the other, a massive workforce composed mostly of poor workers.

In 2012, the Government of Peru (“GP”) launched a new formalization program that allowed informal miners to regularize their activities by applying for an operating license for a limited period, while existing activities were grandfathered. Yet, both in terms of the number of miners that have accessed formalization title and the prosecution of illegal mining, the program has largely failed. In practice, the GP has become an agent of informalization due to complicit and negligent behavior.

One of the main flaws in the program is that it overlooks the precarious and colonial-like labor relations that ensnares hundreds of thousands of mining workers. The

most paradigmatic example is the lottery-like employment agreement present throughout the Peruvian Andes, by which miners work without pay for a certain number of days, followed by one or two days during which they may keep to themselves whatever ore they can extract from the mine shafts. Although miners feel they will strike it rich someday, this informal arrangement operates as a cruel, large-scale, collective lottery.

Informality is a serious problem that requires critical solutions. Hernando de Soto, a controversial but influential figure, has vociferously attacked the GP's formalization program. In response, he proposes a comprehensive titling program that integrates miner's informal rules already on the ground into one unified property rights system. De Soto looks to the California Gold Rush ("CGR") as an archetypical example of a legal system built up from ground-level conditions and how-to blueprint for developing nations on creating more legitimate and representative formalization frameworks.

Although conventional property rights and legitimacy are important in the design of formalization programs, they are not enough. Close examination of the property rights structure in Peru's contemporary informal ASM sector reveals that labor relations rather than property relations is the core problem in the industry. Rather, to understand the persistence and entrenchment of informality in Peru's contemporary ASM sector and explain its differentiation and inequalities, I propose looking into the historical processes present in artisanal mining labor relations, which suggest a strong resistance to waged labor relations that favor direct appropriation strategies by workers, such as taking a share of the ore, lottery pay-days, or pilfering good-looking rocks.

To illustrate my point, I turn to the history of the "*k'ajchas*", the weekend thieves in the silver mines of Potosí during the Viceroyalty of Peru, who considered themselves

entitled to exploit the minerals as their own right and for their own benefit. In addition, I resort to three case studies from contemporary Peru to explore the history and nature of lottery-like employment arrangements. I argue that direct appropriation strategies are deeply ingrained in cultural principles, which include the family as a unit of production, reciprocity, and superstition. These shared principles have not only helped legitimize these lottery-like employment agreements, but also have prevented the gold deposits from falling into chaos and uncontrolled conflict.

On the other hand, unlike the normative image of the nineteenth century gold rushes, which highlight the iconic figure of the individual prospector—alone, using simple tools, living away from his family—the case studies analyzed in this dissertation show that Peru’s contemporary ASM is seldom egalitarian, democratic, or meritocratic. Rather, the mining workers’ hard work and good luck are mediated and by pre-existing property and power relations.

As an alternative policy solution to conventional property rights, I posit transplanting the legal category of the Economically dependent self-employed worker (“EDSW”) as a more inclusive and malleable method of labor formalization. EDSW encompasses the existing labor arrangements on the ground and, at the same time, protects core labor and social security rights for lottery miners. Finally, I suggest that this legal transplant may bring about the gradual imposition of additional environmental, labor, and human rights standards to the ASM industry.

*<<The incentive to the pioneer held out by the reward of a gold or silver mine, if he can find one, is magical upon the sanguine temperament of the prospector. For near a quarter of a century a race of men, constituting a majority by far of all the miners of the West, patient of toil, hopeful of success, deprived of the associations of home and family, have devoted themselves, with untiring energy, to sinking deep shafts, running tunnels thousands of feet in solid granite, traversing deserts, climbing mountains, and enduring every conceivable hardship and privation, exploring for mines, all predicated upon the idea that no change would be made in this system, that would deprive them of their hard-earned treasure>>*

US Senator William Morris Stewart, 1866<sup>1</sup>

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<sup>1</sup> Cong. Globe 39<sup>th</sup> Cong., 2<sup>nd</sup> Session 3226 (1866).

*To my parents and Mathias Remolina Wieland*

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Finally, I am grateful to the dozens of Altiplano inhabitants that I met during my fieldwork experience—who shall remain nameless—for sharing their stories of success, sacrifice, and resilience around their own artisanal mining livelihoods.

## PREFACE

It is 4 a.m. in the city of Juliaca, region of Puno, in the Peruvian “*Altiplano*” (high plains).<sup>2</sup> It is June, the dry season in the Andes. The thermometer reads 25° F, and I am chilled to the bones. José, the driver who will take me to La Rinconada, the highest permanent human settlement in the world, picks me up at my hotel. He works for his son’s company as the chauffer of a four-wheel drive vehicle that takes tourists and engineers around Puno. He has not been to La Rinconada for many years but claims to remember the route. “Are you sure?” I ask him skeptically. “Yes, don’t worry,” he replies resolutely, as he pours a cup of hot coca tea from a small Thermos. The last time he went to the village he transported a group of engineers that installed a mobile phone antenna. Yet, he cannot hide his apprehension. Stories about La Rinconada’s violence upset even locals.

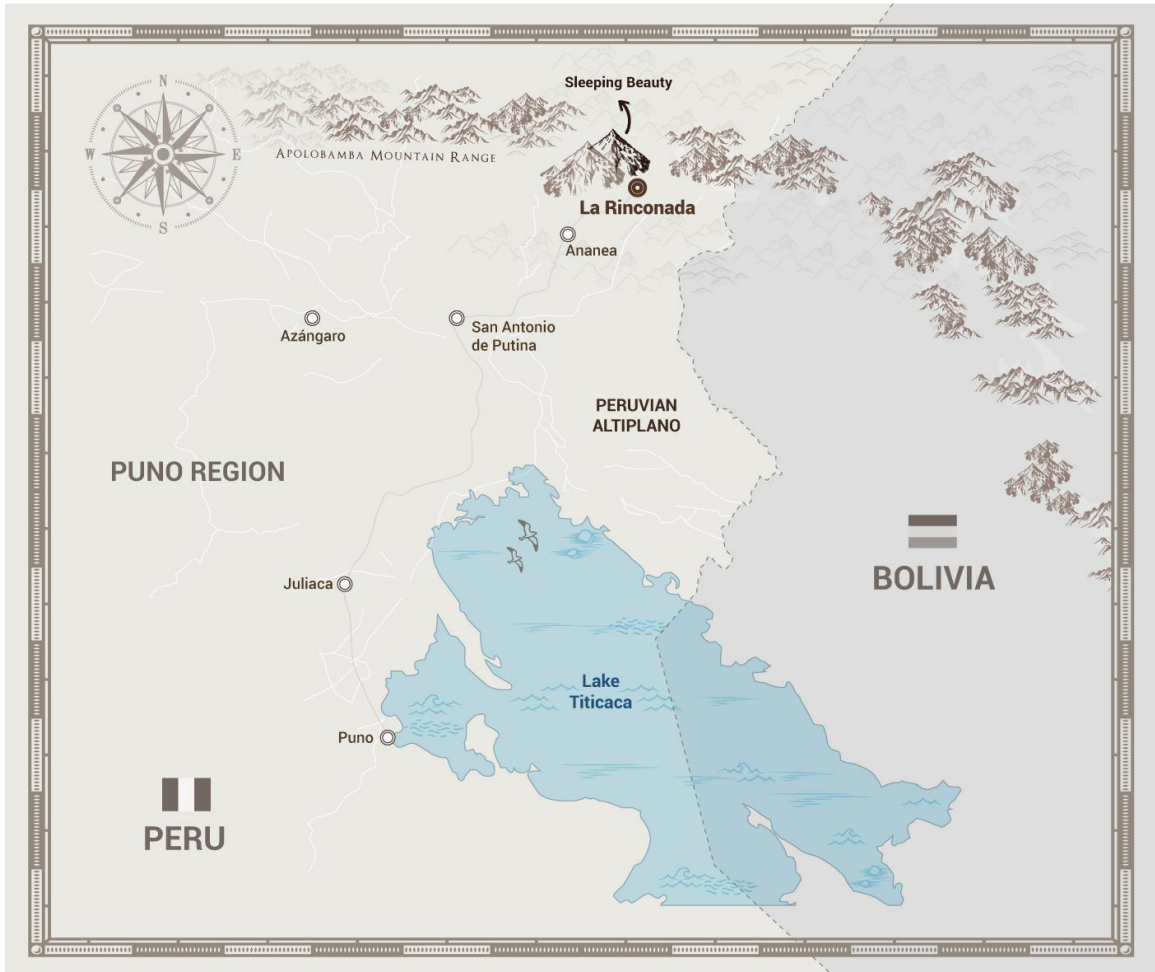
The night is dark and cold. The streets of Juliaca are still empty, except for some merchants that start displaying their produce on their stalls. Before heading to La Rinconada, we pick up Jacinto Flores, a miner who is to guide me on this voyage. Jacinto was born in Azángaro, Puno, and has been an artisanal miner for almost thirty years. He is in his late fifties. His skin is tanned and hardened by the sun and glacial cold. Although at the beginning he was suspicious of me—in fact, it had not been easy to convince him to accompany me on this trip—as the days passed, the air has cleared between us.

A few minutes after leaving Juliaca, we come across dozens of unmarked trucks trying to enter the city. A police raid intercepts our vehicle and asks for our identification documents. “These trucks bring contraband from Bolivia,” adds José in a casual tone.

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<sup>2</sup> For definitions of non-English words used in this dissertation, *see* Appendix 1.

Indeed, the Peruvian/Bolivian border is porous and law enforcement is weak, facilitating the smuggling of goods between both countries, including illegal mercury and gold.



**Figure 1. La Rinconada Map**

Source: Grace Calle

The route from Juliaca to San Antonio de Putina takes about ninety minutes. The road is paved and in excellent condition. Dozens of speed bumps along the road do little to slow down private transportation companies that tend to speed. Modern Mercedes minibuses have playful names—“*El Flash Cordillerano*” or “*Súper Flash*”— connecting



Juliaca and La Rinconada for USD 7 per passenger.<sup>3</sup> In addition, on the route we see dozens of trucks that transport colossal amounts of beer, LPG tanks, and a vast array of inputs and tools for mining. They are all heading to La Rinconada. It is thought that between 50,000 and 70,000 miners have flocked to this mining settlement in recent decades, inspired by stories of gold nuggets the size of a horse's head inside the mine shafts.<sup>4</sup>

The road from San Antonio de Putina to Ananea, on the other hand, is more winding. On the hard shoulder lie dozens of small memorial tombs with fresh flowers and crosses that remind us of the perils of sharp curves and abyss ahead. We ascend from 14,000 to 17,000 feet above sea level without noticing. The sun filters through the mountains, and the landscape is tinged with a warm orange that attenuates the cold and dissipates the darkness.

We finally arrive to the Ananea district, the jurisdiction where La Rinconada is located, at 7am. Along the way, billboards read *Do Not Litter* or *Respect the Environment*. The beautiful, green mountains are left behind us, giving way to a lunar landscape of stirred earth, massive ground holes, abandoned mining facilities, tailings, toxic lagoons, and waste rock. This is our first encounter with artisanal mining before reaching our final destination.

Once we pass through Ananea, construction workers stop us to indicate that the detour to La Rinconada is closed because they are paving it, so we must take the Pampa Blanca dirt road. "This detour will take us at least 40 more minutes," laments the driver. Pampa Blanca is an area of alluvial mining that stretches for several miles and is still in operation, though some areas are abandoned. The vehicle moves slowly, dodging holes,

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<sup>3</sup> For calculations in this dissertation, the exchange rate used is 3.3 soles per 1 USD.

<sup>4</sup> See Marie Arana & Gina Nemirofsky, *Dreaming of El Dorado: In La Rinconada, Peru, the highest human habitation in the world, legions of miners seek gold and one young girl seeks an education*, 88 THE VIRGINIA QUARTERLY REVIEW 26–47, 32 (2012).

stones, tailings, and waste, making its way along a nonexistent road, while avoiding front loaders, bulldozers and trucks that belong to the mining operations, constantly hitting our heads against the car's roof. In the distance, the imposing snowcapped mountains of the Apolobamba Mountain Range decorate the "*puna*" landscape.

Forty minutes later, and after passing a large waste dump—a feast for birds and stray dogs—the first typical corrugated metal houses of La Rinconada appear in the horizon. Suddenly, I see downtown La Rinconada and, in the distance, the Ananea or Riticucho Glacier, known by locals as "*Sleeping Beauty*," as it is said to resemble the silhouette of a woman lying down. Emotion and fear wash over me at the same time. The lack of oxygen is notorious at this altitude, so I grab the oxygen bottle that I brought with me.

The vehicle begins to descend vertically down narrow, makeshift dirt roads, while un-tarred brick houses and trash piled up on either side of the road capture our attention. We then pass the cemetery, which is located a few feet from the only medical post in the village. The first people we see are dozens of miners dressed in blue overalls walking around, helmets in-hand, wandering like ants through the frozen messy streets.

After traversing the improvised minibus stop, we arrive at La Rinconada's square or plaza. My first stop is at the police station, located next to the square. Four policemen are sitting down on a bench, absorbed by their cellphones, abstracted from reality. I introduce myself to a police officer and tell him that I am visiting the place for a few days. The man looks at me without interest. I ask naively if there is any area that is off limits, but he quickly replies that during daylight hours I can go anywhere I want. I ask him how many policemen work in the police station, but there is no answer.

I find myself walking with Jacinto around the dusty neighborhoods of La Rinconada. The first thing I see are groups of miners sitting on improvised chairs drinking beer and warming up in the sun. It is only 8am but alcohol is bought and sold 24/7. The streets are filled with businesses with customers shopping and eating outdoors in improvised street food stalls. Signs of hostels, pharmacies, liquor stores, laundries, public latrines, and restaurants flood the streets and the roofs of buildings. One can literally find anything: smart TVs, industrial overalls, tools for miners, LPG canisters, and even birthday cakes. There are food options for even the most refined miner: chopped fruit with yogurt, colorful desserts, deep fried seafood, ceviche, soups and broths of lamb's tongue or head. Raw chicken and beef are offered in street stalls. Posters everywhere advertise offers for pregnancy tests, money transfers to Juliaca and Puno, and witchcraft services.

Above the brick and corrugated metal houses hang electricity, water, and compressed air cables, as well as pipelines that carry wastewater and mining tailings downstream, away from the town center. Open fires in the middle of the street allow blacksmiths to mold the red-hot chisels for mining. There is no drinking water or sanitary drainage in this village, but there is electricity, at least since 2000. Cement gutters work as improvised sewage, though they are clogged with all kind of wastes, most of it frozen due to low temperatures. The smell is unbearable, nauseating, although it would worsen as the day warmed up and the ice melted (the temperature rose very fast to 45° F). A garbage truck from the Ananea municipality offers to pick up locals' garbage for USD 0.30 per bag.

Jacinto has been working in La Rinconada since 1989. He travels to the mine seasonally, whenever the gold-bearing veins are worth the hassle. He asks me if I want to see his home, but he warns that it is on a steep street uptown. I walk slowly, my heart in

my mouth, as we climb huge steps and zigzag the wet streets, avoiding piles of waste and ponds of dirty wastewater. We finally reach his house, which he calls his *mining camp*. He invites me in after opening a huge padlock hanging on the door. “I have been robbed six times already,” he says. It is a one-bedroom dwelling. The walls and ceiling are made of corrugated metal, not suitable for the Andean cold, and the floor is made of wooden planks. There are two beds, as he shares the space with his cousin, who is also a miner. An energy saving light bulb hangs from the ceiling. There is no heating, no toilet, no running water. Coats, helmets, and overalls hang on the walls, as well as an almanac. In one corner of the room there is a small gas burner and an LPG canister, together with all sort of pans and kitchen utensils. To wash his clothes, Jacinto collects the melting snow that accumulates on the roof with a hose and a bucket. “It is so cold at night that you cannot sleep. It is preferable to take night shifts and rest during the day,” he adds.

We soon leave his house and descend the stairs towards the mining operations. “I want to see the mine shafts,” I say. At my speed, it would still take us over an hour to get from his house to the area of mining operations in the Riticucho sector. As we walk, the snow-covered *Sleeping Beauty* hovers in the distance, showing dozens of small pits where miners make a living.

In La Rinconada, all land uses intermingle and overlap, commercial, industrial, and residential. Miners go up and down the dirty, slippery alleys as the mine never stops. While some head to the mine, others return from a hard night's work and go to sleep or, the most seasoned, to visit the brothels or nightclubs that have proliferated in the Cantolao neighborhood, where streets rumble with popular reggaeton music. Men, still dressed in their blue overalls, are looked after by young girls who keep them company and fill their

glasses with warm beer. In fact, hundreds of girls are sexually exploited here. Brought by force or deception, they are the most vulnerable victims of Peru's gold rush years. "Miners believe that having sex with minors brings good luck," explains an informant.

Some miners look me in the eye, some of them return my greeting, others turn away. They look at me with distrust, but I do not find the hostile attitude that I had anticipated. They are mostly under 30, although older people are seen running businesses or soaking up the sun in the streets. I approach some of them and ask them about their mining livelihoods and their expectations for the future. Others prefer not to speak. Clearly, I am an outsider and, therefore, an object of suspicion. "Everyone here is afraid to speak up. Nobody wants to say things as they are," protests Jacinto. Some people approach directly to him to ask if I am a journalist. Other simply yell at me *snitch* or "*gringo*." One girl greets me with a *hello* in English with a charming smile on her face.

After getting lost in those labyrinth streets, we reach the *Sleeping Beauty* mountain, which has been pierced from all sides, including its delicate glacier area, to open tunnels and galleries where ore is extracted. It is said that La Rinconada produces 3,000 pounds of gold a month. If this is true, it means that this boom town produces gold worth USD 66 million a month... or USD 792 million a year at international gold prices. All this income remains off-the-books and produces no tax revenues to the government.

The electric ball mills run at full speed and make a deafening noise. The tailings are spit out by machines and pumped everywhere. On the clearing slopes I find a group of "*pallaqueras*," single mothers, widows or the wives of miners, who make a living by scavenging through the waste rock that the males dispose of, hammering the stones in search of small glints of gold. *Pallaqueras*, as they are called since the colonial times

throughout the Andes, are banned from entering the pits, but are allowed to process ore. “If women enter the mine shafts, the gold simply goes away,” explains Jacinto.

*Corporación Minera Ananea S.A.C.* (“CMA”) is the formal owner of the mining rights and surface land, but it only operates one section of the gold deposit. The remainder is outsourced to 468 contractors in exchange for a royalty fee that CMA collects every month. Each contractor must secure their labor force. But miners like Jacinto are not paid salaries for their labor. In La Rinconada, mining is hard work with uncertain rewards. Contractors pay their workforce using an ancient oral contract called “*cachorro*.” In this system, miners work without pay for 28 days, followed by two days during which miners may keep *whatever* ore they extract from the tunnels. What passes for fair remuneration is a sack of rocks that may contain a small fortune—or nothing at all.<sup>5</sup>

Before starting their *cachorro* day, miners pay the mountain deities with liquor and ask them to return them home alive. While chewing coca leaves to fight exhaustion and hunger, they use hand tools and dynamite to extract the rocks from the mine shaft. Later, they crush the rocks into ground ore using stone mortars (“*quimbaletes*”) or electric mills and mix it with mercury to produce a gold-mercury amalgam, which they sell to the “*acopiadores*,” small smelter shops located all around the village. The shopkeeper weighs the gold nugget and uses a cellphone app to check the international price of gold.<sup>6</sup> Miners must still pay for the equipment they rented and send some money to support their families

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<sup>5</sup> See Brook Larmer, *The Real Price of Gold*, NAT’L GEOGRAPHIC (Jan. 2009), <https://www.nationalgeographic.com/magazine/2009/01/gold/>.

<sup>6</sup> For calculations in this dissertation, I use the average 2018 gold price, namely USD 1,268 per ounce. See London Bullion Market Association, , <http://www.lbma.org.uk/home>.

back home. *Acopiadores* take the gold nuggets to Juliaca, from where it is distributed as contraband to Bolivia and Brazil<sup>7</sup>.

Even though miners might not get much on their *cachorro* day, most of them believe their luck will change. Miners feel that *cachorro* puts them close to winning the lottery.<sup>8</sup> “The illusion to hit it big by finding the legendary gold rock is a passion; it is obsessive,” explains Peter Koenig.<sup>9</sup> In practice, though, this contract operates as a cruel, large-scale, collective lottery,<sup>10</sup> in which payment is uncertain and at times non-existent.

An “ancestral custom,” “my luck,” “a gift of *Pachamama*” (Mother Earth) or an “ancestral risk-sharing contract” resonate in *Sleeping Beauty* as a justification for this employment system, which the Ministry of Labor characterizes as unconstitutional because it violates the right to fair remuneration.<sup>11</sup> In theory, the constitution prohibits work without pay, but law is not enforced in La Rinconada. However, what makes *cachorro* mesmerizing to me is that miners are continuously attracted to it; this lottery-like arrangement is deeply rooted because it grants the opportunity, real or imaginary, to directly appropriate gold (which would otherwise belong to the employer under a standard employment relation). This opportunity has triggered a veritable gold rush in the Peruvian Altiplano.

Nobody knows exactly how many people live and work in La Rinconada not only because there is no official data, but also because mining activities vary according to the

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<sup>7</sup> Cf. PODER Y CAMBIO EN LAS REGIONES, 110 (Julio Cotler ed., 2009).

<sup>8</sup> See FEDERICO GAMARRA, *Estudio sociolaboral de La Rinconada y Cerro Lunar* (2005), <http://www.papelesdesociedad.info/IMG/pdf/sociolaboral-rinconada-cerro-lunar.pdf>.

<sup>9</sup> Peter Koenig, *La Rinconada – The Devil’s Paradise* (2019), <https://www.greenvillepost.com/2019/03/26/la-rinconada-the-devils-paradise/> (last visited Oct 13, 2019).

<sup>10</sup> Cf. El Mundo, *En la mina del “oro maldito” de la mujer que compró “La Yerbabuena” a Ortega Cano* (2019), <https://www.elmundo.es/cronica/2019/07/04/5d1b43a621efa0c5078b46d5.html>.

<sup>11</sup> See MINISTRY OF LABOR OF PERU, *Opinión técnica sobre propuestas normativas de personas que desempeñan actividades de minería en la zona de La Rinconada y Cerro Lunar en la región Puno* (2014).

richness of the gold-bearing veins and the price of gold. This mining center is certainly a far-off place, but it is not inaccessible (it took me three and a half hours to get there). Although the state is absent, it is not *completely* absent because the mining center has a mayor, a police station, a medical post, and a primary school. There is no running water, but there is electricity (in fact, it has a three-phase voltage to feed the equipment and machines of the mineral processing plants). Mobile phone antennas are erected in the hills to ensure 4G service. Recently, the mobile phone company Bitel painted the plaza and put up benches with colorful advertising.

Three weeks of fieldwork was insufficient time to fully get to know Peru's lottery miners, but it was enough time to understand some of the important and specific context they are experiencing. While La Rinconada is generally associated with poverty, informality, corruption, pollution, human exploitation, and crime, still, in the eyes of tens of thousands of lottery miners, it is a place of hope and dreams. This is, in fact, the land of opportunity for the poor. Although miners seem politically dissociated from the mining center, they feel that it grants them the chance to strike it rich provided they work hard and are lucky enough, even at the cost of their health and, sometimes, their own lives. This is an unforgettable place, but it is not exceptional. Indeed, there are dozens of La Rinconada-like mining towns mushrooming throughout Peru.

What follows is the story of La Rinconada and its (infamous) *cachorro* employment agreement. As the reader will discover, it is a story infused with enormous ambivalences and *chiaroscuro*.

Puno, June 2019



## ABBREVIATIONS

ASSPMACSU	<i>Asociación de Pequeños Productores, Mineros Artesanales y Contratista Secocha–Urasqui</i>
ASM	Artisanal and small-scale mining
CECOMIRL	<i>Central de Cooperativas Mineras Rinconada y Lunar de Oro Ltda.</i>
CGR	California Gold Rush
CMA	<i>Corporación Minera Ananea S.A.</i>
COVID-19	Coronavirus disease
DAR	<i>Derecho, Ambiente y Recursos Naturales</i>
DGDFSST	Human Rights and Health and Safety Office at the Ministry of Labor
DGFM	ASM Formalization Office at MINEM
DGPE	Employment Promotion Office at the Ministry of Labor
DGIT	Work Supervision Office at the Ministry of Labor
EDSW	Economically dependent self-employed worker
EIA	Environmental Impact Assessment
GDP	Gross Domestic Product
GP	Government of Peru
IGAC	Environmental corrective instrument for ASM
IGAFOM	Environmental instrument for the formalization of ASM
ILD	Institute for Liberty and Democracy
ILO	International Labor Organization
INGEMMET	Peruvian Mining, Metallurgy and Geology Agency
LPG	Liquified Petroleum Gas
LSM	Large and medium-scale mining
MINAM	Ministry of the Environment of Peru
MINEM	Ministry of Energy and Mines of Peru
OEFA	Peruvian Environmental Enforcement Agency
PPA	Registered artisanal miner
PPM	Registered small-scale miner
PTP	<i>Padrón de Terceras Personas Naturales y Seleccionadores Manuales de Oro</i>
REPCO	<i>Registro Especial de Comercializadores y Procesadores de Oro</i> at MINEM
REINFO	Centralized registry of informal miners by MINEM
SER	Standard employment relations
SNMPE	Peruvian Mining and Energy Guild
SUNAFIL	Peruvian Labor Enforcement Agency
USD	United States dollars
UTM	Universal Transverse Mercator

## CHAPTER 1.- INTRODUCTION

### A. The Artisanal and Small-Scale Mining (“ASM”) Sector

Since the early 2000s, ASM has experienced a massive (often uncontrollable<sup>12</sup>) worldwide expansion.<sup>13</sup> This remarkable growth is attributed to the price of gold, which increased six-fold between 2001 and 2011. ASM has flourished in Africa, Asia, and Latin America,<sup>14</sup> where there are few alternative employment options and the returns on mining are far higher than those of traditional agriculture, fishing, or forestry.<sup>15</sup> Today, at least 40 million people around the world are directly engaged in ASM-activities, while 150 million depend on it indirectly across 80 countries.<sup>16</sup> Although this is an almost all-male sector, women and children are also key players.<sup>17</sup> Not surprisingly, ASM is expected to continue growing.<sup>18</sup>

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<sup>12</sup> See e.g. Shefa Siegel & Marcello M. Veiga, *Artisanal and small-scale mining as an extralegal economy: De Soto and the redefinition of “formalization”*, 34 *RESOURCES POLICY* 51–56 (2009).

<sup>13</sup> See e.g., Boris Verbrugge & Beverly Besmanos, *Formalizing Artisanal and Small-scale Mining: Whither the Workforce?*, 47 *RESOURCES POL’Y* 134, 134 (2016).

<sup>14</sup> See e.g., Heidi Hausermann et al., *Land-grabbing, Land-use Transformation and Social Differentiation: Deconstructing “Small-scale” in Ghana’s Recent Gold Rush*, 108 *WORLD DEV.* 103, 104 (2018); Samuel J. Spiegel & Marcello M. Veiga, *International Guidelines on Mercury Management in Small-scale Gold Mining*, 18 *J. CLEANER PRODUCTION* 375, 377 (2010).

<sup>15</sup> See EMMA BLACKMORE, ABBY BUXTON & CAREN HOLZMAN, *Scaling-up certification in artisanal and small-scale mining: innovations for inclusivity* 9 (2013), <https://pubs.iied.org/16545IIED/>.

<sup>16</sup> See THE INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, *Global Trends in Artisanal and Small-Scale Mining (ASM): A Review of Key Numbers and Issues* (2017), <https://www.iisd.org/sites/default/files/publications/igf-asm-global-trends.pdf>; M. Hoadley & D. Limpitlaw, *The artisanal and small scale mining sector and sustainable livelihoods* (2004). Note, however, that accurate and reliable statistic on ASM are non-existent, so numbers can be speculative. See PATIENCE SINGO & KADY SEGUIN, *Best Practices: Formalization and Due Diligence in Artisanal and Small-Scale Mining* 5 (2018).

<sup>17</sup> See Natalia Yakovleva, *Perspectives on female participation in artisanal and small-scale mining: A case study of Birim North District of Ghana*, 32 *RESOURCES POLICY* 29–41, 30 (2007) (describing that women comprise 50% of the ASM worldwide workforce, but in Latin America it accounts only for 10–20%).

<sup>18</sup> See Siegel and Veiga, *supra* note 12 at 51.

ASM-activities are complex, unique, and diverse.<sup>19</sup> While its definition varies from country to country, the sector is generally characterized by its labor-intensity and low-tech.<sup>20</sup> While *artisanal* mining is related to more rudimentary methods, *small-scale* mining involves the use of more advanced equipment and larger plots of land.<sup>21</sup> ASM miners are responsible for the extraction of 15 to 20 percent of the world’s mineral production,<sup>22</sup> which includes precious and semi-precious gemstones, metals, metal ores, and construction materials.<sup>23</sup> Gold, nonetheless, is the preferred mineral due to its high market value, low production cost, and ease of extraction.<sup>24</sup> All this production is found in the goods we consume every day. Indeed, it is likely that your own mobile phone holds illegally mined substances.<sup>25</sup>

Although the motivations to work in the mining sector may vary according to time and context, ASM is generally composed of gold-rush miners (a ‘get-rich-quick’ mentality), seasonal miners, permanent miners, and poverty-driven miners.<sup>26</sup> But, as Gavin

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<sup>19</sup> See Gavin Hilson, Halima Goumandakoye & Penda Diallo, *Formalizing Artisanal Mining ‘Spaces’ in Rural Sub-Saharan Africa: The Case of Niger*, 80 LAND USE POL’Y 259, 259 (2019).

<sup>20</sup> See e.g. Boris Verbrugge, *The Economic Logic of Persistent Informality: Artisanal and Small-Scale Mining in the Southern Philippines*, 46 DEVELOPMENT AND CHANGE 1023–1046, 1023 (2015); Gavin Hilson et al., *Artisanal and small-scale mining (ASM) in sub-Saharan Africa: Re-conceptualizing formalization and ‘illegal’ activity*, 83 GEOFORUM 80–90, 80 (2017).

<sup>21</sup> See Dolores Cortés-McPherson, *Expansion of small-scale gold mining in Madre de Dios: ‘capital interests’ and the emergence of a new elite of entrepreneurs in the Peruvian Amazon*, THE EXTRACTIVE INDUSTRIES AND SOCIETY, 3 (2019).

<sup>22</sup> See Kuntala Lahiri-Dutt, *Introduction*, in BETWEEN THE PLOUGH AND THE PICK: INFORMAL ARTISANAL AND SMALL-SCALE MINING IN THE CONTEMPORARY WORLD, 5–6 (2018).

<sup>23</sup> See BLACKMORE, BUXTON, AND HOLZMAN, *supra* note 15 at 9.

<sup>24</sup> See generally Lahiri-Dutt, *supra* note 22 at 11; Boris Verbrugge & Sara Geenen, *The gold commodity frontier: A fresh perspective on change and diversity in the global gold mining economy*, 6 THE EXTRACTIVE INDUSTRIES AND SOCIETY 413–423, 555 (2019).

<sup>25</sup> Cf. BRENT McDONALD, *Episode 12: ‘Apple’s Gold,’* N.Y. TIMES (Aug. 30, 2019) <https://www.nytimes.com/2019/08/30/the-weekly/gold-apple-iphone-colombia.html> (last visited Sep 3, 2019).

<sup>26</sup> See Gavin Hilson, *‘Once a miner, always a miner’: Poverty and livelihood diversification in Akwatia, Ghana*, 26 JOURNAL OF RURAL STUDIES 296–307, 299 (2010); Beth J. Maclin et al., *Moving to the mines: Motivations of men and women for migration to artisanal and small-scale mining sites in Eastern Democratic Republic of the Congo*, 51 RESOURCES POLICY 115–122, 115–116 (2017) (arguing that ASM attracts rural

Hilson points out, miners do not belong statically to one category as they may move from category to another at different points in their lives.<sup>27</sup> Whatever a miner's motivation may be, there is a general understanding that mining provides an emergency relief and daily support, rather than a fast-track to riches.<sup>28</sup>

ASM is often viable when labor and environmental costs are externalized to society in the form of pollution,<sup>29</sup> poor working conditions<sup>30</sup> and other social ills.<sup>31</sup> This poses significant challenges for sustainable development and governance.<sup>32</sup> Despite these concerns, scholars acknowledge that ASM has the potential to help economic development and the reduction of poverty in rural areas.<sup>33</sup> Besides creating direct jobs—the sector is

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families seeking economic refuge, including marginalized groups such as women, youth, and displaced persons).

<sup>27</sup> See Hilson, *supra* note 26 at 299.

<sup>28</sup> See Sadia Mohammed Banchirigah, *How have reforms fuelled the expansion of artisanal mining? Evidence from sub-Saharan Africa*, 31 *RESOURCES POLICY* 165–171, 167 (2006); Hilson, *supra* note 26 at 297; Contra Lahiri-Dutt, *supra* note 22 at 14.

<sup>29</sup> Environmental impacts are especially deleterious. Mercury amalgamation is the most common technique used by ASM miners to process gold due to its simplicity and low-cost. Poor practices result in the release of 1,000 tons of mercury every year from ASM sources, the largest source of mercury emission. River siltation, diversion of rivers, deforestation, encroaching to national parks, habitat destruction, biodiversity loss, and landscape degradation represent other environmental threats. See e.g. BLACKMORE, BUXTON, AND HOLZMAN, *supra* note 15 at 9; Spiegel and Veiga, *supra* note 14 at 46.

<sup>30</sup> See Kuntala Lahiri-Dutt, *Postscript*, in *BETWEEN THE PLOUGH AND THE PICK: INFORMAL ARTISANAL AND SMALL-SCALE MINING IN THE CONTEMPORARY WORLD* 371–374, 372 (2018) (arguing that cheap labor makes ASM possible and productive); See also GABRIEL ARRIARÁN, *FRONTERA PIRATA. LA OTRA CARA DE LA SELVA PERUANA. LA AGONÍA DE MADRE DE DIOS* 35 (2020) (arguing that labor relations in the ASM would hardly be compatible with any formalization process of economic activities).

<sup>31</sup> See Roy Maconachie & Gavin Hilson, *Safeguarding livelihoods or exacerbating poverty? Artisanal mining and formalization in West Africa*, 35 *NATURAL RESOURCES FORUM* 293–303 (2011); Sarah Katz-Lavigne, *Artisanal copper mining and conflict at the intersection of property rights and corporate strategies in the Democratic Republic of Congo*, 6 *THE EXTRACTIVE INDUSTRIES AND SOCIETY* 399–406 (2019); M. Hoadley and D. Limpitlaw, *supra* note 16; Anthony W. Persaud et al., *Artisanal and Small-Scale Gold Mining in Senegal: Livelihoods, Customary Authority, and Formalization*, 30 *SOCIETY & NATURAL RESOURCES* 980–993 (2017); RICARDO VALDÉS, CARLOS BASOMBRÍO & DANTE VERA, *LA MINERÍA NO FORMAL EN EL PERÚ: REALIDADES, TENDENCIAS Y SOLUCIONES* 9 (2019); MARK PIETH, *GOLD LAUNDERING: THE DIRTY SECRETS OF THE GOLD TRADE - AND HOW TO CLEAN UP* 108–28 (2019).

<sup>32</sup> See Ciaran O'Faircheallaigh & Tony Corbett, *Understanding and Improving Policy and Regulatory Responses to Artisanal and Small Scale Mining*, 3 *THE EXTRACTIVE INDUSTRIES AND SOC'Y* 961, 962 (2016).

<sup>33</sup> See Maconachie and Hilson, *supra* note 31 at 293; SAMUEL J. SPIEGEL, *Analysis of Formalization Approaches in the Artisanal and Small-Scale Gold Mining Sector Based on Experiences in Ecuador, Mongolia, Peru, Tanzania and Uganda: Tanzania* (2012); SINGO AND SEGUIN, *supra* note 16 at 6; Roy Maconachie & Felix Marco Conteh, *Artisanal mining and the rationalisation of informality: critical*

often considered a magnetic force and an employment engine<sup>34</sup>—it offers indirect employment opportunities for numerous service sectors, such as food and equipment supply, entertainment, security, or gold trading, boosting local economies.<sup>35</sup> What is more, artisanal miners tend to exploit lower-grade mineral deposits that are uneconomical to exploit in the formal sector and would otherwise remain unexploited.<sup>36</sup>

## B. ASM Remains Informal

Notwithstanding its potential, ASM remains informal around the globe.<sup>37</sup> Though there is no universally accepted definition of *informality*,<sup>38</sup> it generally refers to economic activities that take place outside legal frameworks<sup>39</sup> or in areas outside state control.<sup>40</sup> As Shelley Marshall explains,

The term *informal economy* became current in the 1970s as a label for economic activities which take place outside the framework of corporate public and private sector establishments. It arose at first in response to the proliferation of self-employment and casual labor in Third World cities; but later the expression came to be used with reference to societies like Britain,

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*reflections from Liberia*, 0 CANADIAN JOURNAL OF DEVELOPMENT STUDIES / REVUE CANADIENNE D'ÉTUDES DU DÉVELOPPEMENT 1–18, 2–3 (2019); Cornelia Havel, *The formalization of artisanal and small-scale gold mining in Colombia and its contribution to the Sustainable Development Goals*, 2017; UNITAR & ONU MEDIO AMBIENTE, *Manual para desarrollar estrategias nacionales de formalización de la ASGM en el marco de los planes de acción nacionales* 10 (2018).

<sup>34</sup> See SAMUEL J. SPIEGEL, *Formalisation Policies, Informal Resource Sectors and the De-/Re-Centralisation of Power* 9 (2012); PIETH, *supra* note 31 at 79 (arguing that LSM is responsible for 20% of mining jobs worldwide, while ASM is responsible for the remaining 80%); See also Kuntala Lahiri-Dutt, *Mainstreaming gender in the mines: results from an Indonesian colliery*, 16 DEVELOPMENT IN PRACTICE (2006).

<sup>35</sup> See SPIEGEL, *supra* note 34 at 9.

<sup>36</sup> See THE INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, *supra* note 16 at 33; SINGO AND SEGUIN, *supra* note 16 at 20; Abel Kinyondo & Christopher Huggins, *Resource nationalism in Tanzania: Implications for artisanal and small-scale mining*, 6 THE EXTRACTIVE INDUSTRIES AND SOCIETY 181–189, 181 (2019).

<sup>37</sup> See SINGO AND SEGUIN, *supra* note 16 at 5; Maconachie and Conteh, *supra* note 33 at 2.

<sup>38</sup> See ALICE SINDZINGRE, THE RELEVANCE OF THE CONCEPTS OF FORMALITY AND INFORMALITY: A THEORETICAL APPRAISAL 60 (2006) (underscoring the vagueness of the term informal). See also THE INFORMAL ECONOMY. SEASONAL WORK, STREET SELLING AND SEX WORK, 1 (Dominique Boels ed., 2016).

<sup>39</sup> See e.g. THE INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, *supra* note 16; See also Verbrugge and Geenen, *supra* note 24 at 418.

<sup>40</sup> See Siegel and Veiga, *supra* note 12 at 52.

where it competed with other adjectives describing deindustrialization—the *hidden, underground, black economy*, and so on.<sup>41</sup>

While informal ASM-activities are not officially regulated, registered, taxed, or sanctioned,<sup>42</sup> they are not necessarily *illegal*. Precisely, unlike informal mining, illegal mining is associated with activities that take place in national parks or bodies of water, where chemicals are banned,<sup>43</sup> contravening national laws, and is connected to organized crime.<sup>44</sup>

Informality spawns legal and political instability for miners because they can be dispossessed at any time, have to rebuild their camps after evictions or raids, or are forced to pay bribes to corrupt government officers.<sup>45</sup> Operating in the informal economy deprives them of access to legal protection, such as employment rights, health insurance, retirement programs, technical services, and training and skill development opportunities.<sup>46</sup> In particular, lack of access to financial credit means that miners cannot save or expand their businesses, hindering productivity and technological innovation.<sup>47</sup> Additionally, informal workers are more exposed to human rights abuses, illicit actors and transactions,<sup>48</sup> and unsafe and unhealthy working environments than workers in standard employment

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<sup>41</sup> SHELLEY MARSHALL, *LIVING WAGE : REGULATORY SOLUTIONS TO INFORMAL AND PRECARIOUS WORK IN GLOBAL SUPPLY CHAINS* 5 (2019).

<sup>42</sup> See THE INFORMAL ECONOMY. SEASONAL WORK, STREET SLLING AND SEX WORK, 29 (Dominique Boels ed., 2016).

<sup>43</sup> See SINGO AND SEGUIN, *supra* note 16 at 7.

<sup>44</sup> See UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 17.

<sup>45</sup> See John Hollaway, *Small-scale mining: how to combine development with low environmental impact*, 20 *INDUSTRY AND ENVIRONMENT*. 44–48, 44 (1997); See also Hilson et al., *supra* note 20 at 82; J. Berkeley Bentley, *Easing the Transition: Proposing a Supranational Body to Facilitate Formalizing Economies Student Notes*, 118 *W. VA. L. REV.* 1247–1278, 1260 (2015).

<sup>46</sup> See MARSHALL, *supra* note 41 at 11.

<sup>47</sup> See Bentley, *supra* note 45 at 1259; MARSHALL, *supra* note 41 at 8.

<sup>48</sup> SINGO AND SEGUIN, *supra* note 16 at 7.

relations.<sup>49</sup> All told, informality hampers the development of worker's well-being, freedom, and human capabilities.<sup>50</sup> Yet, operating informally is convenient for some as it offers the flexibility and mobility they need, and allows them to circumvent taxes, regulations, and fines. Others do not see the benefits of transitioning from the informal to the legal economy.<sup>51</sup>

In turn, informality prevents governments from collecting taxes and imposing additional duties on miners (i.e. fulfillment of employment or environmental, health and safety regulations, as well as basic respect of human rights).<sup>52</sup> Furthermore, it hinders good governance, peace, and security objectives.<sup>53</sup>

Informality is a serious problem that requires critical solutions.<sup>54</sup> Putting aside the perceived benefits of staying informal for some players, there is a growing consensus that to unleash all of its potential, while minimizing the risks associated with informal mining,

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<sup>49</sup> See e.g. Gavin Hilson et al., *Formalizing artisanal gold mining under the Minamata convention: Previewing the challenge in Sub-Saharan Africa*, 85 ENVIRONMENTAL SCIENCE & POLICY 123–131, 259 (2018); CÉSAR IPENZA, *Manual para entender la pequeña minería y la minería artesanal y los decretos legislativos vinculados a la minería ilegal* 17–18 (2013), <https://spda.org.pe/wpfb-file/manual-de-mineria-3ra-edicion-pdf/>; Interview with Iris Olivera and Ciro Salazar, *Representatives of DAR* (2019); Martha Chen, *Rethinking the informal economy: linkages with the formal economy and the formal regulatory environment*, in LINKING THE FORMAL AND INFORMAL ECONOMY: CONCEPTS AND POLICIES, 81 (2006); ILO, *INFORMAL ECONOMY AND DECENT WORK: A POLICY RESOURCE GUIDE SUPPORTING TRANSITIONS TO FORMALITY* 2–3 (2013); Bentley, *supra* note 45 at 1260–61; UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 10; MARSHALL, *supra* note 41 at 12.

<sup>50</sup> See MARSHALL, *supra* note 41 at 12.

<sup>51</sup> See Gavin Hilson & Roy Maconachie, *Formalising artisanal and small-scale mining: insights, contestations and clarifications*, 49 AREA 443–451, 447 (2017).

<sup>52</sup> See e.g. Siegel and Veiga, *supra* note 12 at 52; Matti Salo et al., *Local perspectives on the formalization of artisanal and small-scale mining in the Madre de Dios gold fields, Peru*, 3 THE EXTRACTIVE INDUSTRIES AND SOCIETY 1058–1066, 1058 (2016); Bruce Marshall & Marcello Veiga, *Formalization of artisanal miners: Stop the train, we need to get off!*, 4 THE EXTRACTIVE INDUSTRIES AND SOCIETY 300–303, 301 (2017); Louis Putzel et al., *Formalization as Development in Land and Natural Resource Policy*, 28 SOCIETY & NATURAL RESOURCES 453–472, 461 (2015); SINGO AND SEGUIN, *supra* note 16 at 8; THOMAS KENYON, *A Framework for Thinking about Enterprise Formalization Policies in Developing Countries* 4 (2007).

<sup>53</sup> See SINGO AND SEGUIN, *supra* note 16 at 4.

<sup>54</sup> See MARSHALL, *supra* note 41 at 9.

governments need to formalize ASM miners.<sup>55</sup> By *formalization* we refer to the process by which the state integrates informal rules (i.e. traditional and cultural norms<sup>56</sup>) to the formal economy and society through a written and acceptable canon.<sup>57</sup> In the words of J. Berkeley Bentley, formalization “[...] provides the regulation and oversight necessary to correct human rights abuses, the access to credit and other banking services necessary to secure or expand businesses, and the fair allocation and collection of taxes necessary to provide the services that only a government can practicably deliver.”<sup>58</sup> Though a nebulous and disputed term,<sup>59</sup> formalization has become the holy grail of ASM’s governance over the past decade.<sup>60</sup>

The literature recognizes that the regularization of ASM-activities requires granting access to mineral resources through the recognition of a miner’s right to mine.<sup>61</sup> “Legal and transferable titles are essential to organize and transform this informal industry [...] and must be understood as a pre-requisite to change and transform [...] underprivileged people

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<sup>55</sup> See Siegel and Veiga, *supra* note 12 at 51; See also Verbrugge and Besmanos, *supra* note 13 at 234; Putzel et al., *supra* note 52 at 458; UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 10.

<sup>56</sup> See Natalia Yakovleva & Diego Alfonso Vazquez-Brust, *Multinational mining enterprises and artisanal small-scale miners: From confrontation to cooperation*, 53 JOURNAL OF WORLD BUSINESS 52–62, 56 (2018); SINGO AND SEGUIN, *supra* note 16 at 6.

<sup>57</sup> There are dozens of definitions for formalization. See e.g. Putzel et al., *supra* note 52 at 457; Alice B. Kelly & Nancy Lee Peluso, *Frontiers of Commodification: State Lands and Their Formalization*, 28 SOCIETY & NATURAL RESOURCES 473–495 (2015); UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 10; THOMAS KENYON, *supra* note 52 at 3.

<sup>58</sup> Bentley, *supra* note 45 at 1263.

<sup>59</sup> See Tor A. Benjaminsen et al., *Formalisation of land rights: Some empirical evidence from Mali, Niger and South Africa*, 26 LAND USE POLICY 28–35, 28 (2009); See also SPIEGEL, *supra* note 34.

<sup>60</sup> See Christoph Vogel, Josaphat Musamba & Ben Radley, *A miner’s canary in eastern Congo: Formalisation of artisanal 3T mining and precarious livelihoods in South Kivu*, 5 THE EXTRACTIVE INDUSTRIES AND SOCIETY 73–80, 78 (2018); See also Marjo De Theije et al., *Engaging legal systems in small-scale gold mining conflicts in three SouthAmerican countries*, CONFLICTS OVER NATURAL RESOURCES IN THE GLOBAL SOUTH 144 (2014).

<sup>61</sup> See Keith Barney, *Reassembling informal gold-mining for development and sustainability? Opportunities and limits to formalisation in India, Indonesia and Laos*, in BETWEEN THE PLOUGH AND THE PICK. INFORMAL, ARTISANAL AND SMALL-SCALE MINING IN THE CONTEMPORARY WORLD 335–369, 339 (Kuntala Lahiri-Dutt ed. 2018) (arguing that formalization is a process that entails three elements: a right to land title, a right to minerals and a right to mine).



into citizens.”<sup>62</sup> Thus, formalization of ASM-activities has generally taken the form of government-backed mining rights, such as permits, licenses or mining concessions.<sup>63</sup> Whether granted to individual operators or miner collectivities (e.g. mining cooperatives),<sup>64</sup> mining rights are thought to provide accountability, transparency, and investment security.<sup>65</sup>

Most developing countries have been unprepared, though, to deal with the contemporary explosion of informal mining activities within their jurisdictions.<sup>66</sup> The fact that ASM is governed by both customary norms and state-backed legal systems (i.e. legal pluralism) often exacerbates the challenge.<sup>67</sup> Government-backed formalization attempts worldwide have been largely lackluster<sup>68</sup> and ineffective.<sup>69</sup> As Roy Maconachie & Felix M. Conteh note, the sector’s informality is now “entrenched and intractable.”<sup>70</sup>

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<sup>62</sup> Marcello M. Veiga & Christian Beinhoff, *UNECA Centres: A Way to Reduce Mercury Emissions from Artisanal Gold Mining and Provide Badly Needed Training*, 20 *INDUSTRY & ENV'T.* 49, 5 (1997).

<sup>63</sup> See e.g. Salo et al., *supra* note 52 at 1059; Verbrugge, *supra* note 20; Eleanor Fisher, *Occupying the Margins: Labour Integration and Social Exclusion in Artisanal Mining in Tanzania*, 38 *DEVELOPMENT AND CHANGE* 735–760, 749 (2007); PIETH, *supra* note 31 at 217.

<sup>64</sup> See Verbrugge and Besmanos, *supra* note 13 at 137.

<sup>65</sup> See SINGO AND SEGUIN, *supra* note 16 at 22.

<sup>66</sup> See *id.* at 20.; UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 11.

<sup>67</sup> See Gard Frækaland Vangsnes, *The meanings of mining: A perspective on the regulation of artisanal and small-scale gold mining in southern Ecuador*, 5 *THE EXTRACTIVE INDUSTRIES AND SOCIETY* 317–326, 319 (2018); TERAH U. DE JONG, *Managing Conflict and Fostering Cooperation Between the state and Customary Land Owners for the Effective Formalization of Artisanal and Small-Scale Mining in West Africa: The Case of Diamonds in Côte d’Ivoire* 8 (2018).

<sup>68</sup> See Steven Van Bockstael, *Land Grabbing “from below”? Illicit Artisanal Gold Mining and Access to Land in Post-Conflict Côte d’Ivoire*, 81 *LAND USE POL’Y* 904, 904 (2019).

<sup>69</sup> See Hilson et al., *supra* note 20 at 84 (“[O]verall, the interventions made to date to bring ASM operators into the legal domain have been ad hoc, lacking the necessary ‘buy in’ to make a noticeable impact in landscapes where again, the expansion of exported large-scale resource extraction has been prioritized”). See also Marshall and Veiga, *supra* note 52 at 302 (arguing that in Latin America the number of formalized miners amounts to one percent).

<sup>70</sup> Maconachie and Conteh, *supra* note 33 at 3.

Formalization procedures have followed bureaucratic models that have proven to be tedious, time-consuming, complex, and expensive.<sup>71</sup> Overall, governments fail because they are unable to implement other enabling conditions besides formal title and to create the appropriate incentives for miners to apply for and stay in the program.<sup>72</sup> For example, institutional conditions (e.g. institutional coordination, law enforcement, access to justice), economic conditions (e.g. taxing, access to credit, fair distribution of profits, ethical rules), socio-economic conditions (e.g. working conditions, unequal labor relations, protection of vulnerable groups, gender issues, access to basic public services, language barriers), and geo-environmental conditions (e.g. access to geological data, extraction or processing techniques, respect for protected areas, management of environmental impacts).<sup>73</sup>

What is more, informal miners are rarely part of the policymaking processes,<sup>74</sup> so governments have little understanding of or information about the realities and complexities on the ground,<sup>75</sup> unaware of “the various organizational arrangements that exist within the sector.”<sup>76</sup> Hence, traditional top-down formalization programs risk

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<sup>71</sup> See e.g. Salo et al., *supra* note 52 at 1059; Verbrugge, *supra* note 20 at 1033; Marshall and Veiga, *supra* note 52 at 301; Siegel and Veiga, *supra* note 12 at 53; Fabian Clausen, Maria Laura Barreto & Amir Attaran, *Property Rights Theory and the Reform of Artisanal and Small-Scale Mining in Developing Countries*, 4 J. POL. & L. 15–26, 20 (2011); Verbrugge and Besmanos, *supra* note 13 at 135; THE INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, *supra* note 16 at 52; Doris Buss et al., *Gender and artisanal and small-scale mining: implications for formalization*, 6 THE EXTRACTIVE INDUSTRIES AND SOCIETY 1101–1112, 1102 (2019).

<sup>72</sup> See Chen, *supra* note 49 at 91–92; UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 17.

<sup>73</sup> See e.g. UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 19.

<sup>74</sup> See Ton Salman, Felix Carrillo & Carola Soruco, *Small-Scale Mining Cooperatives and the State in Bolivia: Their Histories, Memories and Negotiation Strategies*, 2 EXTRACTIVE INDUSTRIES & SOC'Y 360, 361 (2015).

<sup>75</sup> See Ton Salman, *The Intricacies of “Being Able to Work Undisturbed”: The Organization of Alluvial Gold Mining in Bolivia*, 29 SOC'Y & NAT. RESOURCES 1124, 1128 (2016) (“[G]overnments have not incorporate[d] the specific constellation in which different mining processes, in different regions, and operated by different mining groups with different stories and skills take place”).

<sup>76</sup> See Verbrugge and Besmanos, *supra* note 13 at 135–36.

disrupting preexisting leadership structures and social order,<sup>77</sup> discourage legalization,<sup>78</sup> or spark fierce resistance.<sup>79</sup> They can also result in the exclusion of vulnerable groups and prompt unanticipated environmental change.<sup>80</sup>

In addition, the design and approval of government-backed formalization programs creates opportunity for elite capture and corruption.<sup>81</sup> Politicians and regulators in developing countries have often preferred the expansion of the large and mid-scale mining sector (“LSM”), which is not only considered the *real game* but also is easier to regulate, tax, and supervise.<sup>82</sup> This LSM-bias has awarded larger mining companies the political muscle to access and accumulate vast mineral deposits<sup>83</sup> and access tax benefits,<sup>84</sup> sometimes to the detriment of ASM players. Also, governments, media, and other groups

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<sup>77</sup> See Hilson, Goumandakoye, and Diallo, *supra* note 19 at 263. See O’Faircheallaigh and Corbett, *supra* note 32 at 964. See also Salman, *supra* note 75 at 1134–1135; Putzel et al., *supra* note 52 at 460.

<sup>78</sup> See Phyllis M. Duff & Timothy J. Downs, *Frontline Narratives on Sustainable Development Challenges/Opportunities in the ‘Illegal’ Gold Mining Region of Madre de Dios, Peru: Informing an Integrative Collaborative Response*, 6 EXTRACTIVE INDUSTRIES & SOC’Y, 8 (2019).

<sup>79</sup> See e.g. O’Faircheallaigh and Corbett, *supra* note 32 at 966 (arguing that informal miners have resisted such policies or changes therein in Tanzania, Bolivia, Ecuador, Peru, the Philippines, and Myanmar); Katz-Lavigne, *supra* note 31 at 401 (“[T]he imposition by central governments of property rights to mining concessions often leads not to favourable economic outcomes but to conflict”).

<sup>80</sup> See Putzel et al., *supra* note 52 at 464; See also Maconachie and Conteh, *supra* note 33; Andrew Hook, *Fluid formalities: Insights on small-scale gold mining dynamics, informal practices, and mining governance in Guyana*, 62 RESOURCES POLICY 324–338, 326 (2019); Benjaminsen et al., *supra* note 59 at 33; Buss et al., *supra* note 71.

<sup>81</sup> See Putzel et al., *supra* note 52 at 465; Hook, *supra* note 80 at 326; Alejandro Portes, Manuel Castells & Lauren A. Benton, *Conclusions*, in THE INFORMAL ECONOMY : STUDIES IN ADVANCED AND LESS DEVELOPED COUNTRIES , 299 (1989); PIETH, *supra* note 31 at 217.

<sup>82</sup> See Tony Corbett, Ciaran O’Faircheallaigh & Anthony Regan, ‘Designated areas’ and the regulation of artisanal and small-scale mining, 68 LAND USE POLICY 393–401, 399 (2017).

<sup>83</sup> See Verbrugge and Besmanos, *supra* note 13 at 135; Verbrugge and Geenen, *supra* note 24 at 413; See also Interview with Juana Kuramoto, *Subsecretary of Territorial Development at the Prime Minister’s Office of Peru* (2019) (arguing that in Peru “almost all” the country has been titled under a mining concession, leaving no room for new ASM entrepreneurship).

<sup>84</sup> See e.g. Gerardo H. Damonte, *The “Blind” State: Government Quest for Formalization and Conflict with Small-Scale Miners in the Peruvian Amazon*, 48 ANTIPODE 956–976, 957 (2016) (arguing that Peruvian governments have relied on LSM companies to control rural and remotes areas of the country where they operate); Hilson and Maconachie, *supra* note 51 at 443; Yakovleva and Vazquez-Brust, *supra* note 56 at 52.

often portray ASM-activities as inefficient, primitive, or devoid of moral value,<sup>85</sup> as well as unlawful in essence.<sup>86</sup>

Some countries have chosen bans, moratoriums, military raids and evictions to address booming ASM-activities instead.<sup>87</sup> This punitive approach has been largely ineffective because miners are highly resilient,<sup>88</sup> tend to move somewhere else<sup>89</sup> or go further underground.<sup>90</sup> Rather, to the contrary, punitive measures have marginalized informal miners and created conflict, resistance, and deadlock.<sup>91</sup> On the other hand, a small number of countries has chosen not to regulate ASM at all.<sup>92</sup>

Despite debates and critiques around the usefulness of the concept of informality, it is still relevant for policymakers and researchers given the reality it captures and the scale of the problem on the ground.<sup>93</sup> “Informality matters because it is linked with poverty, inequality, low job quality, harmful health and safety conditions, and systemic forms of

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<sup>85</sup> See Vogel, Musamba, and Radley, *supra* note 60 at 73–74; Persaud et al., *supra* note 31 at 981; Víctor Hugo Pachas, *Enigma económico de los espíritus dueños del oro: Minería en pequeña escala de oro en Sudamérica*, 2019, [http://cybertesis.unmsm.edu.pe/bitstream/handle/cybertesis/11148/Pachas\\_cv.pdf?sequence=1&isAllowed=y](http://cybertesis.unmsm.edu.pe/bitstream/handle/cybertesis/11148/Pachas_cv.pdf?sequence=1&isAllowed=y) (claiming that ASM in the Andes is stigmatized as organized crime, polluting, and informal); Theije et al., *supra* note 60 at 131 (“Small-scale gold mining communities are often described as uncontrolled, wild, informal, or even illegal and criminal”).

<sup>86</sup> See UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 17.

<sup>87</sup> See e.g. Sadia Mohammed Banchirigah, *Challenges with eradicating illegal mining in Ghana: A perspective from the grassroots*, 33 RESOURCES POLICY 29–38, 33 (2008); Jocelyn T. D. Kelly, “*This mine has become our farmland*”: *Critical perspectives on the coevolution of artisanal mining and conflict in the Democratic Republic of the Congo*, 40 RESOURCES POLICY 100–108, 100 (2014); Pachas, *supra* note 85 at 12–13 (arguing that violence and repression of ASM activities is a “typical reaction” of South American governments).

<sup>88</sup> Interview with Alicia Abanto, *Environmental Director, Peruvian Ombudsman Office* (2019).

<sup>89</sup> See e.g. THE INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, *supra* note 16; T. Zvarivadza & A. S. Nhleko, *Resolving artisanal and small-scale mining challenges: Moving from conflict to cooperation for sustainability in mine planning*, 56 RESOURCES POLICY 78–86, 85 (2018); Cortés-McPherson, *supra* note 21 at 3.

<sup>90</sup> See Lizzie Wade, *Gold’s Dark Side*, 341 SCI. 1448–1449 (2013).

<sup>91</sup> See e.g. Damonte, *supra* note 84 at 958; Cortés-McPherson, *supra* note 21 at 3; Putzel et al., *supra* note 52 at 463 (arguing that temporary or permanent bans on exports may worsen poverty and negatively impact local economies); Theije et al., *supra* note 60 at 143.

<sup>92</sup> See Hook, *supra* note 80 at 324.

<sup>93</sup> See Chen, *supra* note 49 at 75.

discrimination and exploitation. It also matters because it shows no signs of disappearing in many countries around the world.”<sup>94</sup> Therefore, the study of informality is still appropriate in light of the ASM sector’s potential for millions of people, and the fact that ASM-activities are here to stay<sup>95</sup>. Next, I address the traditional conceptualizations of informality in the literature.

### C. Understanding Persistence Informality

The study of the informal economy and its relation to economic development has been intensely debated since the 1970s,<sup>96</sup> receiving much attention from academic circles to multinational organizations.<sup>97</sup> Traditionally, there are four dominant schools of thought or theoretical models that explain the presence and functioning of the informal economy: the dualist, the structuralist (or neo-Marxist), the legalist (or neoliberal), and the voluntarist.<sup>98</sup> I summarize their propositions next.

According to the *dualist school*, the informal economy comprises marginal activities that provide a safety net for the poor in times of crisis,<sup>99</sup> when it tends to expand.<sup>100</sup> This view, associated with the International Labor Organization (“ILO”),<sup>101</sup> regards

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<sup>94</sup> MARSHALL, *supra* note 41 at 15–16.

<sup>95</sup> See SINGO AND SEGUIN, *supra* note 16 at 20.

<sup>96</sup> See MARTHA CHEN, *Informality and Social Protection: Theories and Realities* 22 (2008).

<sup>97</sup> See e.g. Alejandro Portes & Richard Schauffler, *Competing Perspectives on the Latin American Informal Sector*, 19 POPULATION AND DEVELOPMENT REVIEW 33–60, 54 (1993); THE INFORMAL ECONOMY. SEASONAL WORK, STREET SELLING AND SEX WORK, *supra* note 38 at 2.

<sup>98</sup> See e.g. CHEN, *supra* note 96 at 22; Verbrugge, *supra* note 20; Hilson and Maconachie, *supra* note 51 at 447; Hilson, Goumandakoye, and Diallo, *supra* note 19 at 259; Hilson et al., *supra* note 20 at 81; THE INFORMAL ECONOMY. SEASONAL WORK, STREET SELLING AND SEX WORK, *supra* note 38 at 38; Abbas Khandan, *Informal Economy: The Invisible Hand of Government*, in THE INFORMAL ECONOMY IN GLOBAL PERSPECTIVE: VARIETIES OF GOVERNANCE 37–56, 38 (Abel Polese et al. eds., 2017); ILO, *supra* note 49 at 4–5.

<sup>99</sup> See CHEN, *supra* note 96 at 22.

<sup>100</sup> See Verbrugge, *supra* note 20 at 1025 (describing the sector as counter-cyclical).

<sup>101</sup> See Portes and Schauffler, *supra* note 97 at 38–39.

informal work as a *reserve pool* of labor for the modern or formal sector.<sup>102</sup> The rationality of the informal economy, according to the ILO, was one of survival of the individual or his close ones, and is characterized by little capital use, intensive use of family labor, and illegal activities.<sup>103</sup> Conceived as a traditional or pre-modern type of work, dualists believe that informal activities will inexorably evolve into the capitalist economic system.<sup>104</sup>

By contrast, the *structuralist* or *neo-Marxist school*, led by Alejandro Portes and others, do not study informality as a distinct economic sector but rather as a social and historical process.<sup>105</sup> As Portes et al. put it, “[...] the processes and profile of the informal economy are historically specific, depending upon the relationship between the state, capital and labor in each country.”<sup>106</sup> Importantly, the structuralists see informality as the by-product of a de-regularized global economy,<sup>107</sup> that is to say, as an attempt of the formal sector to reduce their labor costs and increase their competitiveness by “relying on the exploitation of cheap informal labor.”<sup>108</sup>

The structuralist school has raised important questions about the conceptualization of informality. First, they have focused on the informal economy’s heterogeneity and segmented character.<sup>109</sup> Second, the structuralists have drawn their attention to the links

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<sup>102</sup> See Risa Whitson, *Beyond the Crisis: Economic globalization and informal work in urban Argentina*, 6 JOURNAL OF LATIN AMERICAN GEOGRAPHY 121–136, 124 (2007).

<sup>103</sup> See Portes and Schauffler, *supra* note 97 at 38–39.

<sup>104</sup> See James J. Biles, *Informal Work in Latin America: Competing Perspectives and Recent Debates*, 3 GEOGRAPHY COMPASS 214–236, 215 (2009); MARSHALL, *supra* note 41 at 8.

<sup>105</sup> See Kate Meagher, *Crisis, Informalization and the Urban Informal Sector in Sub-Saharan Africa*, 26 DEVELOPMENT AND CHANGE, 264 (1995).

<sup>106</sup> Portes, Castells, and Benton, *supra* note 81 at 306.

<sup>107</sup> See THE INFORMAL ECONOMY. SEASONAL WORK, STREET SELLING AND SEX WORK, *supra* note 38 at 39.

<sup>108</sup> Verbrugge, *supra* note 20 at 1024; See also Meagher, *supra* note 105 at 264; THE INFORMAL ECONOMY. SEASONAL WORK, STREET SELLING AND SEX WORK, *supra* note 38 at 39; MARSHALL, *supra* note 41 at 16.

<sup>109</sup> See Verbrugge, *supra* note 20 at 1026; Portes and Schauffler, *supra* note 97 at 46; Jesper Bosse Jønsson & Deborah Fahy Bryceson, *Rushing for Gold: Mobility and Small-Scale Mining in East Africa*, 40 DEVELOPMENT AND CHANGE, 255 (2009).

between the informal and formal activities.<sup>110</sup> For example, by hiring workers off-the-books or adopting outsourcing or subcontracting strategies, large firms can circumvent legal regulations and thus increase their profits.<sup>111</sup> Third, the structuralists explore the role of state institutions and social networks—including religious or kin group—in the organization of the informal economy, including recruitment and use of informal laborers.<sup>112</sup>

The *legalist* or *neoliberal school* (1980-1990), popularized by Peruvian economist Hernando de Soto,<sup>113</sup> argues that the informal sector is the consequence of overregulation and favoritism of economic elites in a mercantilist economy.<sup>114</sup> Despite state oppression, and thanks to their entrepreneurial spirit, informal actors choose to operate informally to avoid the costs, time, and effort of formal registration.<sup>115</sup> De Soto's scholarship describes informality as a popular response that effectively circumvents legal closure, discarding the idea of a transient or accidental informal sector.<sup>116</sup>

De Soto's famous recipe to solve informality relies on the use of bottom-up property rights to convert the informal assets of the poor into legally recognized ones.<sup>117</sup> In

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<sup>110</sup> See e.g. Portes and Schauffler, *supra* note 97 at 48; Martha Chen, *The Informal Economy: Recent Trends, Future Directions*, NEW SOLUTIONS: A JOURNAL OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH POLICY, 162 (2016), <https://journals.sagepub.com/doi/10.1177/1048291116652613> (last visited Apr 2, 2020).

<sup>111</sup> See Verbrugge, *supra* note 20 at 1027; Portes and Schauffler, *supra* note 97 at 46, 49.

<sup>112</sup> See Meagher, *supra* note 105 at 265; Portes, Castells, and Benton, *supra* note 81 at 305 (“The least tangible factor characterizing informal economies of growth is the existence of a common identity that binds together participants... [providing] the basis for an overarching solidarity that facilitates, in turn, cooperation among small firms and nonconflictual relations with workers”) ; Linda Weiss, *Explaining the Underground Economy: State and Social Structure*, 38 THE BRITISH JOURNAL OF SOCIOLOGY 216–234, 231 (1987) (“[T]he underground economy is rooted in conditions of social structure that are in large part politically shaped and sustained”).

<sup>113</sup> See Portes and Schauffler, *supra* note 97 at 40.

<sup>114</sup> See Whitson, *supra* note 102 at 124.

<sup>115</sup> See CHEN, *supra* note 96 at 22.

<sup>116</sup> See Portes and Schauffler, *supra* note 97 at 40; See also FRANCISCO DURAND, EL PERÚ FRACTURADO: FORMALIDAD, INFOMALIDAD Y ECONOMÍA DELICTIVA (2007).

<sup>117</sup> See CHEN, *supra* note 96 at 22.

his controversial best-seller *THE MYSTERY OF CAPITAL: WHY CAPITALISM TRIUMPHS IN THE WEST AND FAILS EVERYWHERE ELSE* (“MYSTERY”),<sup>118</sup> he recommends making property rights widely available by integrating the existing informal social or customary norms—what he calls the *people’s law*—into one unified legal system.<sup>119</sup> Well-functioning property rights systems, he argues, increase economic performance, promote investment, and reduce the transaction costs of credit.<sup>120</sup>

Finally, and more recently, the *voluntarist school* of thought argues that informal entrepreneurs deliberately choose to avoid regulations and taxations.<sup>121</sup> Unlike the legalist school, this choice is not based on overregulation but is a conscious decision after calculating the benefits of remaining formal or becoming informal.<sup>122</sup>

All these schools of thought offer an explanation for persistence informality but limited to a particular segment of the informal economy.<sup>123</sup> In fact, informality “is more heterogeneous and complex than the sum of these perspectives would suggest,” claims Martha Chen.<sup>124</sup> Consequently, these ideas are not capable, “on their own and without refinement, of explaining [informality].”<sup>125</sup>

Today, there is a renewed interest in the informal economy.<sup>126</sup> The *post-structuralist perspective* recommends going beyond the portrayal of informal work as simply spaces of

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<sup>118</sup> See *THE MYSTERY OF CAPITAL: WHY CAPITALISM TRIUMPHS IN THE WEST AND FAILS EVERYWHERE ELSE* 140 (2000).

<sup>119</sup> See Hernando De Soto, *Law and prosperity outside the West: A few new ideas about fighting poverty*, 29 *in* FORUM FOR DEVELOPMENT STUDIES 349–361, 355.

<sup>120</sup> See Benito Arruñada & Nuno Garoupa, *The Choice of Titling System in Land*, 48 *J. LAW & ECON.* 709, 709–727 (2005).

<sup>121</sup> See CHEN, *supra* note 96 at 22.

<sup>122</sup> See Chen, *supra* note 110 at 157.

<sup>123</sup> See CHEN, *supra* note 96 at 22.

<sup>124</sup> Chen, *supra* note 110 at 157.

<sup>125</sup> Hilson, Goumandakoye, and Diallo, *supra* note 19.

<sup>126</sup> See Chen, *supra* note 49 at 75.



neo-Marxist exploitation or neoliberal liberation.<sup>127</sup> Informality is no longer understood as constrained to small-scale activities or sweatshops in developing countries, but rather as a global phenomenon that infuses all aspects of public life.<sup>128</sup> New discussions unpack its significance and permanence (i.e. it is not a short-term phenomenon but a permanent one); the continuum of employment relations within the informal sector (i.e. there are many categories in-between *purely formal* and *purely informal* relations); and segmentation (i.e. gender and earning gaps within the informal economy).<sup>129</sup> This post-structuralist view focuses on issues of culture, identity, power, and resistance.<sup>130</sup>

Boris Verbrugge proposes a post-structuralist understanding of informal ASM.<sup>131</sup> He studies the role of external financiers and nascent *opportunistic entrepreneurs* in the ASM sector.<sup>132</sup> In his view, subsistence mining now coexists with more capitalized ASM operators, who generally hold the power, skill, and capital to accrue most of the benefits of the activity,<sup>133</sup> and are also able to secure formal mining licenses to the detriment of a massive labor force.<sup>134</sup> While informality is in part the consequence of entry barriers and political impediments that exclude ASM from the formal economy (*legalist school*), at the same time Verbrugge posits that the persistence of informality in labor arrangements is also a matter of exploitation and serves the interest of the dominant stratum of ASM

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<sup>127</sup> See e.g. Biles, *supra* note 104 at 227; Abel Polese et al., *Introduction: Informal Economies as Varieties of Governance*, in *THE INFORMAL ECONOMY IN GLOBAL PERSPECTIVE: VARIETIES OF GOVERNANCE* 1–14, 2 (Abel Polese et al. eds., 2017).

<sup>128</sup> See Polese et al., *supra* note 127 at 3.

<sup>129</sup> See Chen, *supra* note 49 at 78–79.

<sup>130</sup> See e.g. Biles, *supra* note 104 at 227; *THE INFORMAL ECONOMY. SEASONAL WORK, STREET SELLING AND SEX WORK*, *supra* note 38 at 43.

<sup>131</sup> See Verbrugge, *supra* note 20 at 1029–30.

<sup>132</sup> See *id.* at 1026.

<sup>133</sup> See BORIS VERBRUGGE, BEVERLY BESMANOS & ABBIE BUXTON, *Artisanal and small-scale mining: protecting those “doing the dirty work”* (2014), <https://pubs.iied.org/17262IIED/>.

<sup>134</sup> See *id.*

entrepreneurs (*structuralist school*).<sup>135</sup> He concludes that the ASM sector has therefore evolved from a poverty-driven sector “... into a highly intertwined group of semi-formal sectors operating with varying degrees of legal registration.”<sup>136</sup>

Next, I turn to Peru’s ASM sector and propose a post-structuralist approach to understand and tackle informality.

#### **D. The Expansion of ASM in Peru and the Dominant Legalist Approach**

Peru reflects the worldwide expansion of ASM. Although official data is unavailable or unreliable, between 200,000-500,000 people are engaged in ASM, informally or illegally, producing 20 percent of the country’s gold.<sup>137</sup> In fact, since 2014, the main source of illegal profits produced in Peru is not attributed to drug trafficking—but rather to illegal gold mining.<sup>138</sup> The negative externalities are substantial as ASM miners invade forests, national parks, employ children, and pour mercury into waterbodies.

The resultant environmental devastation, especially in the Amazon region, along with pressure from developed countries, forced President Ollanta Humala (2011-2016) to revise Peru’s ASM legislation. In 2012, his government launched a new formalization strategy that allowed informal miners to regularize their activities by applying for an operating license for a limited period.<sup>139</sup> Existing ASM-activities were grandfathered provided that miners submitted an affidavit by which they committed themselves to fulfill

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<sup>135</sup> See Verbrugge, *supra* note 20 at 1024.

<sup>136</sup> *Id.* at 1026; Also cf. DURAND, *supra* note 116.

<sup>137</sup> See Cortés-McPherson, *supra* note 21 at 2.

<sup>138</sup> See Vanessa Valverde & Diego Collantes, *Alcances para una respuesta jurídica integral al comercio ilegal de oro*, IUS ET VERITAS 128–151, 132 (2017); See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 84 (arguing that illegal gold trade from Peru was worth USD 2.6 billion in 2016).

<sup>139</sup> Presidencia del Consejo de Ministros del Perú / Executive Branch 2012, DECRETOS LEGISLATIVOS [Legislative Decrees] 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106 and 1107 (Peru).

all steps of the process, which included filing a short Environmental Impact Assessment (“EIA”), securing title to mining rights and surface lands, as well as obtaining other permits.

In parallel, the program criminalized illegal mining, that is, operations located in environmentally sensitive areas such as national parks, riverbanks, watersheds, or archaeological sites, or that used materials and equipment proscribed for ASM. It also criminalized the provision of capital, machinery, and feedstock to illegal mining, shifting the burden of proof to other actors in the supply chain of gold. Accordingly, during the early years of the program, the government launched spectacular military raids to destroy illegal mining camps and evict illegal miners.

Yet, many experts believe that the Government of Peru’s (“GP”) formalization program has failed.<sup>140</sup> The administrative procedures introduced to promote ASM formalization are legalist, overly bureaucratic, and slow.<sup>141</sup> The results of formalization affirm this, both in terms of the number of miners that have accessed formalization title (only 13% of applicants have completed the program to date), and prosecution of illegal miners (only one case has resulted in effective imprisonment since 2012).<sup>142</sup> Worse still, the political will to tackle informality—celebrated in the early days of the program—is

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<sup>140</sup> Interview with Juana Kuramoto, *supra* note 83. See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 30.

<sup>141</sup> See Marc Dourojeanni, *Las propuestas de Hernando de Soto sobre la minería informal*, SPDA ACTUALIDAD AMBIENTAL (2015), <http://www.actualidadambiental.pe/?p=27796> (last visited Feb 13, 2019).

<sup>142</sup> See Valentina Ruiz, *Illegal miners sentenced to jail in Peru*, MINING (2019), <http://www.mining.com/illegal-miners-sentenced-jail-peru/> (last visited Feb 13, 2019); VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 9–10; Guillermo Reaño, *Minería ilegal en Madre de Dios: Operación Mercurio 2019, el baile de los que faltan*, ACTUALIDAD AMBIENTAL (2019), <http://www.actualidadambiental.pe/?p=54930> (arguing that between 2013 and 2016, the government conducted 103 raids in Madre de Dios against illegal miners).

now dissipating and becoming erratic, to the extent that the GP's program is now considered a 'paper tiger'.<sup>143</sup>

The most significant flaw in the program is that it overlooks the precarious and colonial-like labor relations that ensnares hundreds of thousands of mining workers. The most paradigmatic example is the lottery-like employment agreement present throughout the Peruvian Andes, called "*cachorro*," by which miners work without pay for 28 days, followed by two days during which they may keep to themselves whatever ore they can extract from the mine shafts. Although miners feel they are close to winning the lottery, this contract operates as a cruel, large-scale, collective lottery, in which payment is uncertain and at times non-existent.

The transition of such informal employment arrangements into standard employment relations ("SER") has not been prioritized by the GP. Here, I refer to SER as full employment status, that is to say, "full-time, open-ended, and based on a direct subordinate and bilateral employment relationship between an employee and employer."<sup>144</sup> SER is a continuous, on-going, and indefinite employment contract. It comprises adequate social benefits, a standard workday, and work week.<sup>145</sup> In this dissertation, I use SER and waged labor interchangeably.

De Soto, an influential but polarizing figure, has vociferously attacked the GP's formalization efforts. According to de Soto's Institute of Liberty and Democracy ("ILD"), the typical informal miner spends up to 1,260 days and more than USD 87,000 to comply

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<sup>143</sup> Interview with Alicia Abanto, *supra* note 88.

<sup>144</sup> See COLIN C. WILLIAMS, *DEPENDENT SELF-EMPLOYMENT: THEORY, PRACTICE AND POLICY* 18 (2019).

<sup>145</sup> See *PRECARIOUS WORK, WOMEN AND THE NEW ECONOMY: THE CHALLENGE TO LEGAL NORMS*, 10 (Judy Fudge & Rosemary Owens eds., 2006).

with formalization paperwork.<sup>146</sup> He argues that red tape is, therefore, locking out thousands of miners from gaining legal title, inhibiting them from accessing collateral-backed credit, secure contracts, or limited liability vehicles. In response, de Soto proposes a comprehensive titling program that integrates miner's informal rules *already on the ground* into one unified property rights system.<sup>147</sup>

Interestingly, de Soto looks to the California Gold Rush (“CGR”) to examine the tension between top-down and bottom-up governance. Upon the discovery of gold in California in 1848, absent government regulation, thousands of miners eventually improvised their own rules to distribute rights to the gold deposits and avoid chaos<sup>148</sup>. In a process lionized as “the noblest experiment in self-government ever attempted,”<sup>149</sup> miners organized themselves around mining districts or camps and created their own mining codes. These codes set up a claim system based on two main tenets: first, standardized claim sizes, and second, the obligation to work the claim on a continuous basis.<sup>150</sup> Seventeen years after the discovery of gold, and after long debates, the United States Congress finally ratified miner's mining codes by approving the Lode Law of 1866,<sup>151</sup> which was built on the miner's informal arrangements. From then on, the California mining codes became “the American system of mining law.”<sup>152</sup>

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<sup>146</sup> Institute for Liberty and Democracy (ILD) & Federación Nacional de Mineros Artesanales del Perú (FENAMARPE), *President Humala: Would you like to create more jobs for the youth?* (2014), [https://www.ild.org.pe/images/our\\_work/2014dec23-ElComercio\\_PresHumalaJobs4youth.pdf](https://www.ild.org.pe/images/our_work/2014dec23-ElComercio_PresHumalaJobs4youth.pdf).

<sup>147</sup> See Institute for Liberty and Democracy (ILD), *Conga va pero vamos todos* (2014), <https://www.scribd.com/document/248188762/Programa-Para-Integrar-a-Los-2-Perus>.

<sup>148</sup> See e.g. Andrea G. McDowell, *From Commons to Claims: Property Rights in the California Gold Rush*, 14 YALE J.L. & HUMAN. 1–72 (2002).

<sup>149</sup> John C. Lacy, *Historical Overview of the Mining Law: The Miner's Law Becomes Law*, in THE MINING LAW OF 1872 : A LEGAL AND HISTORICAL ANALYSIS , 20 (1989).

<sup>150</sup> See e.g. McDowell, *supra* note 148.

<sup>151</sup> Act of July 26, 1866, ch. 262, 14 Stat. 251 (repealed 1872).

<sup>152</sup> CHARLES HOWARD SHINN, MINING CAMPS : A STUDY IN AMERICAN FRONTIER GOVERNMENT (1885).

In MYSTERY, de Soto puts forth the CGR as an archetypical example of a legal system built up from ground-level conditions. This process was remarkable, claims de Soto, in that the United States Congress did not aim to destroy informal mining codes but strengthened them by regulating the way miners held and worked their claims.<sup>153</sup> He argues that the mining codes served as temporary rest stops on the road to legal recognition,<sup>154</sup> which came about when Congress converted “what seemingly were disruptions of [the law] into a social contract that brought property rights to everybody.”<sup>155</sup> Hence, for de Soto the expansion of the Western frontier by the United States is a how-to blueprint for developing nations on creating more legitimate and representative formalization frameworks rather than top-down approaches.<sup>156</sup>

De Soto’s interpretation of the United States westward expansion has crucial policy consequences. To quote Jennifer B. Murtazashvili & Ilia Murtazashvili, “If one takes from the American frontier the lesson that it is important to give squatters legal rights, then the logical policy implication is legal titling in today’s developing world.”<sup>157</sup> De Soto’s provocative analogy of the CGR has rippled through within the ASM literature, creating vigorous debate about the process of legal integration of miner’s informal and customary rules into conventional law systems. For example, Siegel & Veiga cite de Soto’s example to propose that the “Law is not created; rather, it adapts to the arrangements and systems

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<sup>153</sup> See DE SOTO, *supra* note 118 at 137–47.

<sup>154</sup> See *id.* at 140.

<sup>155</sup> Hernando De Soto, *Rethinking Liberalism: An Interview with Hernando de Soto*, 10 WHITEHEAD J. DIPL. & INT’L REL. 9–20 (2009).

<sup>156</sup> See HERNANDO DE SOTO, *How Peru’s poor defeated terrorism* (2016), [https://www.ild.org.pe/pdf/2016-10-27\\_WEB-ILD-How-Peru's-Poor-Defeated-Terrorism.pdf](https://www.ild.org.pe/pdf/2016-10-27_WEB-ILD-How-Peru's-Poor-Defeated-Terrorism.pdf); Jennifer Brick Murtazashvili & Ilia Murtazashvili, *What Are the Lessons of the American Frontier for the Developing World?*, FORTHCOMING, APSA COMPARATIVE POLITICS NEWSLETTER, 253 (2019), <https://papers.ssrn.com/abstract=3378086> (last visited Apr 2, 2020) (“De Soto’s libertarian case for legal titling is based in part on his understanding of what entrenched capitalism in the U.S.”).

<sup>157</sup> Murtazashvili and Murtazashvili, *supra* note 156 at 254.

that people have already established.”<sup>158</sup> While recognizing that the contemporary political landscape makes the CGR’s bottom-up approach impractical today, Hilson et al. contend that de Soto’s bottom-up model, “...would undoubtedly yield more representative policy and regulatory frameworks for ASM.”<sup>159</sup> Finally, in his discussion of current challenges with ASM formalization, Van Bockstael refers to de Soto’s reading of the CGR as an illustration of how “... to absorb existing informal practices into a country’s official legal framework.”<sup>160</sup>

Although de Soto’s ideas have been widely criticized,<sup>161</sup> engaging with his recent analysis of Peru’s ASM sector is relevant and timely. His ideas to regularize ASM have come back to light this year in the context of the COVID-19 pandemic. In a joint press release, different associations of informal miners across the country publicly urged President Martín Vizcarra to summon de Soto and implement his proposal to formalize ASM.<sup>162</sup>

Furthermore, Hilson et al. argue that the role of de Soto’s scholarship in the ASM sector “... must [still] be revisited, unpacked, dissected very carefully and, if necessary,

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<sup>158</sup> Siegel and Veiga, *supra* note 12 at 53.

<sup>159</sup> Hilson et al., *supra* note 20 at 84.

<sup>160</sup> Steven Van Bockstael, *The Persistence of Informality: Perspectives on the Future of Artisanal Mining in Liberia*, 62 FUTURES 10, 17 (2014).

<sup>161</sup> Over the last two decades, de Soto’s ideas have been challenged on several grounds, such as lack of academic integrity and originality; the portrayal of formalization programs as a silver bullet; the assumption that property empowers the poor; the correlation between title and access to credit; the correlation of title and investment in home improvements; the conception of individual property as the ultimate form of tenure, ignoring customary property systems; the fact that formalization is unnecessary when existing informal arrangements are perceived as fair and secure; the exclusion of vulnerable groups from formalization programs; and superficial and confused historical evidence. *See e.g.* Jan Michiel Otto, *Rule of Law Promotion, Land Tenure and Poverty Alleviation: Questioning the Assumptions of Hernando de Soto*, 1 HAGUE JOURNAL ON THE RULE OF LAW 173–194 (2009); Edesio Fernandes, *Una lectura crítica a Hernando de Soto*, in IRREGULAR 213–240 (Clara Eugenia Salazar ed., 2012); HERNANDO DE SOTO AND PROPERTY IN A MARKET ECONOMY, (D. Benjamin Barros ed., 2010); Dan Banik, *The legal empowerment of the poor*, HANDBOOK ON THE RULE OF LAW, 422–23 (2018); Cora Fontana, *Hernando de Soto on Land Titling: Consensus and Criticism*, 3 PLANEXT-NEXT GENERATION PLANNING (2016).

<sup>162</sup> *See* Federaciones de Pequeños Productores Mineros y Mineros Artesanales del Perú, *Manifiesto a la República (Press Release)* (2020).

refined for use in this specific context. [His formalization] ideas may be old; but they have yet to be interrogated in the context of ASM, a sector with a unique *informal* dimension.”<sup>163</sup>

This dissertation makes new contributions to the ASM literature in this direction.

## **E. Dissertation Approach**

### **1. Hypothesis**

Identifying the root causes of informality is not an easy task. Yet, without understanding the complex dynamics and causes of informality, any government-backed response to the problem risks being ineffective.<sup>164</sup> I contend that to understand the persistence and entrenchment of informality in Peru’s ASM sector it is necessary to go beyond the legalist school of thought embodied by de Soto. Rather, following a legal history / post-structuralist perspective, I propose an alternative explanation that is based on (a) the role of the Government of Peru as an agent of informalization due to complicit and neglectful behavior in the regulation and enforcement of ASM; and (b) the historical processes of ASM, which suggest a strong resistance to SER (waged labor relations) and deeply ingrained cultural principles that favor direct appropriation strategies by workers (i.e. lottery-like arrangements).

Even though I agree with de Soto that conventional property rights and legitimacy are important in the design of formalization programs, I show that they are not enough to tackle persistent informality. Close examination of the property rights structure in Peru’s informal ASM sector reveals that labor relations rather than property relations is the source of the problem in the industry. While I recognize that there is no silver bullet to regularize

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<sup>163</sup> Hilson et al., *supra* note 20 at 89; *See also* Benjaminsen et al., *supra* note 59 at 29.

<sup>164</sup> *See* MARSHALL, *supra* note 41 at 18.



ASM, I propose a more inclusive approach to formalization that encompasses the existing complex labor arrangements on the ground to protect the massive mining working force, while at the same time safeguarding core labor, safety and health, and social security rights for lottery miners.

*a) The Government of Peru as an agent of informalization*

I contend that the GP has become an agent of informalization due to complicit and negligent behavior in the regulation and enforcement of ASM. Although the GP has offered a formalization program since 2012, it does not represent a holistic strategy to regularize ASM-activities and combat illegal mining. This is evidenced by the legalist model chosen, institutional weaknesses, structural constraints, and the oversight of a massive workforce from the regularization process. This dissertation is chiefly concerned with exploring the oversight of the workforce, showing how the GP has ignored informal labor arrangements in ASM, including *cachorro* and other lottery-like systems, privileging form over substance. The government has thus opted for a legalist approach anchored in the granting of operating licenses to the mine owners or contractors, failing to acknowledge “the increasingly complex labor systems that now characterize ASM in many countries, and thus fail to protect a massive and vulnerable labor force.”<sup>165</sup>

Figure 2 below emphasizes the importance of including both *firm* and *workers* characteristics in the formalization effort.<sup>166</sup> Rather than fostering activities in the Quadrant I (*formal* firm; *formal* labor), the GP has conformed with activities in the Quadrant II (*formal* firms; *informal* labor). I thus posit that the government’s lack of shared vision,

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<sup>165</sup> VERBRUGGE, BESMANOS, AND BUXTON, *supra* note 133.

<sup>166</sup> See Chen, *supra* note 110 at 169.

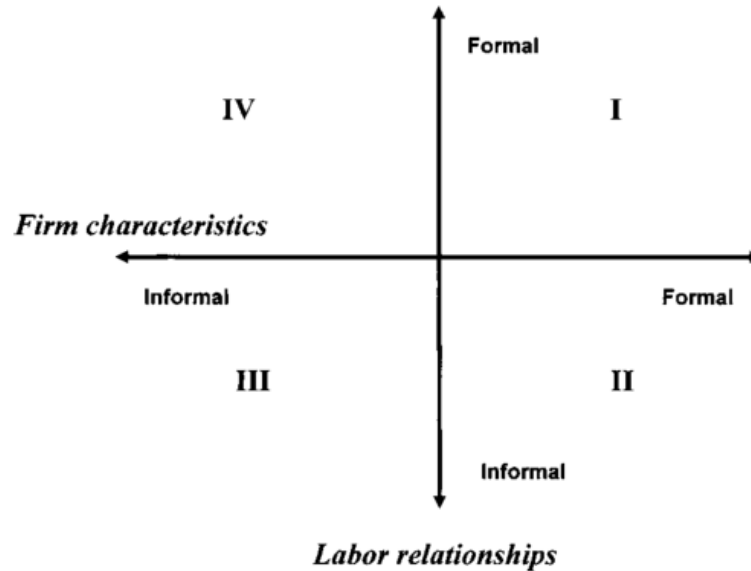
poor inter-agency coordination, and mutual blaming has resulted in the violation of worker's core labor, health and safety, and social security rights.<sup>167</sup> Paradoxically, ASM entrepreneurs that have completed GP's program still retain their workforce under exploitative and unconscionable employment contracts, which remain off-the-books. This would not be possible without the concomitance of the state.

To strengthen my argument, I engage with the frontier literature to conceptualize La Rinconada as an *imagined* frontier.<sup>168</sup> In my opinion, Lima-based bureaucrats have constructed a narrative around this mining center as a remote, vicious, and ruthless place as a way to justify passivity and stay off the mines. I show that such spatialization or exoticization is subjective and has no factual support. Also, far from constituting an unruly landscape, I show that La Rinconada represents a *patchworked* frontier landscape where formal, informal, and illegal worlds intermingle and coexist according to the power and status that ASM's stakeholders hold. Finally, I explore the structural constraints that hinder the development of democratic and egalitarian values in contemporary La Rinconada.

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<sup>167</sup> See Duff and Downs, *supra* note 78 at 6.

<sup>168</sup> On imagined frontiers or geographies, see e.g. Nedra Reynolds, *Composition's Imagined Geographies: The Politics of Space in the Frontier, City, and Cyberspace*, 50 COLLEGE COMPOSITION AND COMMUNICATION 12–35 (1998); Anna Lowenhaupt Tsing, *Inside the Economy of Appearances*, 12 PUBLIC CULTURE 115–144 (2000).



(Source: Meagher)<sup>169</sup>

**Figure 2. Characteristics of the firm and labor relations in the informal sector**

*b) Historical ASM Processes*

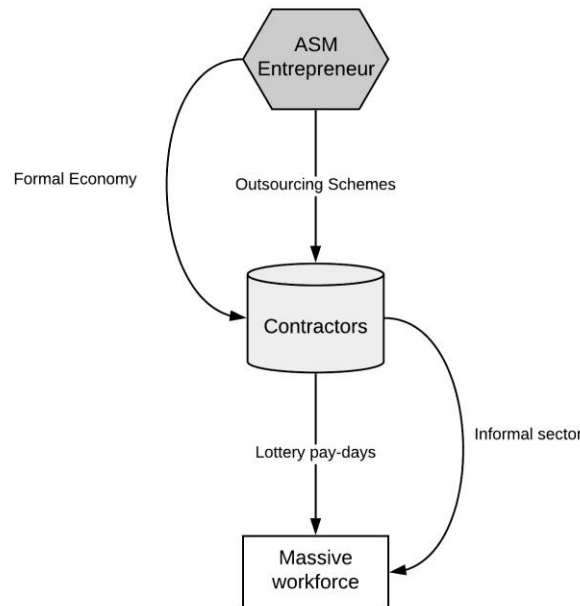
Peru's ASM literature has failed to explore the historical roots of artisanal mining and the resistance to waged labor relations in the adoption of formalization strategies. Following a legal history / post-structuralist perspective, I argue that historical processes can help explain the existing differentiation and inequalities in contemporary ASM. By mapping out direct appropriation strategies by the workforce conducted since colonial times to contemporary Peru, I aim to show the existence of a strong ideology of resistance to the public ownership system of natural resources and SER (waged labor relations). I contend that these historical features have slowed down the process of formalization of ASM-activities and, by contrast, reinforced its shady reputation.

<sup>169</sup> See Meagher, *supra* note 105 at 217.

To illustrate my point, I turn to the history of the “*k’ajchas*”, the weekend thieves in the silver mines of Potosí during the Viceroyalty of Peru (present-day Bolivia). During weekends, when official mining operations were interrupted, a group of independent and intrepid men entered the mine shafts to extract ore illegally. Challenging the property monopoly of the Spanish mines, the *k’ajchas* considered themselves entitled to exploit the minerals as their own right and for their own benefit, resulting in a parallel circuit of silver extraction and processing. The existence of these independent prospectors who rejected working for a salary slowed down the proletarianization process in the Altiplano for centuries.

I then turn to contemporary direct appropriation strategies by unpacking three case studies in the Peruvian ASM sector: La Rinconada and Upina (in the region of Puno), and Secocha (in the region of Arequipa). I study the history and nature of the lottery-like labor arrangements that characterize gold mining in these mining settlements. I claim that these agreements are deeply ingrained in cultural principles in the Andes, such as the rejection of waged labor, the necessity of highly flexible and mobile working conditions, the family as a unit of production, reciprocity, and superstition. These shared principles have worked as focal points to help legitimize outsourcing schemes (*see* Figure 3). ASM entrepreneurs, on the one hand, have managed to access formal title to the mineral deposit from the GP and, on the other, to compensate their workforce informally, through lottery pay-days. By resorting to such outsourcing practices—which are lawful and recorded in the public registry—powerful ASM players have maintained the *status quo* and prevented conflict. But, at the same time, this system has turned out to be an instrument of informalization for

a massive workforce, whose work remains off-the-books. This is the first academic work to dissect and understand lottery mining agreements in Peru.



(Source: By author)

**Figure 3. Outsourcing scheme in ASM**

### *Proposed Policy Solutions*

Incorporating the massive mining workforce—including lottery miners—to the formal economy should be a priority for the GP. I first assess de Soto’s proposal of a bottom-up property rights program—built on romantic depictions of the nineteenth-century frontier mining in the American tradition—as an effective answer to the expansion of contemporary ASM. I question de Soto’s portrayal of the CGR’s and problematize his extrapolation from the CGR to contemporary Peruvian ASM. Furthermore, I expose the conceptual assumptions and practical implications behind de Soto’s strategy, arguing that

his ideas would not create more wealth nor improve the environmental and labor conditions of the sector, but contribute to the exclusion of vulnerable groups and the legalization of a right to pollute.

By contrast, I argue that tackling idiosyncratic and persistent lottery-like systems demands thinking beyond legalist solutions and adopting multidimensional strategies. I extrapolate the European category of Economically Dependent Self-employed Worker (“EDSW”) and apply it to lottery miners. EDSW applies to individuals who habitually and personally conduct for-profit economic or professional activity, directly and predominantly for a client, on which they depend economically for at least 75 percent of their income (e.g. Uber or Lyft drivers).<sup>170</sup> This legal category imposes on the self-employed worker’s client a minimum respect for labor rights, such as minimum wage and healthcare, as well as pension fund contributions.

I claim that transplanting the EDSW scheme to lottery miners may allow them to maintain their independence and mobility, as well as their customary lottery pay-days, while at the same time safeguarding access to a minimum core of labor, health and safety, and social security rights. Furthermore, I posit that legal recognition of lottery miners may bring about the gradual imposition of additional environmental, labor, and human rights standards, and thus work as a first step in a transition towards decent work.<sup>171</sup> Far from a legalist proposal, EDSW represents a pragmatic approach to a long-lasting problem in the

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<sup>170</sup> See e.g. Esther Sanchez Torres, *The Spanish Law on Dependent Self-Employed Workers: A New Evolution in Labor Law Self-Employed Workers*, COMP. LAB. L. & POL’Y J. 231–248, 236 (2009).

<sup>171</sup> Cf. Siegel and Veiga, *supra* note 12 at 52.

Peruvian Altiplano, and offers “a form of entry point into the labor market” for thousands of miners currently working under exploitative arrangements.<sup>172</sup>

Here, it is important to note that the study of female miners (*pallaqueras*) falls beyond the scope of this dissertation. The policy solution proposed is thus circumscribed to male lottery miners (*cachorreros*). This is why this dissertation does not include a gender approach to ASGM. An in-depth study of *pallaqueras* is still pending in academia.

### *Methodology*

I adopt a legal history / post-structuralist perspective as an analytical tool to grasp the complexities of contemporary legal patterns in the ASM sector. In addition to site visits to La Rinconada and Upina taken place in the summer of 2019, I conducted 35 interviews in Lima and 24 interviews in the Andes to key players in the ASM sector, including de Soto’s ILD, the founders of La Rinconada (the Cenzano family), contractors, lottery miners, and current and former public servants, including the ministers of Energy and Mines, and the Environment (*see* Appendix 5 for a list of interviewees). Interviews were open-ended but followed the tentative list of questions provided in Appendix 3. All interviews were performed in Spanish; all quotations to interviews have been translated by the author. Finally, to secure access to documents in the public domain, I filed eighteen freedom of information requests to the government of Peru (*see* Appendix 9).

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<sup>172</sup> See Virginia Navajas-Romero, Rosalía Díaz-Carrión & Antonio Ariza-Montes, *Decent Work as Determinant of Work Engagement on Dependent Self-Employed*, 11 SUSTAINABILITY 2512, 10 (2019). While EDSW has had varying results across Europe, in France the introduction of self-employed categories in 2008 appears to have improved social protection of workers. See COLIN C. WILLIAMS, *supra* note 144 at 165.

## *Dissertation Outline*

*Chapter 2* provides background information on the public ownership and mining concession system applicable in Peru. It then describes the expansion of ASM, the GP's attempts to contain it, and the formalization program's shortcomings.

*Chapter 3* unpacks the mining workers' resistance to waged labor relations in the Andes. It traces down the story of the colonial *k'ajchas* in Potosí and other historical examples of direct appropriation strategies by workers. It also analyzes the transition from peasants to miners in Peru during the nineteenth and twentieth centuries.

In *Chapter 4*, I explore the founding of La Rinconada mining settlement and the development of its peculiar employment system. I then turn to other mining settlements in the Southern Peruvian Andes where similar lottery-like arrangements have emerged.

*Chapter 5* offers an in-depth analysis of *cachorreo*'s origin and its main attributes. It then shows how this arrangement has helped La Rinconada avoid complete chaos and falling into open access. This chapter closes with an analysis of *cachorreo* through legal lenses.

*Chapter 6* unpacks de Soto's understanding of the Western expansion of the United States frontier, by discussing the evolution of property rights during the California Gold Rush. It then examines his proposal of making property rights available to ASM, showing that scholars must look elsewhere for solutions.

In *Chapter 7*, I use different frontier lenses to shed light on La Rinconada. I argue that this mining center represents, at the same time, an *imagined* and *patchworked* frontier landscape, and the antithesis of an *artisanal mining frontier democracy*.



Finally, in *Chapter 8*, I discuss an alternative approach to formalize lottery miners from the bottom-up by adopting the legal category of EDSW.

## CHAPTER 2.- BRIEF HISTORY OF PERU'S ASM SECTOR AND GOVERNMENT OF PERU'S ATTEMPTS TO REGULATE IT

*<<It is unfortunate to witness the indifference of fellow congressmen who appear to ignore the reality of our country. We are debating here the formalization of a key economic sector... Peru is a mining country. For the love of God! Go raid a tomb. What will you find? Gold, silver, copper, corn, cotton, fabrics, ceramics. Why can't you learn from our ancestors a way to live in balance [between mining and the environment]?*

Former Congresswoman Schaefer (2019)<sup>173</sup>

*<<The day I become formal [i.e. complete the GP's formalization process] is the day my terrible ordeal begins>>.*

Anonymous artisanal miner in the region Puno<sup>174</sup>

Long before the Spaniards arrived in the Americas, the Andean population had spent thousands of years exploiting gold, silver, copper, and many other mineral deposits.<sup>175</sup> Needless to say, mining has shaped Peru's landscape and economy for centuries.<sup>176</sup> Yet, over the past two decades, LSM has become more extensive and visible as a result of the booming commodity prices and the development of new technologies.<sup>177</sup> Today, the relationship of Peruvians with the mining sector is bitter-sweet.<sup>178</sup> For urban elites, LSM

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<sup>173</sup> CONGRESO DE LA REPÚBLICA DEL PERÚ, *Diario de los Debates, 2019-10th Session, Law 31007* 126 (2019) (translation by author).

<sup>174</sup> Interview with Jesús Álvarez, *Public Servant at the Regional Government of Puno* (2019) (quoting an informal miner in Puno).

<sup>175</sup> See KRIS E. LANE, *POTOSÍ: THE SILVER CITY THAT CHANGED THE WORLD* 22 (2019).

<sup>176</sup> See VÍCTOR HUGO PACHAS, *HISTORIA DE UNA INCERTIDUMBRE: HÁBITAT, CONFLICTO Y PODER EN LA MINERÍA ARTESANAL DE ORO DE PERÚ* 7 (Earth First ed. 2013); See also LEONIDAS WIENER, *LA GOBERNANZA DE LA MINERÍA EN PEQUEÑA ESCALA EN EL PERÚ* 7 (2019); Gerardo Damonte, *Industrias extractivas, agricultura y uso de recursos naturales: el caso de la gran minería en el Perú*, in *EL PROBLEMA AGRARIO EN DEBATE. SEPIA XII / SEMINARIO PERMANENTE DE INVESTIGACIÓN AGRARIA*, 20 (2008).

<sup>177</sup> See Eduardo Dargent et al., *Chapter 1. Cycle of Abundance and Institutional Pathways*, in *RESOURCE BOOMS AND INSTITUTIONAL PATHWAYS: THE CASE OF THE EXTRACTIVE INDUSTRY IN PERU 175–185*, 9 (Eduardo Dargent et al. eds., 2017).

<sup>178</sup> See JUANA KURAMOTO & MANUEL GLAVE, *LA MINERÍA PERUANA: LO QUE SABEMOS Y LO QUE AÚN NOS FALTA SABER* 2 (2007).

represents the country's economic engine and thus is perceived as the source of macroeconomic stability. The slogan “*Perú, País Minero*” (Peru, A Mining Country) incarnates this sentiment. By contrast, for rural communities neighboring LSM-activities, mining often relates to environmental and social disruption. Interestingly, the expansion of LSM-activities has been accompanied by an unprecedented explosion of ASM, which no longer conforms to the characterization of a rudimentary and poverty-driven sector. This chapter describes the growth of ASM and the GP's attempts to contain it.

### **A. Public Ownership of Mineral Resources**

In contrast to the American tradition, where surface landowners own the natural resources beneath the surface,<sup>179</sup> most legal systems around the world grant title to minerals to the crown or government. In South America, the origin of the public ownership rule, also known as the “*regalian*” doctrine, goes back to colonial rule.<sup>180</sup> The 1574 Ordinances of Viceroy Francisco de Toledo stipulated that “All minerals are owned by His Majesty.”<sup>181</sup> Thanks to this rule, the Spanish Crown claimed ownership over all minerals regardless of surface right ownership or the type of minerals found.<sup>182</sup> In turn, Spaniards were allowed

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<sup>179</sup> See PAUL COLLIER, *THE PLUNDERED PLANET* 46 (2010) (“The only society in the world which has decided to leave the value almost entirely with whoever might be lucky enough to find them is the United States, which adopted the ‘finder keepers’ approach to prospecting. Everywhere else at least part of the value from the extraction of natural assets accrues to governments...”).

<sup>180</sup> See Jeannette Graulau, *Ownership of mines and taxation in Castilian laws, from the middle ages to the early modern period: the decisive influence of the sovereign in the history of mining*, 26 *CONTINUITY AND CHANGE* 13–44, 14–15 (2011).

<sup>181</sup> Toledo Ordinances, Title 1, Ordinance 1 (1574).

<sup>182</sup> See Northcutt Ely & Robert F. Jr. Pietrowski, *Changing Concepts in the World's Mineral and Petroleum Development Laws Essay*, *BYU L. REV.* 9–36, 13 (1976); WERNER R. GOCHT, HALF ZANTOP & RODERICK G. EGGERT, *THE ECONOMIC, INSTITUTIONAL, AND LEGAL FRAMEWORK FOR MINERAL DEVELOPMENT* 90 (1988).

access to mineral deposits *indirectly*, through mining concessions,<sup>183</sup> which were subject to compliance with state regulations and payment of a royalty fee (“*iura regalia*”).<sup>184</sup>

In contemporary public ownership systems, mineral resources are considered distinct from land tenure and vest immediately in the government.<sup>185</sup> Mining activities can be undertaken either by the government itself through state-owned companies or, more likely, be awarded to private companies under mining concessions. The justification for public ownership of natural resources include the right of monarchs, the notion that the corpus of the land belongs to the sovereign, the need to discharge government obligations, and the prevention of wasteful exploitation.<sup>186</sup> Yet, the main justification is that minerals “should be considered public property to be conserved and managed for the welfare of all the citizens.”<sup>187</sup>

Consistent with the regalian doctrine, the 1993 Peruvian Constitution stipulates that “All natural resources are the Patrimony of the Nation.”<sup>188</sup> Peruvian scholars have long debated the theoretical significance of this nebulous concept.<sup>189</sup> The Constitutional Court has interpreted this provision, concluding that natural resources are “a special kind of

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<sup>183</sup> See Jayni Foley Hein & Caroline Cecot, *Mineral Royalties: Historical Uses and Justifications*, DUKE ENVTL. L. & POL’Y F. 1–30, 8 (2017); DAMILOLA S. OLAWUYI, OWNERSHIP AND CONTROL OF EXTRACTIVE RESOURCES 89 (2018); Nicholas Campbell, *Principles of mineral ownership in the civil law and common law*, PROCEEDINGS (AMERICAN BAR ASSOCIATION. SECTION OF INTERNATIONAL AND COMPARATIVE LAW) 37–43, 39 (1956); LANE, *supra* note 175 at 33 (“[T]he king owned all subsurface wealth. He was simply kind enough to allow his subjects to excavate his treasures in exchange for a modest royalty”).

<sup>184</sup> See Ely and Pietrowski, *supra* note 182 at 14; Hein and Cecot, *supra* note 183 at 7–8.

<sup>185</sup> See Yinka Omorogbe & Peter Oniemola, *Property Rights in Oil and Gas under Domanial Regimes*, in PROPERTY AND THE LAW IN ENERGY AND NATURAL RESOURCES , 115 (2010).

<sup>186</sup> See Emeka Duruigbo, *The Global Energy Challenge and Nigeria’s Emergence as a Major Gas Power: Promise, Peril or Paradox of Plenty*, 21 GEO. INT’L ENVTL. L. REV. 395–454, 440–41 (2008).

<sup>187</sup> *Id.* at 441.

<sup>188</sup> “Natural resources, renewable and non-renewable, are the Patrimony of the Nation. The State is sovereign in their utilization. The law determines the conditions of their use and granting to private individuals. Such concession grants the title-holders an in rem right subject to those legal regulations.” CONSTITUCIÓN, art. 66 (Peru) (translation by author).

<sup>189</sup> See Xennia Forno, *El título minero como acto administrativo habilitante*, 8 REVISTA DE DERECHO ADMINISTRATIVO, 47 (2009).

property held by Peruvians of all generations” and that the benefits derived from their exploitation “should reach the nation as a whole.”<sup>190</sup> Considering the public interest at stake, the Constitution grants the Peruvian State full powers to legislate, manage, and adjudicate the use of natural resources regardless of surface land ownership.<sup>191</sup>

Since the 1990 economic liberalization reforms put in place by President Alberto Fujimori (1990-2000), mining operations have been conducted through LSM corporations, many of them multinational.<sup>192</sup> To operate, LSM corporations must file a mining claim to the Peruvian Mining, Metallurgy, and Geology Agency (“INGEMMET”), the agency in charge of granting mining concessions on a first-come, first-serve basis.<sup>193</sup> A mining concession grants its titleholder the exclusive right to explore and exploit mineral resources to an unlimited depth, bound by vertical limits corresponding to the sides of a square in UTM geographic coordinates.<sup>194</sup> Mining claims are not allowed in national parks, archaeological sites, and urban areas. Though it is an administrative title, a mining concession has proprietary features as it can be recorded, registered, transferred, and mortgaged.

Mining concessions have no expiration date provided that the concessionaire meets certain regulations, including payment of a good standing fee and producing a minimum target of minerals (or pay a production penalty instead). Failure to comply with these obligations for two consecutive years triggers the cancellation of the mining concession

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<sup>190</sup> See Sentencia del Tribunal Constitucional del Perú, STC 0048-2004-PI/TC, dated 04/01/2005 (§29) (translation by author).

<sup>191</sup> See *id.*

<sup>192</sup> For a brief chronology of key milestones in Peruvian history, see Appendix 2. See Roxana Barrantes, *Minería, Desarrollo y Pobreza en el Perú o de cómo todo depende del cristal con que se mire*, in *TE QUIERO PERO NO*: RELACIONES ENTRE MINERÍA, DESARROLLO Y POBLACIONES LOCALES 17–80, 17 (2015).

<sup>193</sup> See Forno, *supra* note 189 at 59.

<sup>194</sup> See Ley General de Minería, D.S. No. 014-92-EM, June 1992 (Peru), art.9.

and creates the opportunity for other individuals to reclaim the area. In addition to securing title to the mineral deposit, concessionaires must negotiate surface rights to the area with the landowner, whether private or public, and file dozens of permits to operate, including an EIA. These are the main considerations to run a *formal* LSM business.

Revitalized by the increase in international prices of minerals, Peru has become a “global center for mining expansion,”<sup>195</sup> attracting billions of USD in foreign direct investment every year<sup>196</sup> and becoming a top world producer of mineral commodities. For example, in 2018 it ranked number two in the world in the production of silver, copper and zinc, number three in lead, number four in tin, and number six in gold.<sup>197</sup> Gold production amounted to 128 million grams of gold in 2019, which were exported mainly to Canada, India, and Switzerland.<sup>198</sup> The importance of mining production to the national economy is sizeable. Between 2009 and 2018, the mining sector represented 8.64 percent of the country’s GDP and 60 percent of exports.<sup>199</sup> The number of people directly employed in

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<sup>195</sup> Anthony J. Bebbington & Jeffrey T. Bury, *Institutional challenges for mining and sustainability in Peru*, 106 PNAS 17296–17301 (2009); Dargent et al., *supra* note 177 at 5–6 (“The growth of mining investment also partly responds to the policy adopted by the Peruvian state that helped the country take advantage of the resource boom cycle. Since the 1990s, Fujimori’s government reduced state participation in the mining sector and promoted private investment through fiscal incentives and the simplification of providing concessions. As a consequence of these changes on the international and national level, mining has represented on average in the last 20 years 10% of GDP, reaching 15% in 2006. Peru, along with Chile and Bolivia, has become one of the countries where extractive industries represent the largest percentage of GDP in Latin America. The boom thus nourished already powerful private stakeholders and increased their presence in the territory”).

<sup>196</sup> See Dargent et al., *supra* note 177 at 4.

<sup>197</sup> See MINISTRY OF ENERGY AND MINES, *Informativo Minero No. 10-2009* (2019), <http://www.minem.gob.pe/minem/archivos/file/Mineria/PUBLICACIONES/INFORMATIVOS/2019/INF10-2019.pdf>.

<sup>198</sup> See *id.*

<sup>199</sup> See PRESIDENCIA DEL CONSEJO DE MINISTROS, *Informe Final de la Comision para el Desarrollo Minero Sostenible* 21 (2020), <https://www.gob.pe/institucion/pcm/informes-publicaciones/481866-informe-final-de-la-comision-para-el-desarrollo-minero-sostenible>.

LSM, both by mining companies and contractors, amounted to 200,000 in 2018.<sup>200</sup> In short, “the mining sector pays the bills of the country.”<sup>201</sup>

Interestingly, the explosion of *formal* LSM activities has been accompanied by a rise in *informal* ASM-activities,<sup>202</sup> triggering conflicts but also creating opportunities.<sup>203</sup> I unpack the expansion of ASM next.

## B. The Expansion of ASM

Traditionally poverty-driven, rudimentary, low-tech, and family-run,<sup>204</sup> ASM has been conducted in Peru since time immemorial, as evidenced by its exceptional history of gold- and silversmithing. For some, this type of artisanal mining embodies a *noble* type of informality<sup>205</sup> or the *mining of the poor*.<sup>206</sup> Peru’s modern ASM history can be divided into three moments.<sup>207</sup> First, between 1900 and 1969, ASM was conducted by peasant communities in the Andes in a sporadic way, mostly to complement their income from

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<sup>200</sup> See Sentencia del Tribunal Constitucional del Perú, STC 0048-2004-PI/TC, dated 04/01/2005 (§29).

<sup>201</sup> See Energiminas, *Claudia Cooper: «La minería es básicamente quien paga las cuentas en este país»* (2020), <https://www.energiminas.com/claudia-cooper-la-mineria-es-basicamente-quien-paga-las-cuentas-en-este-pais/> (translation by author); See also Barrantes, *supra* note 192 at 28 (“From a national treasury standpoint, mining is a fundamental activity for Peruvian economy... it has enabled us to extend our indebtedness capacity and sustain our macroeconomic policies”) (translation by author).

<sup>202</sup> See Cortés-McPherson, *supra* note 21 at 5.

<sup>203</sup> Cf. Verbrugge, *supra* note 20 at 1043 (“While in some areas this [overlap] is giving rise to conflict, a growing number of actors are now in support of working towards a ‘win-win solution’”); Kinyondo and Huggins, *supra* note 36 at 182; Interview with Gabriela Pérez-Costa, *Legal Manager at MARSA Mining Corp.* (2019) (claiming that the quality of the ore that ASM miners sell to LSM companies is outstanding, as they manually select the best pieces).

<sup>204</sup> See LENIN VALENCIA, *Las rutas del oro ilegal. Estudios de caso de cinco países* 314 239 (2015), <https://spda.org.pe/wpfb-file/larutadeloro-completo-final-doblecara-pdf/>; See also CONGRESO DE LA REPÚBLICA DEL PERÚ, *Diario de los Debates, 2001-35th Session (Law 27651)* 2843 (2001) (Congressman Torres: “Artisanal mining is essentially a family-driven activity that has been developed since time immemorial. Labor force is the engine that creates richness and employment as ASM contributes to 24% of the national gold production”) (translation by author).

<sup>205</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 7.

<sup>206</sup> Pachas, *supra* note 85 at 178.

<sup>207</sup> See PACHAS, *supra* note 176 at 86–92, 262; See also HERACLIO BONILLA, *EL MINERO DE LOS ANDES : UNA APROXIMACIÓN A SU ESTUDIO* 46 (1974).

agriculture.<sup>208</sup> Mining was not permanent but temporary. Second, the period between 1970 and 2000 was characterized by massive migration processes from rural areas into urban areas as a consequence of political violence and lack of economic opportunities.<sup>209</sup> As migrants struggled to make a living in urban centers, they resorted to mining as an economic refuge. Gradually, sporadic miners became permanent ones, establishing the first permanent ASM mining settlements, joined by their close ones.<sup>210</sup> Finally, since 2000 ASM has experienced an unprecedented explosion. In fact, by 2000 ASM-activities were responsible for one-third of the country's gold production.<sup>211</sup> Miners have propelled their activities into new areas in the Coast, the Andes, and Amazonia, founding settlements and consolidating their economic activities.<sup>212</sup> The sons and grandsons of miners themselves, this is a new generation of ASM miners.<sup>213</sup>

What explains this contemporary boom? First, mining became one of the few subsistence activities in depressed areas, where agriculture or grazing are not possible or have disappeared.<sup>214</sup> Second, weak governance and poor law enforcement have reinforced a widespread culture of evasion and informality.<sup>215</sup> According to Francisco Durand, Peru is characterized by the coexistence of informal, legal and illegal realms, which overlap and intermingle.<sup>216</sup> Legality has been surpassed by an avalanche of popular disorder that has cornered the state and its elite groups and entrenched a culture of law transgression.<sup>217</sup>

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<sup>208</sup> See PACHAS, *supra* note 176 at 86–92, 262; See also BONILLA, *supra* note 207 at 46.

<sup>209</sup> See PACHAS, *supra* note 176 at 262–263.

<sup>210</sup> See *id.* at 262–263.

<sup>211</sup> See CONGRESO DE LA REPÚBLICA DEL PERÚ, *supra* note 204 at 2842 (Congressman Carrasco).

<sup>212</sup> See PACHAS, *supra* note 176 at 262–263.

<sup>213</sup> See *id.* at 262–263.

<sup>214</sup> See JUANA KURAMOTO, *Artisanal and Informal Mining in Peru* 53 (2001), <http://pubs.iied.org/pdfs/G00730.pdf>; See also PACHAS, *supra* note 176 at 15; WIENER, *supra* note 176 at 11.

<sup>215</sup> See e.g. Putzel et al., *supra* note 52 at 463.

<sup>216</sup> See DURAND, *supra* note 116.

<sup>217</sup> See *id.*



“Informality is the natural way of conducting oneself for many people in Peru,” notes Luis Carlos Rodrigo.<sup>218</sup> Third, favorable geological conditions allow easy access to mineral deposits (what Cesar Mosquera calls “Peru’s geological fatality”<sup>219</sup>). Finally, especially after 2000, the record-breaking price of gold has turned gold-seeking into a very lucrative activity for those in quest of economic and social mobility.<sup>220</sup>

Although official surveys are unavailable or unreliable, experts roughly estimate that there are between 200,000-500,000 people engaged in ASM throughout all 25 regions of Peru,<sup>221</sup> producing 20 percent of the country’s gold.<sup>222</sup> Illegal gold mined in the region of Madre de Dios alone (Peruvian Amazon) amounts to 20 tons every year, which is more than the gold produced by ASM in Bolivia, Ecuador, and Colombia combined.<sup>223</sup> In fact,

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<sup>218</sup> Interview with Luis Carlos Rodrigo, *Mining Law expert* (2019).

<sup>219</sup> CÉSAR MOSQUERA, EL DESAFÍO DE LA FORMALIZACIÓN EN LA MINERÍA ARTESANAL Y DE PEQUEÑA ESCALA. ANÁLISIS DE LAS EXPERIENCIAS EN BOLIVIA, COLOMBIA, ECUADOR Y PERÚ 17 (2006); *See also* CONGRESO DE LA REPÚBLICA DEL PERÚ, *supra* note 204 at 2845 (Congressman Sánchez, claiming that the most important mineral deposits in Peru were discovered by small-scale miners).

<sup>220</sup> *See* CARMEN HECK, *La realidad de la minería ilegal en países amazónicos* 175 (2014), <https://spda.org.pe/wpfb-file/la-realidad-de-la-mineria-ilegal-en-paises-amazonicos-spda-pdf/>; Damonte, *supra* note 84 at 963; *See also* Jesper Bosse Jønsson & Niels Fold, *Handling uncertainty: Policy and organizational practices in Tanzania’s small-scale gold mining sector*, 33 NATURAL RESOURCES FORUM 211–220, 254 (2009) (“[F]or the lucky and knowledgeable ones, a mineral rush presents an opportunity to earn relatively large amounts of money”); Interview with Elsa Galarza (May 29, 2019), *Former Minister of Environment of Peru* (“[For the government] to compete with the price of gold is very difficult. It is intrinsically perverse”); WIENER, *supra* note 176 at 11; VALENCIA, *supra* note 204 at 243.

<sup>221</sup> *See e.g.* Cortés-McPherson, *supra* note 21; HECK, *supra* note 220 at 175. Interview with Gustavo Marini, *Senior Researcher and Project Manager at Institute for Liberty and Democracy (ILD)* (2019) (“ASM in Peru is a stationary activity. Our guess is that there are between 100,000 and 600,000 people embarked on ASM according to the time of the year, the price of gold, and status of military raids”). *See also* PACHAS, *supra* note 176 at 55 (estimating the ASM sector in 53,600 miners and 268,000 people directly related to mining, including women and children); Pachas, *supra* note 85 at 12 (estimating the ASM sector between 150,000 and 300,000 miners) (citing SPDA); Telephone interview with Gonzalo Tamayo, *Former Minister of Energy and Mines of Peru* (2019) (calculating ASM between 100,000 and 200,000 people); PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 73 (estimating the number of ASM miners in 50,000); COMBUTTERS, *¿Qué acciones se debe tomar para combatir la minería ilegal?* (2019), <https://www.youtube.com/watch?v=Qp9GB4NBZe8> (De Soto estimates that Peru has 500,000 informal miners); CONGRESO DE LA REPÚBLICA DEL PERÚ, *supra* note 204 at 2844 (Congressman Torres, reporting the existence of 200,000 ASM miners in 2000); Lenin Valencia, *Formalización ayudaría a resolver los delitos conexos a la minería*, PERU21 (2019), <https://peru21.pe/politica/formalizacion-ayudaria-resolver-delitos-conexos-mineria-video-458706> (last visited Feb 13, 2019) (claiming that sixty-five percent of ASM-activities are concentrated in Southern Peru).

<sup>222</sup> *See* Cortés-McPherson, *supra* note 21 at 2; Pachas, *supra* note 85 at 12.

<sup>223</sup> *See* Pachas, *supra* note 85 at 12.

as of 2014, the main source of illegal revenues produced in Peru is not attributed to drug trafficking, but to illegal gold mining.<sup>224</sup> The negative externalities are substantial as miners enter forests,<sup>225</sup> national parks,<sup>226</sup> indigenous lands,<sup>227</sup> employ children,<sup>228</sup> and pour mercury into waterbodies.<sup>229</sup>

The windfall of mineral rents produced over the two last decades has lured capital and machinery suppliers to what used to be a subsistence or family activity.<sup>230</sup> Supported with excavators, front loaders, dump trucks, and other equipment (all of them forbidden in ASM), some miners have managed to expand and mechanize their operations,<sup>231</sup> which no longer conform to the legal definition of artisanal or small-scale.<sup>232</sup> This emerging group of ASM opportunistic entrepreneurs has accumulated extraordinary wealth and gained

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<sup>224</sup> See Vanessa Valverde & Diego Collantes, *Alcances para una respuesta jurídica integral al comercio ilegal de oro*, 55 IUS ET VERITAS 128, 132 (2017).

<sup>225</sup> See generally Jorge Caballero et al., *Deforestation and Forest Degradation Due to Gold Mining in the Peruvian Amazon: A 34-Year Perspective*, 10 REMOTE SENSING 1903, 5 (2018) (arguing that between 1982 and 2011, Peru lost 235,000 acres of forest to informal gold mining in the southern Peruvian Amazon); Monitoring of the Andean Amazon Project (MAAP), *Gold mining deforestation at record high levels in Southern Peruvian Amazon*, MAAP #96: GOLD MINING DEFORESTATION AT RECORD HIGH LEVELS IN SOUTHERN PERUVIAN AMAZON (2019), <https://maaproject.org/2019/peru-gold-mining-2018/> (claiming that in 2017 and 2018 alone, Peru lost 45,565 acres in the Southern Amazon, which are the highest deforestation rates ever recorded); Interview with Elsa Galarza (May 29, 2019), *supra* note 220 (“The level of devastation in the Amazon is moving and infuriating. How can humans go against their own existence?”).

<sup>226</sup> To date, ASM has encroached 17 national parks and buffer zones. See Carmen Heck (ed.), *supra* note 212, at 12–15.

<sup>227</sup> Interview with Iris Olivera and Ciro Salazar, *supra* note 49.

<sup>228</sup> In Peru, 50,000 children are reported to work in the ASM sector. See *id.* at 12–15.

<sup>229</sup> Over the last 20 years, 3000 tons of mercury have been poured into the Amazonian rivers of Peru. See *id.* at 190; See also Duff & Downs, *supra* note 202.

<sup>230</sup> See Cortés-McPherson, *supra* note 21 at 5; See also PACHAS, *supra* note 176 at 86; Interview with Luis Carlos Rodrigo, *supra* note 218.

<sup>231</sup> See e.g., Damonte, *supra* note 192, at 963 (arguing that miners in Madre de Dios, in the Peruvian Amazon, are no longer poor or indigenous peoples); Jose de Echave, *La minería en el Peru. Entre la formalidad y el delito*, 263 NUEVA SOCIEDAD 131, 143 (2016) (arguing that many ASM communities have shifted from the operation of abandoned mines or easily accessible deposits, to more complex endeavors).

<sup>232</sup> See e.g., Ramón Escobar, *La otra cara del oro: La minería informal e ilegal. Un problema aun por resolver*, Sociedad Peruana de Derecho Ambiental 2 (2013), [http://www.actualidadambiental.pe/wp-content/uploads/2013/12/La-otra-cara-del-oro\\_Ramon-Escobar\\_Primer-Puesto.pdf](http://www.actualidadambiental.pe/wp-content/uploads/2013/12/La-otra-cara-del-oro_Ramon-Escobar_Primer-Puesto.pdf); Cortés-McPherson, *supra* note 157, at 2.

substantial political influence during the gold rush years, as I describe later. In Durand's words, they now constitute an 'informal bourgeoisie'.<sup>233</sup>

Accordingly, Peru's contemporary ASM sector is highly heterogeneous and differentiated. On the one hand, there is a dominant stratum of powerful ASM entrepreneurs and, on the other, a massive workforce composed of poor workers.<sup>234</sup> Mirroring similar experiences in the informal sector, ASM has become stratified and hierarchical.<sup>235</sup> To quote Kuntala Lahiri-Dutt, the ennobling connotation of the term *artisanal mining* is now a misnomer.<sup>236</sup>

## C. Regulating ASM

### 1. ASM Miners

The contemporary blooming of ASM-activities has taken place outside legal frameworks. Precisely, informality is one of its defining features.<sup>237</sup> The first piece of legislation to attempt to regularize the sector in Peru was the 2002 *Ley de Formalización y Promoción de la Pequeña Minería y la Minería Artesanal*.<sup>238</sup> Following a paternalistic debate in Congress, the law aspired not only to regulate ASM by creating an ordinary registration procedure, but also to promote it, considering the number of jobs it created.<sup>239</sup>

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<sup>233</sup> See DURAND, *supra* note 116.

<sup>234</sup> Cf. Verbrugge, *supra* note 20 at 1024; See also CONGRESO DE LA REPÚBLICA DEL PERÚ, *supra* note 204 at 2841 (Congressman Carrasco: "Artisanal miners are not the ones that file mining claims to the Ministry of Energy and Mines. Artisanal miners are the ones worked in the mine shafts, many times abandoned mines. They must negotiate with small or mid-sized miners who own the mining rights a right to enter and stay in the mines. Artisanal miners are generally the weakest party in this relationship") (translation by author).

<sup>235</sup> See DURAND, *supra* note 116.

<sup>236</sup> Cf. Lahiri-Dutt, *supra* note 22 at 3.

<sup>237</sup> See Boris Verbrugge, *The Economic Logic of Persistent Informality: Artisanal and Small-Scale Mining in the Southern Philippines*, 46 DEV. & CHANGE 1023, 1023 (2015).

<sup>238</sup> CONGRESO DE LA REPÚBLICA DE PERÚ [Congress of the Republic of Peru] 2002, Ley N° 27651. Approved unanimously.

<sup>239</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 27.

For the first time, the legal framework distinguished between *artisanal* (“PMA”) and *small-scale* (“PPM”) miners, based on production capacity and land extension thresholds.<sup>240</sup>

Table 1 shows the mining categories in force today. Importantly, this differentiation was upheld by the Constitutional Court.<sup>241</sup> While ASM and LSM fall under the regulatory umbrella of the Ministry of Energy and Mines (“MINEM”), regional governments are in charge of implementing and enforcing ASM regulation (the decentralization process from national to regional governments took place between 2004 and 2008).<sup>242</sup>

**Table 1. Mining categories**<sup>243</sup>

<b>Category</b>	<b>Maximum extension of mining concessions (in hectares)</b>	<b>Maximum production capacity (in metric tons per day)</b>	<b>Regulatory authority</b>	<b>Environmental enforcement authority</b>
Large and medium-scale mining (LSM)	Unlimited	> 5000	MINEM	OEFA
	Unlimited	350 < 5000	MINEM	OEFA
Small-scale miner (PPM)	< 2000	< 350	Regional government	Regional government
Artisanal miner (PMA)	< 1000	< 25	Regional government	Regional government

(Source: By author)

Additionally, PMA and PPM are proscribed from using certain types of machinery, equipment, and feedstock or operating in certain ecosystems. When adequately registered,

<sup>240</sup> See VALENCIA, *supra* note 204 at 247.

<sup>241</sup> See Sentencia del Tribunal Constitucional del Perú, STC 0019-2015-PI/TC, dated 11/29/2019 (§59-60).

<sup>242</sup> See VALENCIA, *supra* note 204 at 247.

<sup>243</sup> Adapted from HECK, *supra* note 220.

PMA and PPM have access to different incentives, such as exemption from payment of royalty taxes; reduced good standing fees and production penalties; fast-track environmental permitting procedures; and smaller fines in case of administrative infringements.

During President Alan García's tenure (2006-2011), the GP approved additional parameters for ASM-activities by the passing of "*Decreto de Urgencia 010-2010*". For the first time, the government zoned the region of Madre de Dios by establishing allowable and exclusion areas for ASM.<sup>244</sup> By the end of García's government, the Armed Forces and Police intervened in Madre de Dios to violently seize and destroy illegal mining camps, sparking strikes and protests.<sup>245</sup> Although *Decreto de Urgencia 10* amounted to a "declaration of war against illegal miners,"<sup>246</sup> the government would soon cede to miners' protests and stop law enforcement.<sup>247</sup>

The resulting environmental devastation, especially in Amazonia, along with pressure from developed countries,<sup>248</sup> forced President Ollanta Humala (2011-2016) to revisit Peru's 2002 legislation. In 2012, based on the powers delegated by Congress, his government was able to launch a new formalization program.<sup>249</sup> Although the program has been subsequently modified (*see* Appendix 6 for a list of key ASM legislation), it is still in force today. The program purported, on the one hand, to eradicate *illegal mining*, and on the other hand, to formalize *informal mining* (*see* Table 2 below). Illegal mining refers to

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<sup>244</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 27–30.

<sup>245</sup> See *id.* at 27–30.

<sup>246</sup> See GABRIEL ARRIARÁN, *supra* note 30 at 74.

<sup>247</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 27–30.

<sup>248</sup> See Cortés-McPherson, *supra* note 21; Interview with Iris Olivera and Ciro Salazar, *supra* note 49 ("The international scandal fostered regulatory change in Peru").

<sup>249</sup> PODER EJECUTIVO [Executive Branch] 2012, DECRETOS LEGISLATIVOS [Legislative Decrees] 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106 and 1107 (Peru).

mining activities that do not conform to the definition of artisanal or small-scale *and* operate in environmentally sensitive areas (e.g. national parks, riverbanks, watersheds, or archaeological sites). *Illegal mining*, and the provision thereto of capital, machinery, and feedstock, were therefore criminalized with up to twelve years of imprisonment.<sup>250</sup> Accordingly, during the early years of Humala’s program, the government launched spectacular military raids to destroy illegal mining camps and evict illegal miners. Humala went further on creating the position of High Commissioner for Mining Formalization in the government, a public servant who had a seat at the Cabinet of Ministers, though it would soon be dismantled.<sup>251</sup>

**Table 2. Differences between informal and illegal mining**

Informal Mining	Illegal Mining
<ul style="list-style-type: none"> <li>• Submitted the affidavit and is part of the formalization process</li> <li>• Does not work in forbidden areas</li> <li>• Does not work in water bodies</li> <li>• Qualifies to regularize his operations</li> <li>• Cannot be interdicted by the government</li> </ul>	<ul style="list-style-type: none"> <li>• Did not submit the affidavit and is not part of the formalization process</li> <li>• Works in forbidden areas</li> <li>• Works in water bodies</li> <li>• Does not qualify to regularize his operations</li> <li>• Can be interdicted by the government</li> </ul>

(Source: By author)<sup>252</sup>

<sup>250</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 32–33.

<sup>251</sup> See Presidencia del Consejo de Ministros, *Alto Comisionado para la Formalización de la Minería ratifica firme decisión del Gobierno de combatir la minería ilegal* (2013), <https://www.gob.pe/institucion/pcm/noticias/11099-alto-comisionado-para-la-formalizacion-de-la-mineria-ratifica-firme-decision-del-gobierno-de-combatir-la-mineria-ilegal>.

<sup>252</sup> Adapted from VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 21.

By contrast, *informal mining* refers to mining activities that do not conform to the definition of small-scale *but* do not operate in environmentally sensitive areas. Consequently, the 2012 program fostered the extraordinary registration of such activities within a two-year window (2012-2014), requiring miners to fulfill a six-step preclusive process:

- (a) submit an explicit intent of formalization (affidavit)
- (b) negotiate a mining lease agreement (“*contrato de explotación*”) with the owner of the mining concession
- (c) obtain a surface right
- (d) file a water authorization
- (e) conduct a rapid EIA (i.e. “IGAC”), and
- (f) secure an operating license to start-up activities.<sup>253</sup>

By complying with this preclusive process, the GP aspired to bring informal miners to formality. Note that informal miners that managed to file (a) were grandfathered and were thus allowed to continue operating informally, as they progressively complied with steps (b) through (f).<sup>254</sup> Grandfathering of miners is the backbone of the program. By contrast, *informal* miners that did not initiate the formalization process within the time window became *illegal* miners and therefore subject to eradication.<sup>255</sup> To protect informal miners from evictions or prosecution, the GP extended identification cards to those miners that had filed requisite (a) above.

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<sup>253</sup> See generally Salo et al., *supra* note 186, at 1060; Duff & Downs, *supra* note 202, at 555.

<sup>254</sup> See Valverde and Collantes, *supra* note 138 at 134.

<sup>255</sup> *Informal* miners that did not initiate the formalization process within the time window became *illegal* miners and therefore subject to eradication. To protect informal miners from evictions or prosecution, the government extended identification cards to those miners that had filed an intent of formalization (step a above). In other words, informal miners who initiated the formalization process are deemed legal, even if they have not completed all six formalization steps. See Valverde & Collantes, *supra* note 219, at 132.

In addition, the government created a bureaucratic traceability system that spanned all the life of gold, from extraction to processing and trade.<sup>256</sup> Accordingly, actors involved in the production (e.g. contractors, informal miners, suppliers of machinery and feedstock) and trade of gold (e.g. buyers, traders, exporters) must register and periodically report their operations to MINEM's *ad hoc* registry ("*Registro Especial de Comercializadores y Procesadores de Oro–REPCO*").<sup>257</sup> Buyers and traders are also required by law to verify the licit origin of the gold they buy or they could face criminal prosecution.

In light of the difficulties that the GP's program faced in the field, as well as protests from miners, Humala's administration amended the rules and extended the formalization deadline to 2016, the same year he left office.<sup>258</sup>

President Pedro Pablo Kuczynski (2016-2018) ratified Humala's program, though it introduced some adjustments. He simplified the steps to access formalization and created a new category to simplify the EIA process (i.e. "IGAFOM").<sup>259</sup> Further, his government prolonged the formalization deadline from 2016 to 2020.<sup>260</sup> In a controversial move, the Kuczynski administration liberalized the use of previously proscribed machinery and equipment (e.g. excavators, front loaders, dump trucks, tank trucks, and pneumatic compressors).<sup>261</sup> He also amended the criminal code to enable prosecuting illegal miners on organized crime charges, thus aggravating criminal sanctions.<sup>262</sup>

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<sup>256</sup> See e.g. WIENER, *supra* note 176 at 25–26.

<sup>257</sup> See Ministry of Energy & Mines of Peru, Registro Especial de Comercializadores y Procesadores de Oro, <http://intranet2.minem.gob.pe/ProyectoDGE/Mineria/registro%20especial%20de%20comercializadores%20y%20procesadores%20de%20oro.pdf>.

<sup>258</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 35–36.

<sup>259</sup> See *id.* at 37.

<sup>260</sup> PODER EJECUTIVO [Executive Branch] 2016-17, DECRETOS LEGISLATIVOS [Legislative Decrees] 1244, 1293, 1336 and 1351 (Peru). Legislative Decrees.

<sup>261</sup> See Valverde & Collantes, *supra* note 219, at 147.

<sup>262</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 37.



More recently, President Vizcarra (2018-present) relaxed environmental requirements even further and set up a one-stop-shop to streamline the delivery of permits.<sup>263</sup> In October 2019, Congress approved an additional extension to the formalization deadline to December 2021, but Vizcarra did not use his veto powers.<sup>264</sup> Just like President Humala did before him, his government decided to kick the problem forward to the next administration (2021-2026). The subsequent extensions to the regularization deadline meant that informal miners were granted not only more time to comply with the permitting process, but also new miners were allowed to file affidavits, turning into a never-ending cycle.

In February 2019, the Vizcarra administration launched *Operación Mercurio*, an unprecedented operation against illegal mining in Madre de Dios that not only comprised military raids and the installation of permanent military camps, but also government-funded social programs to provide alternative livelihoods for miners and victims of human trafficking. This operation has allegedly allowed a 92 percent reduction in deforestation.<sup>265</sup>

As regards the program's results, according to MINEM, out of the 54,721 informal miners who submitted the affidavit (step *a* above), only 7,266 (i.e. thirteen percent) have completed all steps of the formalization process.<sup>266</sup> As depicted in Figure 4 below, the GP

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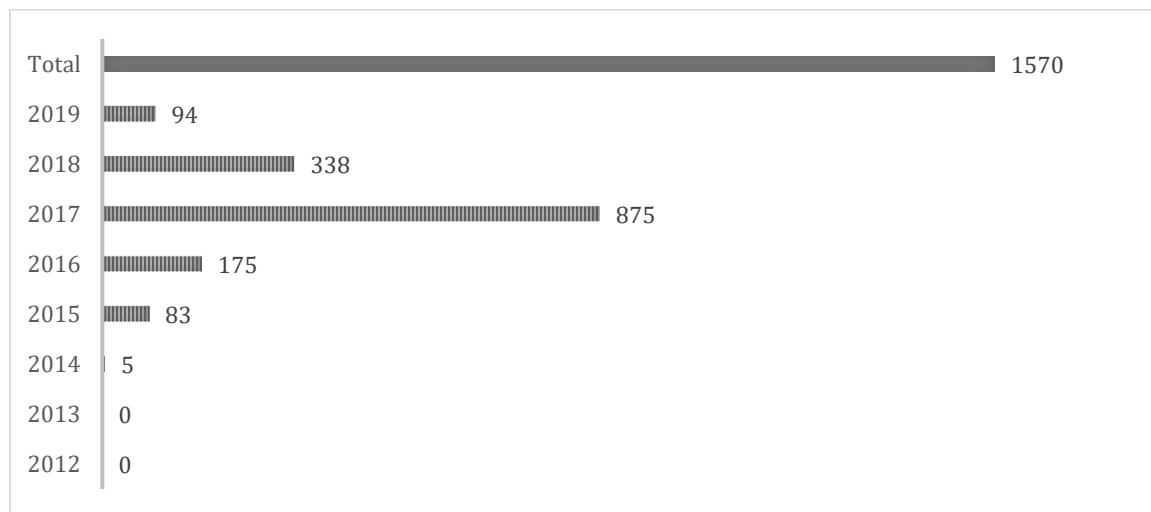
<sup>263</sup> PODER EJECUTIVO [Executive Branch] 2017, DECRETO LEGISLATIVO [Legislative Decree] 1451 (Peru). The former Director of ASM Formalization Office at MINEM suggests that “the government cannot set the bar too high for informal miners so we need to make rules more flexible to accommodate them” (author's translation). See Valencia, *supra* note 221.

<sup>264</sup> CONGRESO DE LA REPÚBLICA DE PERÚ [Congress of the Republic of Peru] 2002, Ley N° 31007.

<sup>265</sup> See El Comercio, *Madre de Dios: la deforestación por minería ilegal en La Pampa se redujo en 92%* (2019), <https://elcomercio.pe/peru/madre-de-dios/madre-dios-deforestacion-mineria-ilegal-pampa-redujo-92-noticia-ecpm-662034>; Yet, it is too early to assess the results of Operación Mercurio and its long-term effects. Interview with Pedro Solano, *Former Executive Director of SPDA* (2019).

<sup>266</sup> See Ministry of Energy and Mines, *Registro Integral de Formalización Minera (REINFO)*, [http://www.minem.gob.pe/\\_detalle.php?idSector=20&idTitular=8049&idMenu=sub8048&idCateg=1442](http://www.minem.gob.pe/_detalle.php?idSector=20&idTitular=8049&idMenu=sub8048&idCateg=1442); MINISTRY ENERGY AND MINES, *Respuesta a la Solicitud de Acceso a la Información Pública - Expediente N° 2966854* (2019).

did not issue any formalization permits until 2014, when five miners were formalized. In 2017, following the relaxation of some requirements, the largest number of people accessed legal status. It is worth noting that, as of 2017, the formalization permit comprises not only the individual miner who files the permit, but also his partners under association or cooperative vehicles.



**Figure 4. Number of formalization permits issued by the government (2012-2018)**

(Source: MINEM)<sup>267</sup>

According to the former Minister of the Environment, the results shown by the government represent a “good starting point.”<sup>268</sup> Yet, the program remains fiercely resisted and largely ineffective.<sup>269</sup>

<sup>267</sup> MINISTRY OF ENERGY AND MINES, *supra* note 266.

<sup>268</sup> Telephone interview with Lucia Ruiz, *former Minister of the Environment of Peru* (14 September 2019).

<sup>269</sup> See e.g. Damonte, *supra* note 84 at 957; Salo et al., *supra* note 52 at 1061; Duff and Downs, *supra* note 78 at 4.

## 2. Lottery Miners

Lottery miners were not originally contemplated as part of the GP's formalization program. In fact, they fall in a gray area: they are neither mine owners (i.e. they do not hold a mining right directly) nor contractors (i.e. they do not hold a mining lease that entitles them to exploit the ore in someone else's mining concession) nor SER workers (i.e. they do not hold a formal or written full time employment agreement). Officially, then, they fell outside the legal framework and risked falling into the category of illegal mining.<sup>270</sup>

Following strikes in Puno organized by lottery miners themselves, which summoned more than 50,000 people,<sup>271</sup> in July 2012 the government passed an *ad hoc* regulation ("*Decreto Supremo 027-2012-EM*").<sup>272</sup> This regulation authorized lottery miners—defined as *third parties that extract gold from areas that belong to mining concessionaires or contractors following customary traditions recognized and practiced in the region of Puno—to sell gold to processing plants or gold traders, provided that the concessionaires or contractors had initiated the formalization program.*<sup>273</sup> This regulation also obliged concessionaires or contractors to keep record of the lottery miners authorized to work within their property and issue a certificate of origin for the gold they trade.<sup>274</sup>

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<sup>270</sup> See Ministry of Energy and Mines of Peru, *Cost-Benefit Analysis for Decreto Supremo N° 018-2018-EM* (2018).

<sup>271</sup> See Andina, *Mineros artesanales de Puno levantan paro y se comprometen a no contaminar medio ambiente*, <https://andina.pe/agencia/noticia-mineros-artesanales-puno-levantan-paro-y-se-comprometen-a-no-contaminar-medio-ambiente-425452.aspx>; Ministry of Energy and Mines of Peru, *supra* note 270.

<sup>272</sup> See Ministry of Energy and Mines of Peru, *Decreto Supremo N° 027-2012-EM, que dicta normas complementarias al Decreto Legislativo N° 1105 para la comercialización de oro* (2012). This regulation was applicable exclusively to lottery miners in La Rinconada y Cerro Lunar. It was later amendment, though, to include all lottery miners in other provinces of Puno (Sandia and Carabaya). See Ministry of Energy and Mines of Peru, *Decreto Supremo N° 039-2012-EM* (2012).

<sup>273</sup> See Ministry of Energy and Mines of Peru, *supra* note 272 (Article 1); Ministry of Energy and Mines of Peru, *Cost-benefit Analysis for Decreto Supremo N° 027-2012-EM* (2012).

<sup>274</sup> See Ministry of Energy and Mines of Peru, *supra* note 272 (Article 2).

Furthermore, *Decreto Supremo 27* instructed the Ministry of Labor to create a Special Labor Formalization Program aiming to guarantee the labor rights, safety and health, and social security for lottery miners.<sup>275</sup> The plan was approved in May 2014, almost two years later, and established a list of activities that covered the following objectives: (a) orientation, sensitization, and supervision, (b) promotion of employment, and (c) interinstitutional coordination.<sup>276</sup> The plan comprised activities from June through December 2014<sup>277</sup> and was not renewed or replaced.

*Decreto Supremo 27* soon demonstrated to be a fiasco as it failed to trace the legal origin of gold.<sup>278</sup> There were many cases of adulterated certificates of origin. Six years later, the Kuczynski administration amended this statute by passing “*Decreto Supremo 018-2018-EM*”,<sup>279</sup> which shifted the burden to *cachorreros*, requiring them to register before a new roster at MINEM (i.e. “*Padrón de Terceras Personas Naturales y Seleccionadores Manuales de Oro–PTP*”).<sup>280</sup> The aim was to obtain more reliable information on gold production and trade from informal mining activities, and to stiffen the control over the sector.<sup>281</sup> For the first time, *Decreto Supremo 18* also entitled each lottery miner to trade a maximum of sixty-six grams of gold per month.<sup>282</sup> To date, almost

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<sup>275</sup> See *id.* (Article 5).

<sup>276</sup> See Ministry of Labor of Peru, *Resolución Ministerial 094-2014-TR, Aprueban el “Plan de Acción para la orientación, sensibilización y fiscalización en materia de derechos laborales, seguridad y salud en el trabajo y seguridad social, así como para la promoción del empleo, en el marco de lo previsto en el Decreto Supremo N° 027-2012-EM”* (2014).

<sup>277</sup> See *id.*

<sup>278</sup> See Ministry of Energy and Mines of Peru, *supra* note 270; Interview with Jacinto Flores, *cachorro worker* (2019).

<sup>279</sup> See Ministry of Energy and Mines of Peru, *Decreto Supremo N° 018-2018-EM* (2018).

<sup>280</sup> See *id.* (Article 2).

<sup>281</sup> See Ministry of Energy and Mines of Peru, *supra* note 270.

<sup>282</sup> See Ministry of Energy and Mines of Peru, *supra* note 279 (Article 2). According to MINEM, lottery miners produce a maximum of 60 grams of gold per month. This threshold was set in coordination with CECOMIRL and, allegedly, mirrors similar income thresholds established for other micro-entrepreneurs in Peru. See Ministry of Energy and Mines of Peru, *supra* note 270.

12,000 *cachorreros* have registered at MINEM's PTP,<sup>283</sup> though such registration does not amount to the formalization of miners' employment relationships.

*Decreto Supremo 18* also established that mining concessionaires and contractors were responsible for compliance with environmental, health and safety regulations within their property, "regardless of the relationship they hold with lottery miners."<sup>284</sup> It also banned children from accessing the lottery miners' roster, and work "under forced labor conditions."<sup>285</sup>

Finally, in 2015 and 2019 two political parties submitted draft legislation to Congress to regulate *cachorro*, but they did not prosper (*see* Appendix 7).

#### **D. Formalizing from Nowhere?**

Both in terms of the number of miners that have accessed formalization title (13 percent) and the prosecution of illegal mining (only one case has resulted in imprisonment since the raids and evictions took place in 2012),<sup>286</sup> the program has been largely ineffective. Experts believe the program is legalist, overly bureaucratic, and slow,<sup>287</sup> and is doomed to failure.<sup>288</sup> To quote Víctor Hugo Pachas, "If we consider that the first attempt to regularize ASM dates back to 2002, this means that the Peruvian State has been unable

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<sup>283</sup> See Ministry of Energy and Mines, *Padron de Terceras Personas Naturales y Seleccionadores Manuales de Oro*, [http://www.minem.gob.pe/\\_detalle.php?idSector=20&idTitular=8820&idMenu=sub8819&idCateg=1611](http://www.minem.gob.pe/_detalle.php?idSector=20&idTitular=8820&idMenu=sub8819&idCateg=1611) (last visited Aug 24, 2019).

<sup>284</sup> See Ministry of Energy and Mines of Peru, *supra* note 279 (Article 5).

<sup>285</sup> See *id.* (Article 5).

<sup>286</sup> See Ruiz, *supra* note 142; VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 9–10; Reaño, *supra* note 142 (arguing that between 2013 and 2016, the government conducted 103 raids in Madre de Dios against illegal miners).

<sup>287</sup> See Marc Dourojeanni, *Las propuestas de Hernando de Soto sobre la minería informal*, SPDA ACTUALIDAD AMBIENTAL (2015), <http://www.actualidadambiental.pe/?p=27796> (last visited Feb. 13, 2019); Interview with Elsa Galarza (May 29, 2019), *supra* note 216.

<sup>288</sup> Interview with Juana Kuramoto, *supra* note 83. See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 30; Interview with Eva Arias, *CEO at Poderosa Mining Corp.* (2019).

to formalize miners in eighteen years!”<sup>289</sup> More recently, the Commission for Sustainable Mining Development in charge of proposing amendments to Peru’s Mining Law, pointed out in its final report that the GP has attempted to tackle ASM “without policies and programs that incentivize miners to fulfill their obligations.”<sup>290</sup> Worse still, it concluded that Peru’s regularization efforts have not been effective and thus urged the government to adopt a new approach.<sup>291</sup>

Building on this criticism, next I show not only that Peru’s ASM regulation is probably the most scandalous regulatory failure in decades, but also that the GP has become, in practice, an agent of ASM *informalization* due to complicit and negligent behavior in the regulation and enforcement of ASM-activities. This is evidenced in the following factors: the legalist model chosen, institutional weaknesses, structural constraints, and the oversight of a massive workforce from the regularization process. I unpack these arguments next.

## 1. A Legalist Model

The complex and tedious administrative procedures created by the GP do not respond to a coherent or holistic formalization strategy to regularize ASM-activities and combat illegal mining.<sup>292</sup> As Javier Yrigoyen puts it, “there is no strategy at all”.<sup>293</sup> The

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<sup>289</sup> VÍCTOR HUGO PACHAS, *supra* note 174; Interview with Miguel Inchaústegui, *Former Vice-Minister of Mines of Peru* (2019) (acknowledging that the GP’s program results are poor).

<sup>290</sup> PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 72 (translation by author).

<sup>291</sup> *See id.* at 72.

<sup>292</sup> *See* WIENER, *supra* note 176 at 75; *See also* CONGRESO DE LA REPÚBLICA DEL PERÚ, *supra* note 173 at 109 (Congressman Roman: “All these paperwork that miners must file include contracts, public deeds, licenses, permits, professional fees, time, dedication, all of which turn out to be too onerous and complex for artisanal miners. It is urgent to create a legal system that corrects all these deficiencies and makes it friendly for artisanal miners”) (translation by author).

<sup>293</sup> Telephone interview with Javier Yrigoyen, *ASM expert* (2020); *See also* CONGRESO DE LA REPÚBLICA DEL PERÚ, *supra* note 173 at 111 (Congressman Melgarejo, claiming that the Executive Branch has failed to approve a clear policy for ASM formalization).

Commission for Sustainable Mining Development concurs and sanctions: “To date, there has not been a policy that transcends isolated interventions and provides continuity to the fulfillment of goals over time... A policy for formalization should aim at having at least five years of continuous implementation.”<sup>294</sup> This lack of strategy is further evidenced by the number of amendments introduced to the program since its inception in 2012 (i.e. 15), which includes laws, legislative decrees, and regulations.<sup>295</sup> Next, I provide some examples of the flaws of this legalist approach.

First, the formalization program was poorly designed from the beginning if we consider that the GP lacked baseline studies or surveys on ASM-activities. “The GP had no idea about how to tackle ASM,” claims Roxana Barrantes.<sup>296</sup> This prompted a bureaucratic response that has proven to be narrow-sighted, shown little understanding of miner’s idiosyncrasies, and treated all artisanal miners as a monolithic group.<sup>297</sup> “The government legislated without having baseline information. It simply conducted desk work without knowledge of the realities on the ground,” argues Yrigoyen.<sup>298</sup> Rather, a more nuanced and flexible approach is suggested,<sup>299</sup> one that acknowledges ASM’s diversity and heterogeneity.<sup>300</sup>

Second, the government has equated *formalization* with *legalization*, that is to say, the recognition of ASM miners’ right to work through licenses, permits, or mining

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<sup>294</sup> PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 75. (translation by author).

<sup>295</sup> *See id.* at 75.

<sup>296</sup> Telephone interview with Roxana Barrantes, *President of the Commission for Sustainable Mining Development* (2020).

<sup>297</sup> Interview with Alicia Abanto, *supra* note 88; Telephone interview with Jaime Cuzquén, *Labor Law expert* (2019); PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 73. 22 MAY 2019

<sup>298</sup> Telephone interview with Javier Yrigoyen, *supra* note 293; *see also* PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 73; VALENCIA, *supra* note 204 at 241.

<sup>299</sup> Interview with Alicia Abanto, *supra* note 88; PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 77.

<sup>300</sup> Telephone interview with Roxana Barrantes, *supra* note 296.

concessions.<sup>301</sup> “The GP has followed a legalist approach to ASM because lawyers think that things will change just because a new law says so.”<sup>302</sup> In actuality, as mentioned before, formalization strategies “[...] should include, for example, interventions to improve access to finance, credit, markets, as well as training on mining techniques, formation of associations or cooperatives, and minimizing environmental impacts.”<sup>303</sup> Unfortunately, none of these enabling conditions have been part of the policy design.

Third, the GP’s program focuses on regularizing *gold production*, not *gold trade*. The informal miner is the main protagonist of the policy design, even if “he is the weakest link in the formalization process because he has no easy access to state bureaucracy or resources to mobilize.”<sup>304</sup> Experts suggest tackling gold trading instead, shifting the (regulatory) burden from the weakest to the strongest player.<sup>305</sup> In this regard, the world’s emerging middle class—whose appetite for gold has skyrocketed over the last decades<sup>306</sup>—should bear part of the responsibility and contribute to the solution. To date there are only a handful of pilot projects for conducting due diligence, traceability, and green gold certification processes for legally mined gold in Peru.<sup>307</sup>

Fourth, the GP’s legalist model translates into a tedious and onerous permitting system that mirrors the rules applicable to LSM (e.g. mining concession, EIA, water

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<sup>301</sup> See UNITAR & ONU MEDIO AMBIENTE, *supra* note 33 at 17.

<sup>302</sup> Telephone interview with Roxana Barrantes, *supra* note 296.

<sup>303</sup> Cf. Buss et al., *supra* note 71 at 1102; *see also* Interview with Máximo Gallo, *Former Director of the ASM Formalization Office, Ministry of Energy and Mines of Peru* (2019); JONG, *supra* note 67.

<sup>304</sup> Interview with Juana Kuramoto, *supra* note 83.

<sup>305</sup> *See id.*

<sup>306</sup> *See* Verbrugge and Geenen, *supra* note 24 at 415; *see also* Jingting Liu, *Covered in Gold: Examining gold consumption by middle class consumers in emerging markets*, 25 INTERNATIONAL BUSINESS REVIEW 739–747 (2016); PIETH, *supra* note 31 at 66 (arguing that 50% of the world gold production goes to jewellery and watchmaking).

<sup>307</sup> Interview with Juana Kuramoto, *supra* note 83; Telephone interview with Gonzalo Tamayo, *supra* note 221.



permit, title to surface lands, operating license, etc.). The government has simply extrapolated the LSM legal framework to ASM, creating a *bureaucratic monster*.<sup>308</sup> As

Ada Alegre puts it,

ASM legislation takes the rules applicable to large corporations and applies them to small miners. But it simply makes no sense to force ASM miners to retain EIA consultants and go through a long revision process of technical recommendations. The aim of environmental law is not the approval of documents or permits but rendering legislation effective.<sup>309</sup>

Of course, this approach has prompted business opportunities for environmental consultants, who allegedly charge artisanal miners up to USD 15,000 for drafting the environmental paperwork,<sup>310</sup> privileging form over substance. To quote the director of environmental policy and regulation at the Ministry of Environment, Nancy Chauca, “it is a mistake to consider that ASM will transform into a clean activity by simply filing environmental permits. A permit cannot be the magic wand towards formalization.”<sup>311</sup> Simply put, without other enabling conditions, “fulfilling the government’s program simply provides a façade of formality.”<sup>312</sup>

Fifth, as mentioned earlier, the government’s program is premised on grandfathering the existing informal miners. By simply submitting an affidavit, informal

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<sup>308</sup> Interview with Alicia Abanto, *supra* note 88; Interview with Elsa Galarza (May 29, 2019), *supra* note 220.

<sup>309</sup> Interview with Ada Alegre, *Environmental Law expert* (2019); *see also* Interview with Reiner Paredes, *Public Servant, Ministry of Energy and Mines of Peru based in Puno* (2019); Interview with Nancy Chauca, *Director of Environmental Policy and Regulation, Ministry of the Environment of Peru* (2020) (arguing that permitting processes have been simplified assuming that ASM impacts are smaller than LSM); Eden Delzo, *La minería en las zonas marrones: Formalización de los mineros artesanales en el distrito de Curicaca*, 2015 (arguing that the administrative processes for ASM are the same as LSM).

<sup>310</sup> Interview with Reiner Paredes, *supra* note 309. The Commission for Sustainable Mining Development proposes to group miners under one single EIA for a larger plot of land, making the process more cost-effective. Alternatively, it recommends the GP to take over the EIA costs and later bill the miners for the costs incurred. *See* PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 78.

<sup>311</sup> Interview with Nancy Chauca, *supra* note 309.

<sup>312</sup> Interview with Ada Alegre, *supra* note 309; *see also* Interview with Nancy Chauca, *supra* note 309 (arguing that submitting an environmental permit is a mere formality).

miners were immediately allowed (and still are) to continue their operations regardless of the social and environmental externalities they produce. In practice, ASM miners simply apply to the program “to maintain the *status quo* and keep working.”<sup>313</sup> As Gabriel Arriarán bluntly puts it, “Far from representing the starting point of the formalization procedure of an economic activity, what the Peruvian government has allowed [i.e. grandfathering existing activities based on the submittal of affidavits] is adopting a massive system of gold laundering of produced illegally.”<sup>314</sup>

Worse still, the government has granted multiple extensions to the submittal of the affidavits (from 2014 to 2021!), showing its lack of teeth to enforce its own rules. This means that the GP would have grandfathered informal mining activities for seven years! According to Ricardo Valdes et al., “the main mistake the government made in the implementation of the formalization process was to cede to miners’ pressure to extend the deadlines.”<sup>315</sup> These extensions fostered new invasions of LSM mining concessions and the return to work of miners that had been left out of the program.<sup>316</sup> As Leonidas Wiener puts it, “miners believe that the current formalization process will fail, so they speculate on the deadline extensions, allowing them to keep working illegally or informally beyond the regularization deadline.”<sup>317</sup>

An unanticipated consequence of the successive deadline extensions is its effect on LSM operations. According to a confidential source in the LSM industry,<sup>318</sup> some medium-size companies now resort to ASM miners in the shadow to perform exploration for them

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<sup>313</sup> Interview with Jesús Álvarez, *supra* note 174.

<sup>314</sup> ARRIARÁN, *supra* note 30 at 36 (translation by author).

<sup>315</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 99 (translation by author).

<sup>316</sup> See WIENER, *supra* note 176 at 30.

<sup>317</sup> *Id.* at 75. (translation by author).

<sup>318</sup> Interview with confidential LSM operator, (2019).

because obtaining the necessary permits to conduct exploration takes LSM companies five to ten years, and ASM only needs an affidavit to start operating.<sup>319</sup> “This provides a quick route to start exploring circumventing LSM rules. It is sad, but this is what is happening now. Formal companies can use informal vehicles to save time and money.”<sup>320</sup>

Lastly, the program imposes on informal miners the obligation to negotiate directly with the mining concessionaire a mining lease, proving to be the greatest challenge for regularization,<sup>321</sup> especially since more than 88 percent of informal miners work on someone else’s mining concession.<sup>322</sup> Some of these preexisting concessions are under operation, but most of them are simply dormant (in Spanish, “*concesiones ociosas*”). As mentioned before, the Mining Law allows mining corporations to hold their mining rights even if they do not operate them, provided that they pay the good standing fee and the penalty for not producing. Mining concessionaires have thus no real incentive to assign rights to artisanal miners that squat on their own mining rights.<sup>323</sup> As former Congresswoman Tania Pariona (2016-2019) puts it,

The problem is not the deadline [in the formalization process] [...] Most informal miners cannot formalize because they occupy mining concessions that belong to third parties. They will not be able to formalize even if we grant a 20-year extension [to the formalization program]. The underlying issue is thus connected to the mining concession regime[...] We have already extended the formalization deadline four times. We now want to open the record again, and again, while the only requisite is filing an affidavit [to continue operating] [...] What Congress is doing here is to

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<sup>319</sup> *Id.*

<sup>320</sup> *Id.*

<sup>321</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 26; See also WIENER, *supra* note 176 at 66.

<sup>322</sup> Interview with Gallo, *supra* note 251.

<sup>323</sup> See WIENER, *supra* note 176 at 68. The Commission for Sustainable Mining Development recommends conducting a benchmarking to better understand other alternatives regarding the cancellation of mining rights, especially dormant ones. See also PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 78.

produce more informality, because we are promoting a [formalization] process that is not addressing the real problem.<sup>324</sup>

While in other countries the squatting on mining concessions by ASM miners is deemed illegal, in Peru the GP's program allows this regularization, provided that the preexisting concessionaire consents to it. In other words, the government relies on two conflicting parties—the formal owner of the preexisting mining concession and the squatter—to enter into a voluntary mining lease. This policy choice seems overly simplistic and naïve,<sup>325</sup> especially if there is no regulatory or policy arrangement to foster negotiation or mediation between the parties.<sup>326</sup> As the former Peruvian Minister of Energy and Mines puts it, “Without tackling this overlapping issue there is not much more you can do.”<sup>327</sup> In any event, the prospect of a voluntary agreement seems highly unlikely.

Ignoring mining squatters is not always an option, though. LSM companies are sometimes driven to enter into mining leases as a way to ensure a peaceful coexistence with ASM miners or squatters.<sup>328</sup> Some LSM companies that have entered into such agreements now seem to regret it: “Once a mining company enters into a mining lease with the squatters on our own mining concession, the government simply disappears, leaving us to deal with future encroaching or violations to the terms of our lease.”<sup>329</sup>

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<sup>324</sup> CONGRESO DE LA REPÚBLICA DEL PERÚ, *supra* note 173 at 119–20 (Congresswoman Pariona).

<sup>325</sup> See DEFENSORIA DEL PUEBLO, GESTIÓN DEL ESTADO FRENTE A LA MINERÍA INFORMAL E ILEGAL EN EL PERÚ. SUPERVISIÓN A LA IMPLEMENTACIÓN DE LOS DECRETOS LEGISLATIVOS PROMULGADOS AL AMPARO DE LA LEY N.º 29815 159 (2013), <https://www.defensoria.gob.pe/wp-content/uploads/2018/05/informe-defensorial-160.pdf>; Cortés-McPherson, *supra* note 157, at 3. See also VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 26.

<sup>326</sup> See WIENER, *supra* note 176 at 68.

<sup>327</sup> Telephone interview with Gonzalo Tamayo, Former Minister of Energy and Mines of Peru (June 13, 2019).

<sup>328</sup> Interview with anonymous executive of Peru's Mining Guild (SNMPE), (2019).

<sup>329</sup> Interview with Eva Arias, CEO, Poderosa Mining Corp. (July 3, 2019).

## 2. Institutional Weakness

Arguably, one of the first mistakes of the GP's policy design for the formalization of ASM was to transfer (decentralize) the purview over ASM to regional governments. Not only they had no financial or technical capacity to deal with the regularization of ASM-activities,<sup>330</sup> but also they had little political will to implement the program and enforce the law, considering their vested interests and proximity to ASM sources.<sup>331</sup> According to the Commission for Sustainable Mining Development, the decentralization of the purview over ASM proved to be an "excuse for inaction".<sup>332</sup> To quote Barrantes, "Government officials pay lip-service to the idea of formalizing ASM."<sup>333</sup>

Besides decentralizing the purview over ASM, the Executive Branch has failed to provide regional governments with the material and technical support to tackle ASM. In 2019, the total resources transferred to all 25 regional governments in Peru amounted to USD 8.3 million, that is, around USD 330,000 each.<sup>334</sup> For instance, the region of Puno was assigned USD 345,000 in 2019, but due to poor management capabilities it only burned 79 percent.<sup>335</sup> The staff devoted to tackling ASM includes 15 public servants, who

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<sup>330</sup> Interview with Iris Olivera and Ciro Salazar, *supra* note 49.

<sup>331</sup> See Gerardo Damonte, *Mining Formalization at the Margins of the State: Small-scale Miners and State Governance in the Peruvian Amazon*, 49 DEVELOPMENT AND CHANGE, 1320 (2018); ANTHONY BEBBINGTON, GOVERNING EXTRACTIVE INDUSTRIES : POLITICS, HISTORIES, IDEAS 48 (2018); Interview with Jesús Álvarez, *supra* note 174 (reporting that the regional office of Puno has fifteen public servants to deal with 280 formalization applications. To date only 23 informal miners have completed the process); *see also* Interview with Yuri Coaila, *Manager of OEFA's Office in Puno* (2019) (claiming that on top of a problem of lack of staff, there is a high turnover in Puno Regional Government); Interview with Jesús Álvarez, *supra* note 174 ("There is no coordinated work. The Regional Government of Puno is left alone with the problem"); WIENER, *supra* note 176 at 72; Telephone interview with César Ipenza, *ASM expert* (2020).

<sup>332</sup> See PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 76.

<sup>333</sup> Telephone interview with Roxana Barrantes, *supra* note 296.

<sup>334</sup> See PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 75.

<sup>335</sup> See Ministry of Economy and Finance of Peru, *Consulta Amigable Consulta de Ejecución del Gasto* (2020), <https://www.mef.gob.pe/es/seguimiento-de-la-ejecucion-presupuestal-consulta-amigable>.

cannot keep up with the 280 formalization applications they receive every year.<sup>336</sup> Not surprisingly, only 23 miners have completed the formalization program to date.<sup>337</sup> As one informant at Puno’s regional government admits, “We do not know how many informal miners exist in our region.”<sup>338</sup>

In turn, at the national level, the Executive Branch has shown poor coordinating powers.<sup>339</sup> “Government officials do not work collaboratively. They deal with problems according to the purview they represent and the little fragment of power they have. But the citizens do not care if the public servant they contact belongs to what agency. For citizens, the government is just one.”<sup>340</sup> In practice, MINEM and the Ministry of Environment have demonstrated little articulation capability and dissimilar visions over the regularization of the sector.<sup>341</sup> As Nancy Chauca puts it,

There are simply too many actors trying to deal with ASM: MINEM, the Ministry of Environment, Ministry of Interior, the Ministry of Finance, the Tax Agency, the Prime Minister’s Office, etc. There is poor communication among them, little articulation, and no leadership. MINEM is not willing to lead the formalization process. Each agency holds a little *fragment* of power, which translates into mutual blaming and finger-pointing. There is no overarching or *supra-ministerial* vision to ASM, which is indispensable nowadays.<sup>342</sup>

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<sup>336</sup> Interview with Jesús Álvarez, *supra* note 174.

<sup>337</sup> *Id.*

<sup>338</sup> *Id.*

<sup>339</sup> See PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 76.

<sup>340</sup> Telephone interview with Roxana Barrantes, *supra* note 296.

<sup>341</sup> See Damonte, *supra* note 331 at 1330; Interview with Miguel Inchaústegui, *supra* note 289; Interview with Jesús Álvarez, *supra* note 174; Interview with Pedro Solano, *supra* note 265. Nonetheless, the former Minister of the Environment contends that, unlike the Kuczynski’s administration, the current ministers work in a “coordinated and articulated manner.” Telephone interview with Lucía Ruiz, *supra* note 268.

<sup>342</sup> Interview with Nancy Chauca, *supra* note 309; Interview with anonymous executive of Peru’s Mining Guild (SNMPE), *supra* note 328 (“ASM is not a top priority for MINEM”).

In light of the above, the Commission for Sustainable Mining Development suggests the creation of an *ad hoc* agency that takes over the GP's formalization program and enforces ASM legislation.<sup>343</sup>

On the other hand, additional weaknesses in the public sector include a high turn-over of staff, failure to conduct fieldwork, and dissimilar criteria among public servants.<sup>344</sup> Moreover, the government has created a complex system of data recording and reporting related to gold trading (e.g. acquisition of explosives and feedstock, as well as gold transactions and exports), but is incapable of contrasting it or using it for decision-making.<sup>345</sup>

From the distribution of tasks and responsibilities, to the underfunding of the formalization program, as well as mutual blaming and lack of shared vision, the government has been unable to overcome its institutional weaknesses to deal with informality in ASM.<sup>346</sup>

### **3. Structural Constraints**

Peruvians have a high tolerance to informality<sup>347</sup> and corruption,<sup>348</sup> which hinders any formalization attempt. In a context of institutional collapse and economic crisis during the 1980 decade, Peruvians embraced informality and were willing to accept the rules of

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<sup>343</sup> See PRESIDENCIA DEL CONSEJO DE MINISTROS, *supra* note 199 at 79.

<sup>344</sup> Interview with Eva Arias, *supra* note 288.

<sup>345</sup> Interview with Juana Kuramoto, *supra* note 83.

<sup>346</sup> Telephone interview with Gonzalo Tamayo, *supra* note 221; Interview with Elsa Galarza (May 29, 2019), *supra* note 220.

<sup>347</sup> Interview with Solano, *supra* note 233; Interview with Abanto, *supra* note 206; Interview with Jorge Toyama, Labor Law Expert, (May 14, 2019).

<sup>348</sup> See e.g., El Comercio, *El 78% de los Peruanos son Tolerantes con la Corrupción* (2015), <https://elcomercio.pe/politica/actualidad/78-peruanos-son-tolerantes-corrupcion-389838>.

the game<sup>349</sup> to have quick access to cash.<sup>350</sup> De Soto's scholarship depicts the emergence of Peru's popular class, one that struggled against the government's red tape and elite closure, trying to find their way into the market. But, as Wiener puts it, informal miners emerged as economic agents, not legal subjects.<sup>351</sup> In light of the few perceived benefits from becoming formal, it comes as no surprise why informal miners prefer to stay outside legal circles.<sup>352</sup>

As regards corruption, "Peru is a classic example of a country profoundly impacted by administrative, political, and systematic corruption, both historically and currently... Corruption in Peru has been a systematic phenomenon, not a periodical or anecdotal circumstance."<sup>353</sup> In the ASM sector, in particular, the emerging ASM entrepreneurs have accumulated extraordinary wealth<sup>354</sup> and gained substantial political influence during the gold rush years. They have managed to fund or buy votes in political parties<sup>355</sup> and infiltrate

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<sup>349</sup> Interview with Kuramoto, *supra* note 193.

<sup>350</sup> See BLACKMORE, ET AL., *supra* note 158, at 9.

<sup>351</sup> See WIENER, *supra* note 176 at 11.

<sup>352</sup> Interview with Galarza, *supra* note 216.

<sup>353</sup> ALONSO QUIROZ, HISTORIA DE LA CORRUPCIÓN EN EL PERÚ 44, 367 (3 ed. 2019) (translation by author).

<sup>354</sup> See de Echave, *supra* note 225, at 140; see also Cortés-McPherson, *supra* note 157, at 4 (claiming that Peruvian ASM entrepreneurs are not only well connected to international markets and foreign actors, but also linked organized criminality and drug trafficking).

<sup>355</sup> See e.g. Damonte, *supra* note 331 at 1328 ("[M]iners have resorted to 'buying' votes while in others they pay to access key positions in the regional bureaucracy"); ARRIARÁN, *supra* note 30 at 89–91 (pointing out financial connections between former President Ollanta Humala political party and ASM entrepreneurs); Iván Lanegra, *La minería ilegal como actor político en campaña*, OJO PÚBLICO (2016), <https://ojo-publico.com/208/la-mineria-ilegal-como-actor-politico-en-campana>; VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 101; Jose de Echave, *La minería ilegal y la política*, COOPERACIÓN (2018), <http://cooperacion.org.pe/la-mineria-ilegal-y-la-politica/>.



the state apparatus, including the National Congress,<sup>356</sup> the Judiciary,<sup>357</sup> MINEM,<sup>358</sup> and regional governments.<sup>359</sup> In this line of reasoning, Chauca confesses,

In all my years as a public servant, I have perceived that my colleagues have developed a twofold strategy: appear to be doing something to tackle ASM, but actually not worry too much about providing results. Either the topic surmounts you and you simply cannot deal with ASM anymore, or more likely you respond to a hidden agenda.<sup>360</sup>

Besides the capture of public servants, corruption in ASM is palpable in the smuggling of restricted supplies and goods into mining areas (e.g. fuel, explosives, chemicals, or mercury),<sup>361</sup> as well as in the laundering of illegal gold in processing plants, gold traders and exporters.<sup>362</sup> “Today, informal mining is more corruptive than drug trafficking,” warns the former Minister of Energy and Mines.<sup>363</sup>

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<sup>356</sup> The list of ASM entrepreneurs that have managed to access a seat in Congress is rather long. The most prominent include Amado Romero, Tomás (Tommy) Cenzano Sierralta, Francisco Ccama, Luis Alberto Bocangel and Modesto Figueroa. See OJO PÚBLICO, *Perú: La política, bañada de oro ilegal* (2017), <https://actualidad.rt.com/actualidad/234140-gobernador-congresista-peru-madre-dios-nexos-mineria>; Lanegra, *supra* note 355.

<sup>357</sup> Interview with Alicia Abanto, *supra* note 88. In 2013, the press released a video that evidenced the involvement of the President of Madre de Dios Superior Court in illegal mining. See VALENCIA, *supra* note 204 at 249.

<sup>358</sup> The gravest case in the Executive Branch is that of Susana Vilca, Peru’s current Minister of Energy and Mines, who has been charged by the press of having connections with informal ASM-activities. In 2012, she stepped down from her political position of Vice-minister of Mines precisely as a result of media reports. See ARRIARÁN, *supra* note 30 at 94. When questioned for her appointment as Minister of Energy and Mines in 2020, Peru’s Prime Minister replied that “everyone has the right to rehabilitation.” See Jonathan Castro, *Susana Vilca, la ministra rehabilitada*, EL COMERCIO, February 18, 2020, <https://elcomercio.pe/politica/gobierno/susana-vilca-la-ministra-rehabilitada-noticia/>. Prior to Vilca’s scandal, in 2012 the press uncovered the story of Luis Zavaleta, then Director of Hydrocarbons at MINEM, who turned out to be not only the owner of a gold trading company, but also the largest gold exporter in Peru! See El Comercio, *Director de Energía y Minas es el mayor exportador de oro*, 2012, [https://archivo.elcomercio.pe/politica/gobierno/director-energia-minas-mayor-exportador-oro\\_1-noticia-1394710?ref=flujo\\_tags\\_359235&ft=nota\\_4&e=titulo](https://archivo.elcomercio.pe/politica/gobierno/director-energia-minas-mayor-exportador-oro_1-noticia-1394710?ref=flujo_tags_359235&ft=nota_4&e=titulo); VALENCIA, *supra* note 204 at 249.

<sup>359</sup> Governors accused of having vested interests in informal or illegal miners include Luis Otsuka (Madre de Dios, 2015-2018). OJO PÚBLICO, *supra* note 356.

<sup>360</sup> Interview with Nancy Chauca, *supra* note 309.

<sup>361</sup> Interview with Alicia Abanto, *supra* note 88; Telephone interview with Gonzalo Tamayo, *supra* note 221.

<sup>362</sup> Interview with Lenin Valencia, *Former Director of the ASM Formalization Office, Ministry of Energy and Mines of Peru* (2019).

<sup>363</sup> Telephone interview with Gonzalo Tamayo, *supra* note 221.

All things considered, in light of the current state of affairs regarding widespread informality and corruption, reducing illegal mining activities “is simply not possible.”<sup>364</sup>

#### 4. Oversight of The Massive Workforce

The most significant flaw in the GP’s program, though, is that it overlooked the precarious labor relations that ensnares hundreds of thousands of Peruvian miners in exploitative and unconscionable employment contracts, including lottery-like systems. In actuality, the program is built on the granting of operating licenses. Labor informality is not part of the formalization program. This shortsightedness is eloquently manifested in the following quote from my interview with the former Director of ASM Formalization Office, Lenin Valencia, at MINEM: “We at MINEM tackle *mining informality*, while the Ministry of Labor is responsible for improving *labor informality* in ASM. Labor law is not in our purview.”<sup>365</sup> Maximo Gallo, another former director of MINEM, agrees: “We need to formalize *mining operators*; labor formalization is a different thing”.<sup>366</sup>

In turn, the Ministry of Labor has done little to tackle ASM informality in general and *cachorro* in particular.<sup>367</sup> “One can infer that the Ministry of Labor has simply thrown in the towel,”<sup>368</sup> claim experts from *Derecho, Ambiente y Recursos Naturales*, a local NGO. Although *Decreto Supremo 27* did create a Special Labor Formalization Program, it did not change much for *cachorreros*. By definition, such a program should have regulated a

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<sup>364</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 91, 97, 104.

<sup>365</sup> Interview with Lenin Valencia, *supra* note 362. Maximo Gallo, former Director of ASM Formalization Office at MINEM agrees with the current director:

<sup>366</sup> Interview with Máximo Gallo, *supra* note 303.

<sup>367</sup> Interview with Sergio Quiñonez, *Director of Human Rights, Ministry of Labor of Peru* (2019) (“From a human rights perspective, in La Rinconada the Ministry of Labor should work to ensure the respect of basic health and safety standards; ensure that there is no forced labor; and eradicate child labor. From a formalization standpoint, the Ministry should augment formal labor by making *cachorreros* part of the contractors’ payroll, establishing fines, or promoting associative systems among the workforce”).

<sup>368</sup> Interview with Iris Olivera and Ciro Salazar, *supra* note 49.

minimum core of labor, health and safety, and social security rights corresponding to lottery miners, establishing a gradual implementation and phase out. Yet, the plan that the Ministry of Labor finally put in place was far from a labor formalization program; it simply included the distribution of pamphlets, conferences, and meetings around labor, health and safety, and social security rights, child labor, and forced labor between June and December 2014.<sup>369</sup> According to the Ministry of Labor, “sensitizing La Rinconada’s stakeholders around labor law will help create the necessary conditions for future actions by the Ministry.”<sup>370</sup>

Appendix 8 summarizes the results of this plan. As it can be inferred, the goals, scope, and extension of the plan were ill-suited to tackle persistent labor informality in La Rinconada. To pick one example, to think that child labor will disappear from La Rinconada by organizing one sensitization workshop with 40 miners (out of 50,000!) is simply appalling. Besides the lack of continuity to activities beyond 2014, Appendix 8 shows how low the targets were set and, therefore, how easily they were met, privileging form over substance. What is more, according to the plan, “labor informality is located at the end of the pipeline of the ASM formalization problem.”<sup>371</sup> Needless to say, the passing of the plan was insignificant as a labor formalization strategy or policy.

In consequence, and not surprisingly, mining operations that have already completed the GP’s program still retain their workforce under informal agreements, containing exploitative terms. “Formalization is of no good to us,” claims a 34-year-old lottery miner in Puno, who works for an already formalized ASM entrepreneur.<sup>372</sup>

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<sup>369</sup> See Ministry of Labor of Peru, *supra* note 276.

<sup>370</sup> See *id.* (Page 3 of the Plan).

<sup>371</sup> See *id.* (Page 2 of the Plan) (translation by author).

<sup>372</sup> Group interview with anonymous chichiqueo workers, (2019).

Differently put, the formalization program has resulted in the empowerment of the informal bourgeoisie, that is to say, the ASM entrepreneurs, which are the strongest players in the ASM sector, by granting them access to title and the possibility of (legally) outsourcing their operations. But, at the same time, it has disempowered the massive workforce, which remains off-the-books and subject to informal working conditions.<sup>373</sup> This omission evidences the ineffectiveness of top-down processes that are disconnected from realities on the ground. As Pachas puts it, “The government’s program ignores the existing oral arrangements among ASM miners. It does not understand these local rules nor the details of such labor relationships.”<sup>374</sup> For this reason, pondering the historical roots of artisanal mining is a must in contemporary ASM policymaking and governance.

In the words of Alegre, “Peru’s ASM conundrum transcends the discussion of mere permitting processes. To analyze and regulate ASM through environmental lenses exclusively is a waste of time and a distraction.”<sup>375</sup>

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Even though the Government of Peru’s leadership on the war on illegal mining was celebrated during the early years of the program, even by the ombudsman office, who is generally characterized by its prudence and neutrality,<sup>376</sup> the formalization impulse has

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<sup>373</sup> See CONGRESO DE LA REPÚBLICA DEL PERÚ, *supra* note 204 at 2841 (Congressman Carrasco: “Small-scale mining... is one of the most important economic activities that generates resources for the Peruvian State. However, those resources do not go to the artisanal miners, but to those who have the chance of accessing formal markets to export minerals... ASM is unprotected because they do not have any legal protection. Artisanal miners are thus subject to exploitation that many times amounts to cruel forms”) (translation by authors).

<sup>374</sup> Telephone interview with Víctor Hugo Pachas, *ASM expert* (2020).

<sup>375</sup> Interview with Ada Alegre, *supra* note 309.

<sup>376</sup> See DEFENSORIA DEL PUEBLO, *supra* note 257, at 159.

become rhetorical<sup>377</sup> and erratic.<sup>378</sup> As evidenced throughout this chapter, the legalist model adopted in Peru privileges form over substance. Although the government has put in place a formalization program since 2012, it does not represent a holistic strategy to regularize ASM-activities and combat illegal mining. Instead of assuring the necessary enabling conditions to enhance the sector's environmental and labor, health and safety, and social security rights standards, the GP opted for a paper tiger.<sup>379</sup>

Notwithstanding the above, far from being just another example of disastrous regulatory failure, I have shown that the GP's ambiguous and inconsistent ASM policy represents an encouragement of informalization due to complicit and negligent behavior in the regulation and enforcement.<sup>380</sup> The program has been captured by the strongest players in the ASM sector, who now have access to formal title, but maintain informal, exploitative labor relations with the workforce. In other words, in practice, the government has set up a *formalization* scheme for ASM entrepreneurs and, at the same time, an *informalization* program for a massive workforce.

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<sup>377</sup> See e.g. Cortés-McPherson, *supra* note 21 at 3; Salo et al., *supra* note 52 at 1061; Duff and Downs, *supra* note 78 at 4; Damonte, *supra* note 84 at 957; Damonte, *supra* note 331 at 1315; DEFENSORÍA DEL PUEBLO, *Balance de la gestión estatal frente a la minería informal e ilegal en el Perú. 2012-2014. Supervisión a las entidades de alcance nacional y regional* 251 (2014), <https://www.defensoria.gob.pe/wp-content/uploads/2018/05/Informe-Defensorial-N-167-2.pdf>.

<sup>378</sup> Telephone interview with Javier Yrigoyen, *supra* note 293 (“Formalization is political. At times of elections, when the government needs a scape goat to blame, you see ministers and public servants deploying efforts to show they fight illegal mining. But when elections are over, the interest fades away”).

<sup>379</sup> Interview with Abanto, *supra* note 206.

<sup>380</sup> Cf. Meagher, *supra* note 105 at 255.

### CHAPTER 3.- RESISTANCE TO WAGED LABOR RELATIONS: THE EMERGENCY OF LOTTERY MINERS

The Government of Peru has failed to ponder the heterogeneity of the ASM sector in the design of a policy solution and strategy to tackle persistent informality. In this chapter, I argue that recognizing the historical processes of ASM can help explain the differentiation in contemporary ASM, as well as the tardiness of the regularization attempts. To support my claim, I trace down the legitimacy and persistence of direct appropriation strategies from the colonial rule to present-day. I first turn to the history of the *k'ajchas*, Potosí's colonial weekend thieves. I then describe other examples of direct appropriation strategies during the colonial and post-independence periods in Latin America. By mapping out direct appropriation strategies, I aim to show the existence of a strong ideology of resistance to, on the one hand, the public ownership system of natural resources set up in the Viceroyalty of Peru by the Spaniards (later, the Republic of Peru); and, on the other, the proletarianization of peasant-miners in the Andes. I close arguing that today's expansion of ASM cannot only be explained by the sky-rocketing prices of gold, but also by the profound legitimacy crisis of the regalian doctrine and resistance to waged labor relations.

#### A. *The Rich Hill of Potosí*

Between 1550 and 1800, the Spaniards extracted over 136,000 metric tons of silver from her American colonies, accounting for 80 percent of the global production in that period.<sup>381</sup> The silver deposits discovered by the Spanish empire, especially in Peru-Bolivia

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<sup>381</sup> See NICHOLAS A. ROBINS, *MERCURY, MINING, AND EMPIRE THE HUMAN AND ECOLOGICAL COST OF COLONIAL SILVER MINING IN THE ANDES* 4 (c2011).

and Mexico, made Spain rich and powerful, and contributed to the rise of modern global capitalism.<sup>382</sup> The “*Cerro Rico*” (Rich Hill) of Potosí in present-day Bolivia was the most significant mining center in Spanish Americas.<sup>383</sup> Discovered in 1545,<sup>384</sup> Potosí soon became “the greatest mineral deposit ever exploited”<sup>385</sup> and a “universal symbol of unprecedented riches.”<sup>386</sup> As a testament to its miraculous wealth, the King of Spain proclaimed Potosí an imperial villa in 1562.<sup>387</sup> Home to over 100,000 people, it became one of the largest cities in the world, a truly polyglot and cosmopolitan one.<sup>388</sup> But Potosí also personified the sorrow and oppression associated with the draft labor system adopted by the Spaniards, the “*mita*” system. In this section, I provide the necessary background on the colonial *mita* institution.<sup>389</sup>

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<sup>382</sup> See *id.* at 177.; Rossana Barragán, *Working Silver for the World: Mining Labor and Popular Economy in Colonial Potosí*, 97 HISPANIC AMERICAN HISTORICAL REVIEW 193–222, 194 (2017); JULIO COTLER, CLASES, ESTADO Y NACIÓN EN EL PERÚ / 22 (1978).

<sup>383</sup> See Paula C. Zagalsky, *Trabajo indígena, conflictos y justicia en la Villa Imperial de Potosí y su Cerro Rico, una aproximación. Virreinato del Perú, siglos XVI-XVII*, REVISTA HISTORIA Y JUSTICIA, 20 (2017), <http://journals.openedition.org/rhj/1122> (last visited Sep 17, 2019); Zac Zimmer, *Bitcoin and Potosí Silver: Historical Perspectives on Cryptocurrency*, 58 TECHNOLOGY AND CULTURE 307–334 (2017); ROBINS, *supra* note 381 at 4; Raquel Gil Montero, *Mecanismos de reclutamiento indígena en la minería de plata: Lípez (sur de la actual Bolivia), siglo XVII*, 21 AM. LAT. HIST. ECON 5–30 (2014); Rossana Barragán, *Extractive Economy and Institutions? Technology, Labour and Land in Potosí, the Sixteenth to the Eighteenth Century*, in COLONIALISM, INSTITUTIONAL CHANGE, AND SHIFTS IN GLOBAL LABOUR RELATIONS. , 209 (2018).

<sup>384</sup> See Melissa Dell, *The Persistent Effects of Peru’s Mining Mita*, 78 ECONOMÉTRICA 1863–1903, 1866 (2010).

<sup>385</sup> IGNACIO GONZÁLEZ CASASNOVAS, LAS DUDAS DE LA CORONA : LA POLÍTICA DE REPARTIMIENTOS PARA LA MINERÍA DE POTOSÍ (1680-1732) XIII (2000); see also P. J. (PETER JOHN) BAKEWELL, SILVER AND ENTREPRENEURSHIP IN SEVENTEENTH-CENTURY POTOSÍ : THE LIFE AND TIMES OF ANTONIO LÓPEZ DE QUIROGA 24 (c1988).

<sup>386</sup> Lewis Hanke, *Prologue and Notes*, in LA RELACIÓN GENERAL DE LA VILLA IMPERIAL DE POTOSÍ , 9 (1959); see also LANE, *supra* note 175 at 8.

<sup>387</sup> See LANE, *supra* note 175 at 37.

<sup>388</sup> See *id.* at 1–2.; KENDALL BROWN, MINERÍA E IMPERIO EN HISPANOAMÉRICA COLONIAL. PRODUCCIÓN, MERCADOS Y TRABAJO 17 (2015).

<sup>389</sup> For the historiography of the *mita*, see e.g. Ignacio González Casasnovas, *La Minería Andina en la Época Colonial. Tendencias y Aportaciones de la Historiografía Actual*, XLVIII REVISTA DE INDIAS (1988).

## 1. Early Days

Even though the Spaniards were the legal owners of the mines, during the first decades after the discovery of the Rich Hill of Potosí they had a limited role in the exploitation process of silver.<sup>390</sup> In actuality, the first laborers were “*yanaconas*” sent by their Spanish masters to work in the mines.<sup>391</sup> The *yanaconas* were a minority group made of people who did not belong to an “*ayllu*”—the kin group that was a basic building block of the Inca social structure—and were attached as personal servitors to nobles, military leaders or the head of the *ayllus*.<sup>392</sup> In a sort of sharecropping or lease agreement, the Spanish mine owners allocated a certain number of feet in the mines to their *yanaconas*, who were entitled to anything they could extract beyond that point.<sup>393</sup> The ore extracted would then be smelted in rudimentary, wind-activated ovens (called “*guayras*”),<sup>394</sup> which were owned and operated by the *yanaconas* themselves. By controlling the process of silver extraction and processing,<sup>395</sup> many *yanaconas* amassed significant wealth.<sup>396</sup> Indeed, early Potosí “was a land of opportunity for native entrepreneurs as it was for Spaniards,” argues

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<sup>390</sup> See JEFFREY A. COLE, *THE POTOSÍ MITA, 1573-1700 : COMPULSORY INDIAN LABOR IN THE ANDES* 3 (1985).

<sup>391</sup> See *id.* at 4.; GWENDOLYN BALLANTINE COBB, *POTOSÍ Y HUANCVELICA : BASES ECONÓMICAS DEL PERÚ, 1545-1640* 53 (1977); LANE, *supra* note 175 at 40.

<sup>392</sup> See e.g. P. J. (PETER JOHN) BAKEWELL, *MINERS OF THE RED MOUNTAIN : INDIAN LABOR IN POTOSÍ, 1545-1650* 34 (c1984); See also JOSÉ MATOS MAR, *YANACONAJE Y REFORMA AGRARIA EN EL PERÚ. EL CASO DEL VALLE DE CHANCAY* 198 (1976); Giorgio Alberti & Enrique Mayer, *Reciprocidad andina: ayer y hoy, in RECIPROCIDAD E INTERCAMBIO EN LOS ANDES PERUANOS* 13–36, 16 (1974).

<sup>393</sup> See BAKEWELL, *supra* note 392 at 36; ENRIQUE TANDETER, *COACCIÓN Y MERCADO : LA MINERÍA DE LA PLATA EN EL POTOSÍ COLONIAL 1692-1826* 102 (1992); Rossana Barragán, *Dynamics of Continuity and Change: Shifts in Labour Relations in the Potosí Mines (1680–1812)\**, 61 *INTERNATIONAL REVIEW OF SOCIAL HISTORY* 93–114, 98 (2016); LANE, *supra* note 175 at 48–52.

<sup>394</sup> See Carlos Sempat Assadourian, *La producción de la mercancía dinero en la formación del mercado interno colonial, in ENSAYOS SOBRE EL DESARROLLO ECONÓMICO DE MÉXICO Y AMÉRICA LATINA. 1500-1965*, 227 (1979); Barragán, *supra* note 393 at 98.

<sup>395</sup> See Barragán, *supra* note 383 at 230 (arguing that in his Ordinances, Viceroy Toledo stated that “the legal owners of the mines... were obliged to give the workers a quarter of the mine’s seams as ‘was done until then’, under the condition that they had to sell the ore that they obtained to the owners of the mines and refineries”); Barragán, *supra* note 393 at 98.

<sup>396</sup> See COBB, *supra* note 391 at 54.



Kris Lane.<sup>397</sup> Yet, as I discuss next, changes in the silver processing methods sidelined *yanaconas* from such control (and the mining rents associated with it), subordinating them to waged labor relations.<sup>398</sup>

The years that followed the discovery of Potosí were times of abundance and riches. However, the rich and easily accessible silver-bearing veins that made Potosí the “Pearl of the Andes”<sup>399</sup> soon gave way to poorer veins, requiring more investment and work to access and exploit.<sup>400</sup> This change produced an overall decline in Potosí’s yield<sup>401</sup> in a context in which the crown demanded more income from its colonies due to a bullion famine.<sup>402</sup> Poor yields drifted *yanaconas* away from the mining center, creating labor shortages that agitated the Spanish mine owners.<sup>403</sup> All of these factors favored a more intense intervention of the Spanish Crown in the village by the end of the 1560s.<sup>404</sup> To consolidate colonial control and increase the production of mineral wealth, Viceroy Francisco de

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<sup>397</sup> LANE, *supra* note 175 at 10.

<sup>398</sup> See Barragán, *supra* note 383 at 230–31; Tristan Platt, *Señorío aymara y trabajo minero. De la mita al k’ajcheo en Potosí (1545-1837)*, in POTOSÍ: PLATA PARA EUROPA 189–211, 192 (2000); Assadourian, *supra* note 394 at 252.

<sup>399</sup> LANE, *supra* note 175 at 3.

<sup>400</sup> See BAKEWELL, *supra* note 385 at 18; Ward Stavig, *Continuing the Bleeding of These Pueblos Will Shortly Make Them Cadavers: The Potosi Mita, Cultural Identity, and Communal Survival in Colonial Peru*, 56 THE AMERICAS 529–562, 534 (2000); ROBINS, *supra* note 381 at 3; LANE, *supra* note 175 at 26.

<sup>401</sup> See Stavig, *supra* note 400 at 534; COBB, *supra* note 391 at 29.

<sup>402</sup> See LANE, *supra* note 175 at 5.

<sup>403</sup> See John Howland Rowe, *The Incas Under Spanish Colonial Institutions*, 37 THE HISPANIC AMERICAN HISTORICAL REVIEW 155–199, 172 (1957); See Paula Zagalsky, *Trabajadores indígenas mineros en el Cerro Rico de Potosí: tras los rastros de sus prácticas laborales (siglos XVI y XVII)*, 6 REVISTA MUNDOS DO TRABALHO 55–82, 59 (2014); Stavig, *supra* note 400 at 534; COBB, *supra* note 391 at 29; Stavig, *supra* note 400 at 534.

<sup>404</sup> See e.g. BAKEWELL, *supra* note 392 at 54; Heidi V. Scott, *The Contested Spaces of the Subterranean: Colonial Governmentality, Mining, and the Mita in Early Spanish Peru*, 11 JOURNAL OF LATIN AMERICAN GEOGRAPHY 5–33, 17 (2012); Bernd Hausberger, *Comunidad indígena y minería en la época colonial. El noroeste de México y el Alto Perú en comparación*, 23 IBERO-AMERIKANISCHES ARCHIV 263–312, 265 (1997); Steve J. Stern, *Feudalism, Capitalism, and the World-System in the Perspective of Latin America and the Caribbean*, 93 THE AMERICAN HISTORICAL REVIEW 829–872, 851 (1988).

Toledo (1569–1581) undertook a significant reorganization of the Viceroyalty of Peru, which would have long-lasting and transformative consequences.<sup>405</sup>

Toledo's ambitious reform included, on the one hand, the introduction of mercury amalgamation technology to replace the inefficient *guayras* used by the indigenous peoples, thus allowing the processing of low-grade ores.<sup>406</sup> On the other hand, considering the labor-intensive character of the new technology, which required the construction of hydraulic-activated mills<sup>407</sup> and the processing of additional quantities of ore, Toledo established a draft labor service, known as the *mita*, to assure a constant labor force in two key mining centers: Huancavelica (for mercury extraction) and Potosí (for silver extraction).<sup>408</sup> As a result of Toledo's ordinances, the labor force available in the Rich Hill increased three-fold<sup>409</sup> and the silver production augmented eight times.<sup>410</sup>

Importantly, the *mita* system was not completely new in the Andes but was based on preexisting Inca conceptions.<sup>411</sup> Whenever the Inca leader needed workers for public

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<sup>405</sup> See e.g. Scott, *supra* note 404 at 12; GONZÁLEZ CASASNOVAS, *supra* note 385 at XXV; Stavig, *supra* note 400 at 529; ROBINS, *supra* note 381 at 4, 178–79; LANE, *supra* note 175 at 185 (“The psychological burden of the colonial *mita* did not die quickly in the Andes. Villagers in the Potosí hinterland remember ‘Blood Mountain’”). According to Carlos Velarde, Toledo's ordinances represent a ‘legislative monument’ as they lay the foundations of the American Mining Law that were in force for more than 200 years in Peru, Chile and Río de la Plata. Cited in JULIO VILDÓSOLA FUENZALIDA, *EL DOMINIO MINERO Y EL SISTEMA CONCESIONAL EN AMÉRICA LATINA Y EL CARIBE* 92 (Ed. Latina ed. 1999).

<sup>406</sup> See Stavig, *supra* note 400 at 534; D. A. Brading & Margarita Zaionz de Zilberay, *Las minas de plata en el Perú y México colonial. Un estudio comparativo*, 11 *DESARROLLO ECONÓMICO* 101–111, 102 (1971) (claiming that the amalgamation technological process proved key in the future booming of silver production during the colonial regime).

<sup>407</sup> See Assadourian, *supra* note 394 at 255.

<sup>408</sup> Discovered in 1563, the Huancavelica mine was the main source of mercury in the Americas throughout the entire colonial period, giving the town a unique importance but also a lethal reputation. See Adrian J. Pearce, *Huancavelica 1700-1759: Administrative Reform of the Mercury Industry in Early Bourbon Peru*, 79 *THE HISPANIC AMERICAN HISTORICAL REVIEW* 669–702, 669 (1999); BROWN, *supra* note 388 at 18–19.

<sup>409</sup> See BAKEWELL, *supra* note 392 at 81.

<sup>410</sup> See Zimmer, *supra* note 383 at 318.

<sup>411</sup> See BAKEWELL, *supra* note 392 at 59.

works, he drafted people from local provinces in a rotative system called *minka*,<sup>412</sup> a Quechua word meaning turn or period of service.<sup>413</sup> Nonetheless, while the Inca *minka* forced natives to work for the Inca State in benefit of the community as a whole, the Spanish *mita* forced natives to work in the benefit of private mine and mill owners.<sup>414</sup>

## 2. Unfree and Free Labor Force in Potosí

Toledo's ordinances required indigenous communities within seventeen provinces in the Viceroyalty of Peru (*see* Figure 5) to deliver each year one-seventh of their adult male population for 12 months of work in the mines and mills of Potosí.<sup>415</sup> Toledo selected these provinces based on their high elevation and cold climate to facilitate adaptation to Potosí's extreme weather conditions.<sup>416</sup> In some cases, arriving at Potosí required journeys of 600 miles and took more than two months, many times at the natives' own expense.<sup>417</sup> The ordinances also regulated the length of stay in the mines, the salaries, and minimum working conditions.<sup>418</sup> Andean local leaders served as middlemen, making sure that the *mita* quotas were fulfilled by each province.<sup>419</sup> Whenever a province was not able to fulfill

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<sup>412</sup> See Rowe, *supra* note 403 at 170. See also Georges Dumézil, *Catégories et vocabulaires des échanges de services chez les indiens quechua: ayni et mink'a*, 44 JOURNAL DE LA SOCIÉTÉ DES AMÉRICANISTES 3–16, 8 (1955) (“In order to work the Inca’s lands a system of communal work by turns was set up. This type of work was called *minka* or *minga*. This type of communal work was applied also to provide labor in favor of the village, such the construction of bridges, roads, public buildings, etc. This occurred in the Andes of Ecuador, Peru and Bolivia”) (translation by author); Jean-Didier Urbain, *Le Système quechua de l'échange: développements métaphoriques et adaptation d'un " vocabulaire de base "*, 20 L'HOMME 71–90 (1980) (“La *minka* [est] l'union la plus étroite [...] existe entre tous les Indiens. Elle se manifeste de manière spectaculaire dans les travaux exécutés en commun, appelés *minga* [ou *minka*]”).

<sup>413</sup> See COLE, *supra* note 390 at 1.

<sup>414</sup> See Barragán, *supra* note 383 at 212.

<sup>415</sup> See Rowe, *supra* note 403 at 172; GONZÁLEZ CASASNOVAS, *supra* note 385 at XIV.

<sup>416</sup> See COLE, *supra* note 390 at 9; Dell, *supra* note 384 at 1868.

<sup>417</sup> See D. A. Brading & Harry E. Cross, *Colonial Silver Mining: Mexico and Peru*, 52 THE HISPANIC AMERICAN HISTORICAL REVIEW 545–579, 558 (1972); *see also* BAKEWELL, *supra* note 385 at 23 (claiming that Potosí was one of the least accessible towns in Spanish America, so that “only the determined, the ambitious, the avaricious, the very needy, or in the case of the Indians going to the *mita*, the compelled, completed the journey”).

<sup>418</sup> See BAKEWELL, *supra* note 392 at 59.

<sup>419</sup> See LANE, *supra* note 175 at 71.

its allotment, it was required to pay in silver the amount needed to hire wage laborers instead.<sup>420</sup> Individuals could escape the *mita* obligation by fleeing from their communities, though this entailed losing access to their land, community, and family, as well as a risk of severe punishment.<sup>421</sup> Often resisted and challenged, the *mita* had devastating consequences for indigenous communities, splitting families apart and plummeting the Andean population,<sup>422</sup> in what has been described as an ethnocide.<sup>423</sup>

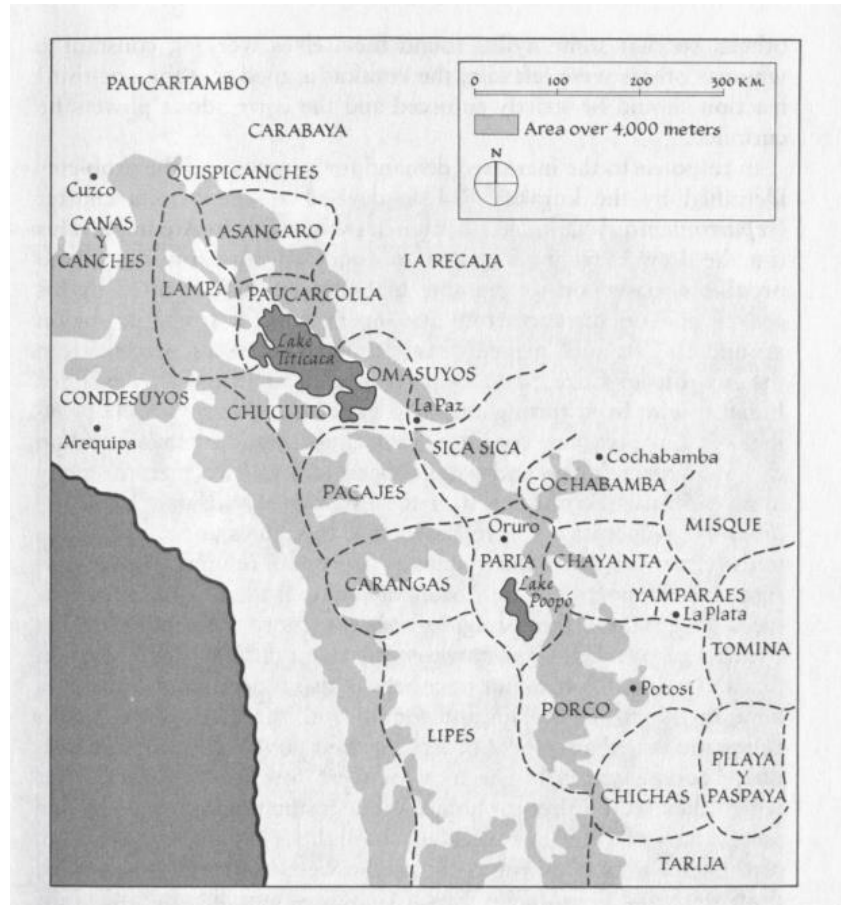
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<sup>420</sup> See Dell, *supra* note 384 at 1867.

<sup>421</sup> See *id.* at 1867 (footnote 5); BROWN, *supra* note 388 at 483 (arguing that mothers would cripple their sons to make them unfit for *mita* duty); Stavig, *supra* note 400 at 529–30.

<sup>422</sup> See Harry Sanabria, *Resistance and the Arts of Domination: Miners and the Bolivian State*, 27 *LATIN AMERICAN PERSPECTIVES* 56–81, 59 (2000); COBB, *supra* note 391 at 62; Stavig, *supra* note 400 at 529.

<sup>423</sup> See COTLER, *supra* note 382 at 26.



**Figure 5. The Provinces of Upper Peru under the *mita***

(Source: Cole)<sup>424</sup>

The first *mita* took place in 1573 and affected 13,500 men (known as “*mitayos*”).<sup>425</sup> Upon their arrival to the Rich Hill, the *mitayos* were divided into three regiments of laborers to allow shifts between them.<sup>426</sup> They worked for one week (Monday through Friday in twelve-hour shifts) and rested during the following two weeks (“*huelga*” period).<sup>427</sup> While

<sup>424</sup> See COLE, *supra* note 390 at 11.

<sup>425</sup> See Stavig, *supra* note 400 at 534–35.

<sup>426</sup> See Brading and Cross, *supra* note 417 at 558–559.

<sup>427</sup> See Barragán, *supra* note 383 at 220; Assadourian, *supra* note 394 at 267; Barragán, *supra* note 393 at 99.

the Spanish Crown had made sure *mitayos* received salaries for their work,<sup>428</sup> the remuneration was not enough to cover their basic needs,<sup>429</sup> especially as prices increased in the village. In actuality, the *rest period* was a euphemism given that most *mitayos* would voluntarily offer themselves as free laborers (known as “*mingas*”) during the rest period in order to survive. Figure 6 below illustrates this *mita-minga* system.<sup>430</sup>

1st Week	2nd Week	3rd Week	4th Week	5th Week	6th Week
Mita Service	Minga Work	Minga Work	Mita Service	Minga Work	Minga Work

**Figure 6. The *mita-minga* system**

(Source: By author)<sup>431</sup>

Low salaries also forced *mitayos* to travel with their families to Potosí<sup>432</sup> and to carry their own supplies to lessen the burden.<sup>433</sup> While the *mita* only requisitioned men, it was a family affair.<sup>434</sup> Many *mitayos* did not return home once their *mita* service concluded due to death, injury, unwillingness to move again, or simply because mining was more lucrative than agriculture. This gradually increased the number of free workers

<sup>428</sup> See LANE, *supra* note 175 at 72 (“Mita work was not unpaid. It was not permanent. It was not slavery. Yet it was coerced and vastly undercompensated...”).

<sup>429</sup> See Assadourian, *supra* note 394 at 267; Stavig, *supra* note 400 at 534.

<sup>430</sup> See Stavig, *supra* note 400 at 535.

<sup>431</sup> This figure is inspired from Barragán, *supra* note 383 at 220 (Table 7.1.).

<sup>432</sup> See Rowe, *supra* note 403; COBB, *supra* note 391 at 62.

<sup>433</sup> See Stavig, *supra* note 400 at 537.

<sup>434</sup> See *id.* at 536.

or *mingas* available in town.<sup>435</sup> By 1600, *mingas* accounted for half the total workforce in the Rich Hill.<sup>436</sup> The introduction of the amalgamation process and the construction of hydraulic-activated mills increased the demand for manpower,<sup>437</sup> which was covered by *mingas*,<sup>438</sup> and led to the Spaniards taking over the production of silver, even though the *guayras* did not completely disappear.<sup>439</sup>

The *mitayos* performed the toughest and most primitive tasks,<sup>440</sup> such as taking the ore from the shafts on their backs or placing the ore into the mills,<sup>441</sup> under exceptionally dangerous and horrific working conditions.<sup>442</sup> “The mountain that ate men cast a long and deadly shadow, showering the Imperial Villa with mercury vapor, lead, zinc, and other toxins.”<sup>443</sup> While Toledo’s ordinances included regulations to prevent abuse and exploitation, these rules were easily circumvented.<sup>444</sup> Working conditions eventually worsened, as mining entrepreneurs introduced a series of strategies to enhance productivity and production.<sup>445</sup>

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<sup>435</sup> See TANDETER, *supra* note 393 at 136–37; NILLS JACOBSEN, ILUSIONES DE LA TRANSICIÓN. EL ALTIPLANO PERUANO 1780-1930 161 (2015); BAKEWELL, *supra* note 385 at 35; Assadourian, *supra* note 394 at 262.

<sup>436</sup> See TANDETER, *supra* note 393 at 100; Barragán, *supra* note 382 at 194.

<sup>437</sup> See Kendall W. Brown, *Workers’ Health and Colonial Mercury Mining at Huancavelica, Peru*, 57 THE AMERICAS 467–496, 469 (2001).

<sup>438</sup> See BAKEWELL, *supra* note 392 at 121.

<sup>439</sup> See Assadourian, *supra* note 394 at 255.

<sup>440</sup> For Cole, the *mita* was a way of compelling indigenous peoples to do the work they otherwise did not want to do. See *supra* note 390 at 123.

<sup>441</sup> See Gil Montero, *supra* note 383 at 8; Stern, *supra* note 404 at 851; ROBINS, *supra* note 381 at 181.

<sup>442</sup> See Stavig, *supra* note 400 at 562; Scott, *supra* note 404 at 17; Lewis Hanke, *supra* note 386 at 25; ROBINS, *supra* note 381 at 182–83. BAKEWELL, *supra* note 392 at 33; Rowe, *supra* note 403 at 173; COBB, *supra* note 391 at 62; LANE, *supra* note 175 at 53; BROWN, *supra* note 388 at 25.

<sup>443</sup> LANE, *supra* note 175 at 181.

<sup>444</sup> See JOHN ROBERT FISHER, SILVER MINES AND SILVER MINERS IN COLONIAL PERU, 1776-1824 10 (1977).

<sup>445</sup> For instance, the introduction of quotas instead of fix working hours; failure to compensate the *mitayo*’s travel expenses; salary reductions; and the appointment of inspectors to make sure workers did not underperform. See Hausberger, *supra* note 404 at 266–67; Zagalsky, *supra* note 383 at 24; COBB, *supra* note 391 at 57.

Unlike *mitayos*, *mingas* performed more skilled and specialized jobs,<sup>446</sup> and were better remunerated.<sup>447</sup> This extra cash allowed many *mingas* to escape their *mita* obligation by paying the Spanish mine owner to hire his replacement.<sup>448</sup>

In addition to their salary payments, *mitayos* and *mingas* resorted to direct appropriation strategies. The most important one was the called “*corpa*,” a customary right to keep one or two pieces of superior ore found during the course of work, which turned out to be the most *attractive* part of their remuneration.<sup>449</sup> Working as a sort of salary bonus<sup>450</sup> or a “gift to oneself for a hard day’s work,”<sup>451</sup> the *corpa* represented ten percent of the total silver extracted in Potosí and an 80 percent increase in the income of *mitayos* and *mingas*.<sup>452</sup> Spanish mine owners tolerated this practice because they were desperate to retain their workforce.<sup>453</sup> Besides the *corpa*, some workers also secreted out ore out of the mines as they exited the tunnels.<sup>454</sup>

To summarize, Potosí was characterized by a complex labor structure that comprised non-free or *corvée* workers (*mitayos*) and free or paid by-the-day workers

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<sup>446</sup> See Enrique Tandeter, *Mineros de weekend*, TODO ES HISTORIA 32–47, 34 (1981).

<sup>447</sup> See COLE, *supra* note 390 at 17.

<sup>448</sup> See Gil Montero, *supra* note 383 at 9.

<sup>449</sup> See e.g. Stern, *supra* note 404 at 852; Brading and Cross, *supra* note 417 at 558; LANE, *supra* note 175 at 36 (arguing that Spanish mine owners allowed this custom as long as it did not exceed certain informally agreed-upon terms).

<sup>450</sup> See Assadourian, *supra* note 394 at 268–69.

<sup>451</sup> LANE, *supra* note 175 at 36.

<sup>452</sup> See Assadourian, *supra* note 394 at 269.

<sup>453</sup> See LANE, *supra* note 175 at 36.

<sup>454</sup> See COLE, *supra* note 390 at 14; Stern, *supra* note 404 at 851; LANE, *supra* note 175 at 50.



(*mingas*) at the same time.<sup>455</sup> *Mitayos* and *mingas* were thus not separate categories but were closely intertwined.<sup>456</sup> As Barragán puts it,

[W]e should speak of a single system of work... instead of two separate and opposed categories of laborer... The laborers who were not working as *mitayos* or unfree workers could be engaged in other enterprises during the two weeks that they were not working[...] If so, free workers or *mingas* could also be unfree workers or *mitayos*. In other words, there was a combination of different labor relations realized by the same people in different weeks and months.<sup>457</sup>

The *mita-minga* system represented a massive input of cheap labor and a subsidy to the mining economy,<sup>458</sup> boosting silver production from the colonial Americas to the colonial power. This system “would not only help Spain consolidate its position as a global power but would also play a key role in the emergence of the industrial revolution and ultimately, modern, global capitalism.”<sup>459</sup> But this silver output was only possible at the cost of human lives and environmental devastation.<sup>460</sup>

Although the *mita* was in place for more than 200 years—it was abolished in 1812 by the “*Cortes de Cadiz*” but it did not completely disappear until 1825, when Simón Bolívar ended it<sup>461</sup>—it did not remain unchanged. Perhaps the most important

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<sup>455</sup> See BAKEWELL, *supra* note 392 at 180; See Barragán, *supra* note 383 at 211–12 (FN 16) (“[T]he word ‘minga’ is a hispanization of the Aymara word *mink’a* and the Quechua word *minq’ay* still in use today to describe an agricultural wage laborer or a person who works for payment in kind rather than money”); Hausberger, *supra* note 404 at 266; Barragán, *supra* note 393 at 99.

<sup>456</sup> Barragán, *supra* note 383 at 232; *see also* Barragán, *supra* note 393 at 98; BAKEWELL, *supra* note 392 at 187; Rossana Barragán, *Dynamics of Continuity and Change: Shifts in Labour Relations in the Potosí Mines (1680–1812)\**, 61 INTERNATIONAL REVIEW OF SOCIAL HISTORY 93–114, 98 (2016).

<sup>457</sup> Barragán, *supra* note 383 at 221.

<sup>458</sup> See Brading and Cross, *supra* note 417 at 558; *see also* Stern, *supra* note 404 at 851.

<sup>459</sup> See Stavig, *supra* note 400 at 529; *see also* ANDER IZAGUIRRE, THE MOUNTAIN THAT EATS MEN 22 (2019) (arguing that between 1545 and 1825 the Spanish removed 35,578 tons of silver from Potosí, the equivalent to USD 17 billion in today’s money).

<sup>460</sup> See LANE, *supra* note 175 at 4 (the environmental legacy of Potosí includes deforestation, waste mismanagement, fouling of streams, and pollution with mercury, lead, zinc and other metals).

<sup>461</sup> See Nicolás Sánchez-Albornoz, *La mita de Lima. magnitud y procedencia*, 12 HISTÓRICA 193–210, 194 (1988); Barragán, *supra* note 383 at 212; LANE, *supra* note 175 at 71.

metamorphosis was the advent of a group of self-employed and independent workers (known as the *k'ajchas*),<sup>462</sup> who would transform power and labor relations in Potosí forever.<sup>463</sup> I explore this development next.

### 3. The *K'ajchas*

During the seventeenth century, a group of independent, skilled, and resourceful men—the *k'ajchas*—emerged in Potosí. During the weekends and feast days, when mining operations were interrupted and workers left the village, the *k'ajchas* entered the mine shafts to extract ore illegally,<sup>464</sup> which they would later process in rudimentary mills (*trapiches*).<sup>465</sup> Potosí's weekend thieves, as Enrique Tandeter calls them,<sup>466</sup> were composed of indigenous peoples, mestizos, blacks, and even Spaniards,<sup>467</sup> and they normally traveled in gangs.<sup>468</sup> Known for their fearless and intrepid character, as well as their extraordinary bravery, the *k'ajchas* would use slings to scare off anyone who dared stop them. Although the etymology is obscure,<sup>469</sup> the word *k'ajchas* derives from *k'aj*, a Quechua and Aymara onomatopoeic term that evokes a loud and sharp sound such as steel striking stone<sup>470</sup> or the

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<sup>462</sup> Also known as known as *cacchas*, *calchas*, *capchas* or *cagchas*. See Barragán, *supra* note 383 at 213 (FN 18).

<sup>463</sup> See *id.* at 212. See also Rossana Barragán, *supra* note 456 at 98.

<sup>464</sup> See ENRIQUE TANDETER, *supra* note 23 at 112; Enrique Tandeter, *supra* note 62 at 32; ROSE MARIE BUECHLER, *THE MINING SOCIETY OF POTOSÍ, 1776-1810* 334 (1981).

<sup>465</sup> Sometimes the *k'ajchas* would own or rent the *trapiche*. See Rossana Barragán, *K'ajchas, trapiches y plata en el cerro de Potosí en el período colonial*, 20 ANUARIO DE ESTUDIOS BOLIVIANOS, ARCHIVÍSTICOS Y BIBLIOGRÁFICOS 273–320, 301 (2014).

<sup>466</sup> See Tandeter, *supra* note 446.

<sup>467</sup> See Thomas Abercrombie, *Qaqchas and to Plebe in "Rebellion": Carnival vs. Lent in 18th-Century Potosí*, 2 JOURNAL OF LATIN AMERICAN ANTHROPOLOGY 62–111, 64 (2008); BUECHLER, *supra* note 464 at 334.

<sup>468</sup> See Laura Escobari, *Potosí: Social Dynamics, Labor, and Mining Technology*, in *POTOSÍ: COLONIAL TREASURES AND THE BOLIVIAN CITY OF SILVER*, 25 (1997).

<sup>469</sup> See Abercrombie, *supra* note 467 at 64; Tandeter, *supra* note 446 at 35; Eduardo Martiré, *Tolerancias, prevenciones y regulación participadora de los indios "capchas" de Potosí, en la explotación del cerro* 291–303, 292 (1977).

<sup>470</sup> See TANDETER, *supra* note 393 at 35; Martiré, *supra* note 469 at 292.

sound of lightning.<sup>471</sup> The *k'ajchas* were characterized by their indiscipline and transgression of the law, alcohol consumption, and hedonism.<sup>472</sup> By raiding the mines during weekends (an activity called “*k'ajcheo*”), they earned more than the *mitayos* and *mingas*.<sup>473</sup>

Interestingly, and as a testament to the complex and entangled labor relations existing in the Rich Hill, some historians now argue that the *k'ajchas* were *mingas* during the weekdays.<sup>474</sup> This would allow them to identify good silver-bearing veins and leave them untouched until they went back in the tunnels during the weekend and help themselves.<sup>475</sup> Figure 7 below depicts what could be called the *mita-minga-k'ajcheo* system.

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<sup>471</sup> See PASCALE ABSI, *LOS MINISTROS DEL DIABLO : EL TRABAJO Y SUS REPRESENTACIONES EN LAS MINAS DE POTOSÍ* 17 (2005).

<sup>472</sup> See Abercrombie, *supra* note 467 at 65–66; TANDETER, *supra* note 393 at 121; Martiré, *supra* note 469 at 291.

<sup>473</sup> See Barragán, *supra* note 465 at 315.

<sup>474</sup> See Abercrombie, *supra* note 467 at 73; BUECHLER, *supra* note 464 at 334–335; Stern, *supra* note 404 at 854; Rossana Barragán, *supra* note 456 at 114; LANE, *supra* note 175 at 162.

<sup>475</sup> See Barragán, *supra* note 465 at 276; *see also* TANDETER, *supra* note 393 at 141; Stern, *supra* note 404 at 852.



**Figure 7. The mita-minga-k'ajcheo system**

(Source: By author)<sup>476</sup>

The Spanish mine and mill owners regarded the *k'ajchas* as vagabonds, thieves, or pirates. They installed gates, reinforced security, and hired guards to keep them off the mine shafts.<sup>477</sup> Not only did *k'ajcheo* create important economic losses, but also threatened the stability of the mining operation as *k'ajchas* destroyed bridges and pillars, often resulting in accidents with casualties.<sup>478</sup> Furthermore, *k'ajcheo* was problematic because it prevented the stability of the workforce.<sup>479</sup> In light of the above, mining entrepreneurs regularly pushed for radical measures against them and the destruction of their *trapiches*.<sup>480</sup>

The official position towards *k'ajcheo* was somewhat ambivalent, moving from permissiveness to repression, and vice versa.<sup>481</sup> During the seventeenth century, the *k'ajchas* were regarded with sympathy and the government seemed to have tolerated them,

<sup>476</sup> This figure is inspired from Barragán, *supra* note 383 at 220 (Table 7.1.).

<sup>477</sup> See TANDETER, *supra* note 393 at 114.

<sup>478</sup> See *id.* at 117, 134.; Martiré, *supra* note 469 at 293; ABSI, *supra* note 471 at 19–20; Lewis Hanke, *supra* note 386 at 19.

<sup>479</sup> *Minga* workers would leave Potosí for a period of time when they had a stroke of luck during their *k'ajcheo* work. See TANDETER, *supra* note 393 at 121.

<sup>480</sup> See Barragán, *supra* note 465 at 288; LANE, *supra* note 175 at 181.

<sup>481</sup> See TANDETER, *supra* note 393 at 113; Barragán, *supra* note 465 at 278; ABSI, *supra* note 471 at 18; BUECHLER, *supra* note 464 at 335; Barragán, *supra* note 393 at 199.

even if royal administrators attempted different strategies to keep them off the mines.<sup>482</sup> Perhaps there were simply too many of them to control or their production became increasingly central to the Spanish Crown.<sup>483</sup>

Importantly, some historians contend that the perception towards *k'ajcheo* varied depending on the fluctuation of silver-bearing veins and the price of silver.<sup>484</sup> Accordingly, at times of low prices the mine owners agreed to *k'ajcheo* because it allowed them to operate without significant capital disbursements.<sup>485</sup> Conversely, at times of high prices the mine owners hardened their control over production and preferred hiring free workers rather than undisciplined *k'ajchas*.<sup>486</sup> In this line of reasoning, for Pascale Absi, the *k'ajchas* represented an escaping valve for mining entrepreneurs because they allowed the exploitation of otherwise unprofitable mining deposits.<sup>487</sup>

Throughout the lifetime of Potosí, there were multiple attempts to regularize *k'ajcheo*. Though it was never approved, in 1794 the royal administrators prepared a draft reform (“*Código Carolino*”) that included a proposal to order and register the *k'ajchas*, subject to a share of the ore with the mine owner.<sup>488</sup> Both Tandeter and Barragán claim that

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<sup>482</sup> See TANDETER, *supra* note 393 at 113–14; Tandeter, *supra* note 446 at 34.

<sup>483</sup> See generally Martiré, *supra* note 469 at 302; BUECHLER, *supra* note 464 at 335 (arguing that the *k'ajchas* continued in impunity because they were dangerous to deal with and authorities did not consider them noxious as it allowed the bank to make significant profits); COBB, *supra* note 391 at 22; Erick Langer, *The Barriers to Proletarianization: Bolivian Mine Labour, 1826–1918*, 41 in INTERNATIONAL REVIEW OF SOCIAL HISTORY 27–51, 38 (1997); Rossana Barragán, *supra* note 456 at 109; LANE, *supra* note 175 at 162 (claiming that from the King’s viewpoint, a steady silver output was being produced and *k'ajchas* kept the mines operating on weekends).

<sup>484</sup> See Mary Van Buren, *Conectando el pasado con el presente: la antropología histórica de la producción de metal a pequeña escala en Porco, Bolivia*, BOLETÍN DE ARQUEOLOGÍA PUCP 63–82, 68 (2016); Tristan Platt, *supra* note 398 at 66; Barragán, *supra* note 465 at 276–277.

<sup>485</sup> See e.g. Mary Van Buren, *supra* note 484 at 68; Tristan Platt, *supra* note 398 at 203; Barragán, *supra* note 465 at 278; LANE, *supra* note 175 at 151.

<sup>486</sup> See Mary Van Buren, *supra* note 484 at 68.

<sup>487</sup> See ABSI, *supra* note 471 at 21.

<sup>488</sup> See TANDETER, *supra* note 393 at 140.

during the nineteenth century, a compromise between the Spanish mine owners and the *k'ajchas* developed, thereby establishing a 50:50 share of the ore extracted.<sup>489</sup>

Towards the end of the colonial rule, the abolition of both the *mita* (1812-1825) and the indigenous tribute (1854) reduced the labor force available in Potosí, which became one composed exclusively of free men thereafter.<sup>490</sup> This change increased the legitimacy of *k'ajcheo*, which was responsible for half of the total production by the time.<sup>491</sup> “The theft of ore, then, was more than simply a complementary source of income. The *k'ajchas* associated with the trapiches evolved into an independent enterprise [and turned into] a popular economy that burst onto the scene with considerable energy in the middle of the eighteenth century.”<sup>492</sup>

Tenaciously persistent,<sup>493</sup> the *k'ajchas* survived until the end of the nineteenth century, when the creation of the mining patrol (1856), the approval of the Mining Code (1871) and the mechanization of mining processes (1880) led to the proletarianization of the working force in present-day Bolivia.<sup>494</sup> Yet, *k'ajcheo* has not completely disappeared from the Altiplano and persists to date.<sup>495</sup>

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<sup>489</sup> See *id.* at 140.; Barragán, *supra* note 465 at 278.

<sup>490</sup> See ABSI, *supra* note 471 at 20. The indigenous tribute was the crown’s second largest source of revenue from her American colonies, behind mining. See COTLER, *supra* note 382 at 23.

<sup>491</sup> See TANDETER, *supra* note 393 at 140; Tandeter, *supra* note 446 at 44; Tristan Platt, *supra* note 398 at 204; Barragán, *supra* note 382 at 213; BROWN, *supra* note 388 at 34.

<sup>492</sup> Barragán, *supra* note 382 at 218.

<sup>493</sup> See LANE, *supra* note 175 at 185.

<sup>494</sup> See TANDETER, *supra* note 393 at 141.

<sup>495</sup> See generally ABSI, *supra* note 471 at 21–23 (arguing that the *k'ajchas* survived throughout the twentieth century in Bolivia); Andrea Marston, *Vertical farming: tin mining and agro-mineros in Bolivia*, THE JOURNAL OF PEASANT STUDIES 1–21, 14 (2019) (arguing that *k'ajcheo* never completely disappeared); LANE, *supra* note 175 at 189 (arguing that *k'ajcheo* continued in tandem with industrial mining); BEBBINGTON, *supra* note 331 at 90 (arguing that during the twentieth century this practice persisted and was consolidated in times of economic crisis); Tristan Platt, *Caccheo y minería mediana en las provincias de Potosí: Lipez y Porco (1830-1850)*, ESTUDIOS ATACAMEÑOS 85–118 (2014) (describing *k'ajcheo* in different mines during the post-independence period in present-day Bolivia). Furthermore, some authors claim the *k'ajchas* are the historical ancestor of contemporary mining cooperatives in Bolivia. See e.g. Mary Van Buren, *supra* note 484 at 75; Andrea Marston & Amy Kennemore, *Extraction, Revolution, Plurinationalism: Rethinking*

#### 4. The Origin and Relevance of *K'ajcheo*

The origin of the *k'ajcheo* system is still unclear. Tandeter claims that its inception can be traced down to the *yanaconas* who, as mentioned earlier, worked under a sharecropping or lease arrangement in early Potosí.<sup>496</sup> Hence, it could have emerged as a way of guaranteeing a threatened but essential part of the Potosí worker's wages.<sup>497</sup> Similarly, Barragán contends that the apparent permissiveness towards *k'ajcheo* represented a way to make up for the losses caused after the Spanish took over the silver production process which sidelined *yanaconas*.<sup>498</sup> Alternatively, Lane's work suggests that the *k'ajcha* reward evolved from the *corpa*, the high-grade ore that both *mitayos* and *mingas* kept to themselves as a *salary bonus*.<sup>499</sup>

Other historians contend that *k'ajcheo* has wider and deeper precedents.<sup>500</sup> According to Tristan Platt, *k'ajcheo* exemplifies an Andean conception of an associative relationship between the worker and his employer.<sup>501</sup> Steve J. Stern goes further claiming that “the drive by laborers to establish customary share arrangements appeared not only in Potosí but in virtually every major silver center of Mexico and Peru-Bolivia [...] convert[ing] relations of forced labor and of wage labor into a relation resembling

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*Extractivism from Bolivia*, 46 LATIN AMERICAN PERSPECTIVES; RIVERSIDE 141–160, 149 (2019); ABSI, *supra* note 471 at 19–27.

<sup>496</sup> See TANDETER, *supra* note 393 at 101; Tandeter, *supra* note 446 at 37.

<sup>497</sup> See Abercrombie, *supra* note 467 at 72–73.

<sup>498</sup> See Barragán, *supra* note 465 at 283; Rossana Barragán, *¿Ladrones, pequeños empresarios o trabajadores independientes? K'ajchas, trapiches y plata en el cerro de Potosí en el siglo XVIII*, NUEVO MUNDO - MUNDOS NUEVOS, 14 (2015), <https://doaj.org> (last visited Nov 8, 2019).

<sup>499</sup> See LANE, *supra* note 175 at 36, 180.

<sup>500</sup> See e.g. Barragán, *supra* note 382 at 206 (“The appropriation of minerals by workers occurred throughout the Americas under different names and amounted to a tolerated form of economic compensation and a means of attracting a workforce”).

<sup>501</sup> See Tristan Platt, *supra* note 398 at 202.

sharecropping.”<sup>502</sup> Precisely, in colonial Mexico,<sup>503</sup> free laborers received salaries even though “what attracted men to mining was not their daily wage but a share in the ore.”<sup>504</sup> The size of these “*pepenas*” or “*partidos*,” as were called in Mexico, varied from camp to camp,<sup>505</sup> but generally materialized in a percentage of the ore produced (as diverse as 1/2, 1/3, 1/4, or 1/12).<sup>506</sup> Notably, mine owners agreed to this system if workers refined the ore in their mills, rather than sell it to independent refiners.<sup>507</sup> Attempts to eliminate the Mexican *partidos* resulted in violent revolts and riots.<sup>508</sup>

Besides Potosí’s *corpa* and *k’jacheo*, there are also examples of direct appropriation strategies in the Viceroyalty of Peru. For example, in the Oruro silver mine (present-day Bolivia), the second most important silver mine after Potosí, Spanish mine owners had to lure free workers with elevated salaries, highly-prized gifts, or a share of the ore.<sup>509</sup> Similarly, in present-day Chile, mine owners created the “*doblas*” system to remunerate their workers, granting them 24 hours to extract ore for their own benefit.<sup>510</sup> Also in Chile, mine owners in Huantajaya retained their workforce through debt peonage, but offered workers mineralized rocks (called “*pallacos*”) as part of their salaries.<sup>511</sup> In other cases,

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<sup>502</sup> Stern, *supra* note 404 at 852, 856.

<sup>503</sup> See Guillermo Mira Delli-Zotti & Ignacio González Casasnovas, *Reflexiones y sugerencias a propósito de la minería colonial*, 42 HISTORIA MEXICANA 309–332, 315–16 (1992).

<sup>504</sup> Brading and Cross, *supra* note 417 at 147.

<sup>505</sup> See Tandeter, *supra* note 446 at 115.

<sup>506</sup> See e.g. Brading and Cross, *supra* note 417 at 147; Frédérique Langue, *Trabajadores y formas de trabajo en las minas zacatecanas del siglo XVIII*, 40 HISTORIA MEXICANA 463–506, 480 (1991); Hausberger, *supra* note 404 at 300.

<sup>507</sup> See Brading and Cross, *supra* note 417 at 186; PHILIP (PHILIP LANCE) HADLEY, *MINERÍA Y SOCIEDAD EN EL CENTRO MINERO DE SANTA EULALIA, CHIHUAHUA : 1709-1750* 165 (c1979).

<sup>508</sup> See Ann Zulawski, *Wages, Ore Sharing, and Peasant Agriculture: Labor in Oruro’s Silver Mines, 1607-1720*, 67 THE HISPANIC AMERICAN HISTORICAL REVIEW 405–430, 419 (FN 44) (1987); Brading and Cross, *supra* note 417 at 148; HADLEY, *supra* note 507 at 165.

<sup>509</sup> See Zulawski, *supra* note 508 at 413; Concepción Gavira Márquez, *Labour Discipline and Resistance: The Oruro Mining District in the Late Colonial Period*, 22 BULLETIN OF LATIN AMERICAN RESEARCH 1–26, 15 (2003).

<sup>510</sup> See Tandeter, *supra* note 446 at 115.

<sup>511</sup> See BROWN, *supra* note 388 at 168.



mine owners also entered into informal partnerships agreements with the mine owners for a share of the ore.<sup>512</sup>

To sum up, even though their visibility and empowerment did not consolidate until the eighteenth century,<sup>513</sup> the *k'ajchas* and the *trapiches* resulted in a parallel circuit of silver extraction and processing that divided public officials and distressed the functioning of the *mita-minga* system.<sup>514</sup> They started as a group of weekend thieves, but gradually evolved into a group of independent, self-employed, and resilient workers, earning a space of legitimacy and autonomy.<sup>515</sup> In fact, the *k'ajchas* embodied the emergence of a new popular class or economy<sup>516</sup> and slowed down the proletarianization process of the workforce in the Altiplano.<sup>517</sup>

Like similar direct appropriation strategies in the Spanish Americas,<sup>518</sup> the *k'ajchas* considered themselves entitled to exploit the minerals as their own right and for their own benefit,<sup>519</sup> synthesizing a strong rejection to the regalian system of natural resources set up by the Spaniards.<sup>520</sup> To quote Barragán,

[t]he existence of the *kajchas* meant therefore that neither ownership of the mines, nor the exclusive property rights of the Spanish mine owners were entirely accepted by the workers, who, for their part, insisted on their own rights of access to the silver mines, such as they had had since early times. Similarly, although deprived of actual ownership of the mines, as *kajchas*

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<sup>512</sup> See *id.* at 168.

<sup>513</sup> See Barragán, *supra* note 465 at 284; TANDETER, *supra* note 393 (reporting approximately 4,000 *k'ajchas* in 1759 and 2,000-3,000 in 1782).

<sup>514</sup> See Barragán, *supra* note 465 at 278, 279, 303, 315 and 316.

<sup>515</sup> See Hausberger, *supra* note 404 at 300–01; ABSI, *supra* note 471 at 18; Barragán, *supra* note 382 at 213.

<sup>516</sup> See e.g. Abercrombie, *supra* note 467 at 63; Barragán, *supra* note 465 at 316.

<sup>517</sup> See generally CARLOS CONTRERAS, MINEROS Y CAMPESINOS EN LOS ANDES : MERCADO LABORAL Y ECONOMÍA CAMPESINA EN LA SIERRA CENTRAL SIGLO XIX 63 (1987); Barragán, *supra* note 465 at 279 and 316; TANDETER, *supra* note 393 at 121; Cf. Zulawski, *supra* note 508 at 406; Hausberger, *supra* note 404 at 301; Barragán, *supra* note 382 at 196.

<sup>518</sup> Yet, unlike *huachaca*, *pepena*, *partidos*, *polleo* or *doblas*, *k'ajcheo* raids were conducted outside the mine owner's control and processes. Cf. TANDETER, *supra* note 393 at 121.

<sup>519</sup> See Barragán, *supra* note 383 at 213; ABSI, *supra* note 471 at 17–18; LANE, *supra* note 175 at 185.

<sup>520</sup> Cf. Barragán, *supra* note 465 at 278.

the *mita* and *minga* workers nevertheless maintained control over a substantial portion of the ore.<sup>521</sup>

Like the sound of a slingshot or lightening, the etymology of *k'ajchas* evokes their silent ordeal and the challenge they represented to the colonial and post-colonial mining industry.<sup>522</sup>

### **B. Labor Force During the Post-Independence Period (1821-1900)**

On 28 July 1821, Peru declared its independence from Spain, putting end to almost 300 years of colonial domination. Though this episode meant the birth of a new, independent country, it also represented the start of a weakened economy following the dismantlement of the productive colonial force.<sup>523</sup> As Carlos Contreras points out, Peru's independence was achieved only at the cost of the decapitalization of the country and the loss of its economic elite.<sup>524</sup> On top of that, Peru experienced severe political instability throughout the nineteenth century, as evidenced by numerous civil wars, guerrilla activity, and road banditry, discouraging investment in the mining and agricultural sectors.<sup>525</sup>

In particular, the wars of independence left the mining sector significantly damaged and disorganized.<sup>526</sup> By the end of the colonial rule, there were 633 silver mines and 55

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<sup>521</sup> Barragán, *supra* note 393 at 107.

<sup>522</sup> See Barragán, *supra* note 382 at 195; Barragán, *supra* note 498 at 14.

<sup>523</sup> See BONILLA, *supra* note 207 at 40–46; Heraclio Bonilla, *La coyuntura comercial del siglo XIX en el Perú*, 12 DESARROLLO ECONÓMICO 305–331, 313 (1972); Peter Guardino & Charles Walker, *Estado, Sociedad y Política en el Perú y México entre fines de la colonia y comienzos de la República*, XVIII HISTÓRICA, 27 (1994); Carlos Sempat Assadourian et al., *Minería y espacio económico en los Andes, siglos XVI-XX*, INSTITUTO DE ESTUDIOS PERUANOS, 46–47 (1980).

<sup>524</sup> See Carlos Contreras, *Introducción*, 14 in COMPENDIO DE HISTORIA ECONÓMICA DEL PERÚ IV: ECONOMÍA DE LA PRIMERA CENTURIA INDEPENDIENTE, 11–12 (2011).

<sup>525</sup> See *id.* at 12.; Jose Deustua, *Guano, salitre, minería y petróleo en la economía peruana, 1820-1930*, 14 in COMPENDIO DE HISTORIA ECONÓMICA DEL PERÚ IV: ECONOMÍA DE LA PRIMERA CENTURIA INDEPENDIENTE, 165 (2011); COTLER, *supra* note 382 at 70 (showing that during the nineteenth century Peru approved eight different constitutions).

<sup>526</sup> See FISHER, *supra* note 444 at 120, 122. See CONTRERAS, *supra* note 517 at 57–58. See Carlos Sempat Assadourian, *Mita de Potosí establecida por Toledo*, 39 HISTORIA MEXICANA 563–563, 46 (1989); BONILLA,

gold mines in operation, while 1,124 silver mines and 57 gold mines were paralyzed.<sup>527</sup> Following the wars, the mines confiscated to Spaniards were offered as rewards to military chiefs, who lacked the know-how and experience to operate them.<sup>528</sup> Furthermore, the administrative subsidies and financial support that the former colonial regime had offered private miners for centuries—which included the provision of tools, mercury, timber, and explosives, and the transportation of mineral commodities from the Andes to the coastline—ended abruptly.<sup>529</sup> Undercapitalized, mining entrepreneurs resorted to loans in goods (“*habilitaciones*”) to engage in risky mining ventures across the Andes.<sup>530</sup> Mining activities throughout the nineteenth century showed little luster in comparison to the colonial period.<sup>531</sup> As a matter of fact, it was not until the end of the Pacific War (1879-1884) that Peru’s modern mining sector developed.<sup>532</sup>

As regards the workforce, the post-independence period was characterized by a shortage of workers, which was intensified by the subsequent abolishment of the *mita* and the indigenous tribute.<sup>533</sup> Despite attempts to reinstitute the *mita*, in the absence of coercive methods, it was very difficult for miners to attract peasants to the mines as free laborers.<sup>534</sup> Indigenous peoples preserved strong, long-lasting bonds to their lands and agricultural

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*supra* note 207 at 20; Deustua, *supra* note 525 at 166; Carlos Contreras, *La minería en la historia del Perú*, 1 AMERICA LATINA EN LA HISTORIA ECONOMICA 33–40, 33–34 (1994).

<sup>527</sup> See Deustua, *supra* note 525 at 166.

<sup>528</sup> See CARLOS CONTRERAS, *El legado económico en la independencia del Perú* 11 (2010).

<sup>529</sup> See CARLOS CONTRERAS & MARCOS CUETO, *HISTORIA DEL PERÚ CONTEMPORÁNEO* 103 (6 ed. 2018); Guardino and Walker, *supra* note 523 at 32, 47; CONTRERAS, *supra* note 528 at 21; Carlos Contreras, *Menos plata pero más papas: consecuencias económicas de la independencia en el Perú*, XXXV HISTORICA 101–132, 112 (2011); Assadourian et al., *supra* note 523 at 50.

<sup>530</sup> See CONTRERAS AND CUETO, *supra* note 529 at 104.

<sup>531</sup> See Assadourian et al., *supra* note 523 at 48.

<sup>532</sup> See Damonte, *supra* note 176 at 20.

<sup>533</sup> See CONTRERAS, *supra* note 517 at 61–67; JOHN ROBERT FISHER, *MINAS Y MINEROS EN EL PERÚ COLONIAL, 1776-1824* 181 (1977); CONTRERAS AND CUETO, *supra* note 529 at 106, 234 (arguing that until the indigenous tribute was abolished, peasants resorted to seasonal mining activities in order to pay the tax).

<sup>534</sup> See BONILLA, *supra* note 207 at 25; Assadourian et al., *supra* note 523 at 50; Erick Langer, *supra* note 483.

livelihoods, simply returning to their communities when harvests were ready to pick.<sup>535</sup> Importing workers from abroad was not an option due to the high cost of transportation, though eventually, Peru resorted to Asian immigrants to allow the development of the guano industry and for railroad construction in the late nineteenth century.<sup>536</sup>

Labor shortages extended throughout the nineteenth century and continued during the early twentieth century.<sup>537</sup> There was a generalized perception that Peru was an underpopulated country.<sup>538</sup> The media at the time compared the country to the Venus de Milo: a beautiful body (i.e. exuberant natural resources) but with no arms (i.e. no manpower to extract the subsoil riches).<sup>539</sup> To surmount this situation, mine owners had to devise creative ways of attracting free laborers. Besides offering high wages, mine owners resorted to debt labor system (“*enganche*”) and direct appropriation strategies by the workforce.<sup>540</sup> In this section, I briefly explore the development of both strategies.

## 1. *Enganche*

Debt peonage offered mining entrepreneurs “a labor force at minimum cost.”<sup>541</sup> Mining companies resorted to *enganche* (literally, to hook or to entrap) to retain *free laborers* (mostly indigenous men) by giving away salary advances (but also gifts) in

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<sup>535</sup> See JOSE DEUSTUA, *Campesino, el patrón no comerá más de tu pobreza: Economía, mercado y campesinos en los andes. el caso de la mimería peruana en el siglo XIX* 27 (1995) (arguing that taking care of their animals and crops was part of peasant’s strategy of survival).

<sup>536</sup> See Carlos Contreras, *Política demográfica, crecimiento económico y formación del mercado laboral en el Perú del siglo veinte*, 13 INVESTIGACIONES DE HISTORIA ECONÓMICA 11–41, 16–17 (2009); See also Michael J. Gonzales, *Capitalist Agriculture and Labour Contracting in Northern Peru, 1880–1905*, 12 JOURNAL OF LATIN AMERICAN STUDIES 291–315, 299 (1980).

<sup>537</sup> See BONILLA, *supra* note 207 at 18.

<sup>538</sup> See Contreras, *supra* note 536 at 16–17.

<sup>539</sup> See *id.* at 16–17.

<sup>540</sup> See CONTRERAS, *supra* note 517 at 61–63; See also Alberto Flores-Galindo, *Los Mineros de la Cerro de Pasco 1900 - 1930 (Un intento de caracterización social y política)*, 1972.

<sup>541</sup> JOSH DEWIND, PEASANTS BECOME MINERS : THE EVOLUTION OF INDUSTRIAL MINING SYSTEMS IN PERU, 1902-1974 172 (1987).

exchange for working in the mines until their debt was repaid.<sup>542</sup> The debt peonage contract involved four different parties and two contractual relationships (*see* Figure 8 below). On the one hand, the mining company and the labor recruiter (*enganchador*)<sup>543</sup> signed an agreement by which the latter obliged itself to facilitate a given number of workers to the former. In exchange, the labor recruiter received a 20 percent commission that was deducted from the workers' salaries.<sup>544</sup> Such payment was also contingent upon the time workers stayed in the company.<sup>545</sup> On the other hand, a second agreement was executed between the labor recruiter and the peon worker ("*enganchado*"). In this contract, the latter was obliged to work for the company until he had paid off his debt. A cosigner ("*fiador*"), usually a friend or relative of the worker, would sign the contract too, offering his assets as collateral in case the peon did not pay back his debt.<sup>546</sup>

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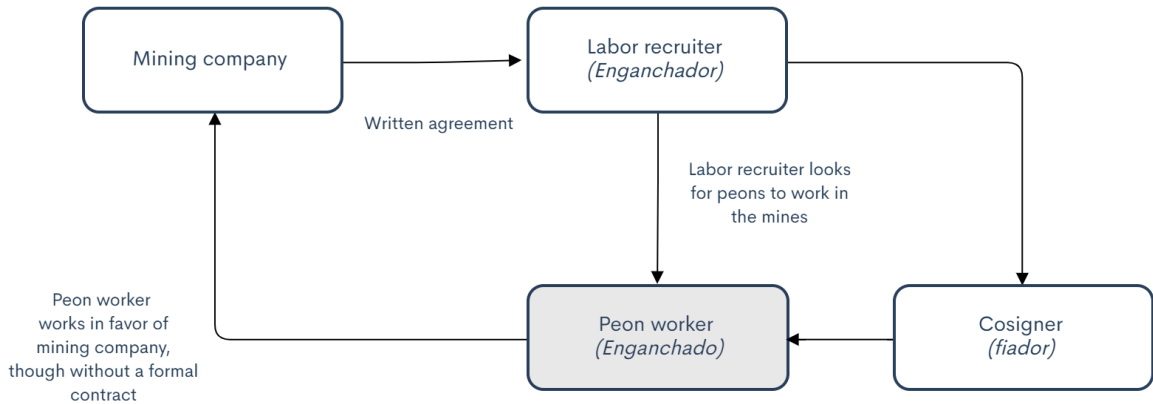
<sup>542</sup> *See generally* Cecilia Mendez, *La otra historia del guano: Perú 1840 - 1879*, 9 REVISTA ANDINA 7–46, 10 (1987); Jesús Cosamalón, *Población y mercado laboral, 1827-1940*, 14 in COMPENDIO DE HISTORIA ECONÓMICA DEL PERÚ IV: ECONOMÍA DE LA PRIMERA CENTURIA INDEPENDIENTE 19–91, 63 (2011); CONTRERAS AND CUETO, *supra* note 529 at 162.

<sup>543</sup> *See* Fernando de Trazegnies, *Paradojas de la Modernización: El Contrato de Enganche*, 20 THEMIS, REVISTA DE DERECHO 13–20, 14 (1991).

<sup>544</sup> *See* Carlos Ramos, *El contrato de enganche: el cautiverio de la autonomía de la voluntad*, V in HISTORIA DEL DERECHO CIVIL PERUANO. SIGLOS XIX Y XX 69–152, 101 (2006).

<sup>545</sup> *See id.* at 97–98.

<sup>546</sup> *See* BONILLA, *supra* note 207 at 41–42; de Trazegnies, *supra* note 543 at 16.



**Figure 8. The *enganche* agreement**

(Source: By author)

The labor recruiter had a strong cognizance of targeted villages for *enganche* where he maintained a wide network of contacts.<sup>547</sup> This assured him the support from local authorities and villagers to pressure peasants to sign the agreement<sup>548</sup> or, worse still, in case a peon escaped from the mines. The legal framework at the time entitled the labor recruiter to trace down runaway peons and forced them back to the mines.<sup>549</sup> Fugitives were also exposed to fines, imprisonment, and had to change their names and hide from “*enganchadores*” for years.<sup>550</sup>

In addition to the salary advances, other features made it almost impossible for the peon to leave the mining company debt-free.<sup>551</sup> The labor recruiter—with the acquiescence of the mining company—set up a food supply store (“*tambo*”) where he could sell products

<sup>547</sup> See Ramos, *supra* note 544 at 102; de Trazegnies, *supra* note 543 at 15; CONTRERAS AND CUETO, *supra* note 529 at 162.

<sup>548</sup> See CONTRERAS AND CUETO, *supra* note 529 at 162.

<sup>549</sup> See de Trazegnies, *supra* note 543 at 15; EDUARDO BEDOYA & ALVARO BEDOYA, *El Trabajo Forzoso en la Extracción de la Madera en la Amazonía Peruana* 23 (2005).

<sup>550</sup> See DEWIND, *supra* note 541 at 317.

<sup>551</sup> See DEUSTUA, *supra* note 535 at 26; DEWIND, *supra* note 541 at 162.

to the peon, but at inflated prices.<sup>552</sup> Sometimes peons had no option but to buy in such places if paid with coupons that could only be used in said stores or were prohibited from buying in other village stores. In case they could not pay in cash, credit was another option although with a high-interest rate. By using this mechanism, the labor contractors sought to permanently subjugate the peons to this perverse system. These features also elicited the development of a clientelist relationship between the mine owner and his peons.<sup>553</sup>

Debt peonage worked under the protection of a binding, written contract.<sup>554</sup> According to Fernando de Trazegnies, this was an abusive contract designed to seize the peon's or consigner's assets in case the former did not fulfill his obligations.<sup>555</sup> Despite its legal character, and some attempts to make it more humane, the design of this contract reveals the intention of maintaining a colonial-like system during the Republican era.<sup>556</sup> Debt peonage was a forced labor system in which indigenous men were trapped for years under unclear and deceitful terms.<sup>557</sup> It was the *reaction* to the lack of labor market, turning out into an onerous recruitment tool for mining entrepreneurs, an extremely lucrative business for *enganchadores*, and a system of abuse for the workers.<sup>558</sup> Some scholars associated it to a disguised form of slavery<sup>559</sup> or to a Republican version of the *mita*.<sup>560</sup>

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<sup>552</sup> See PETER KLAREN, *FORMACION DE LAS HACIENDAS AZUCARERAS Y ORIGENES DEL APRA* 80–81 (3 ed. 2006); de Trazegnies, *supra* note 543 at 15; DEUSTUA, *supra* note 535 at 24; DEWIND, *supra* note 541 at 160. This system evokes the colonial period, where indigenous peoples were forced to buy goods (e.g. animals or tools) from their colonial masters at inflated prices. Cf. COTLER, *supra* note 382 at 24.

<sup>553</sup> See DEUSTUA, *supra* note 535 at 26.

<sup>554</sup> See Flores-Galindo, *supra* note 540 at 182–85.

<sup>555</sup> See de Trazegnies, *supra* note 543 at 16.

<sup>556</sup> See Ramos, *supra* note 544 at 73–75.

<sup>557</sup> See Assadourian, *supra* note 526 at 59; DEWIND, *supra* note 541 at 162.

<sup>558</sup> See CONTRERAS AND CUETO, *supra* note 529 at 162; DEWIND, *supra* note 541 at 158.

<sup>559</sup> See DEWIND, *supra* note 541 at 177; See also Gonzales, *supra* note 536.

<sup>560</sup> See Ramos, *supra* note 544 at 73–75.

The *enganche* agreement soon became a national institution, claims Alberto Flores-Galindo, and was also used to retain workers in the agricultural sector (more specifically in sugar cane plantations), during the Amazon rubber boom, and the guano boom in the Peruvian coastline.<sup>561</sup> Indeed, it could be found “in all corners of Peru” and persevered until the mid-twentieth century.<sup>562</sup> What is more, *enganche*-type labor arrangements have been reported in contemporary gold and timber extraction in the Peruvian Amazon.<sup>563</sup>

## 2. Direct Appropriation Strategies

In opposition to debt peonage, during the post-independence period mining entrepreneurs promoted or tolerated worker’s direct appropriation strategies in different mines around the Andes. In the Hualgayoc mine (Cajamarca, Northern Andes), miners resisted working for a salary so their remuneration included the right to work in the mines for themselves once a week, mostly on Saturdays.<sup>564</sup> According to Federico Gamarra, payment of salaries in Hualgayoc was the exception rather than the rule.<sup>565</sup>

In addition, in Cerro de Pasco (Central Andes), mine owners recognized worker’s right to “*huachaca*,” a natural right to pocket some rocks on their way out a mine shaft, understood as a gift from the mountain deity.<sup>566</sup> Workers were free to select and pick the

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<sup>561</sup> See Flores-Galindo, *supra* note 540 at 45; Ramos, *supra* note 544 at 73–75; DEWIND, *supra* note 541 at 156; EDUARDO BEDOYA AND ALVARO BEDOYA, *supra* note 549; Gonzales, *supra* note 536.

<sup>562</sup> See Ramos, *supra* note 544 at 73–75; see also EDUARDO BEDOYA AND ALVARO BEDOYA, *supra* note 549.

<sup>563</sup> See e.g. EDUARDO BEDOYA AND ALVARO BEDOYA, *supra* note 549; UNITED NATIONS HUMAN RIGHTS COUNCIL, *Report of the Special Rapporteur on contemporary forms of slavery, including its causes and consequences*, Gulnara Shahinian (2011).

<sup>564</sup> See GAMARRA, *supra* note 8 at 47–50; CARLOS CONTRERAS, *LOS MINEROS Y EL SABIO DEL REY: FEDERICO MOTHES EN HUALGAYOC, 1794-1798* 129 (1995).

<sup>565</sup> See GAMARRA, *supra* note 8 at 47.

<sup>566</sup> See generally CONTRERAS, *supra* note 517 at 61; Carlos Contreras, *La fuerza laboral minera y sus condiciones de funcionamiento. Cerro de Pasco siglo XIX* 6–7 (1986), <http://repositorio.iep.org.pe/handle/IEP/789>; Delli-Zotti and Casanovas, *supra* note 503 at 316; see also FISHER, *supra* note 444 at 194.



best ore for themselves during *huachaca*,<sup>567</sup> even if it resulted in the destruction of mine bridges and pillars.<sup>568</sup>

Similarly, in Bolivia, Erick Langer narrates the story of the Andacaba Company, which in 1887 resorted to *k'ajcha*-type arrangements, allowing workers to take the richest ore “to supplement their meagre wages. In other words, at least in the exploration phase, when mine owners had little or no income to offset expenses, colonial-type relationships continued to persist in the nineteenth century mining.”<sup>569</sup>

### 3. From Peasants to Workers

Together with *enganche*, direct appropriation strategies reflected workers’ resistance to proletarianization in the Peruvian Andes and slowed down the emergence of a permanent and professional workforce.<sup>570</sup> Additionally, direct appropriation strategies reduced the opportunity for technological innovation and the mechanization of mineral processes.<sup>571</sup> The emergence and consolidation of proletarianization in Peru’s mining sector was not only lethargic, erratic, and cyclical,<sup>572</sup> but also associated with the entry of an American-incorporated company, the Cerro de Pasco Copper Corporation, in the Central Andes.<sup>573</sup>

Following the passing of a new Mining Law in 1900 designed to attract foreign investment in the natural resource industry,<sup>574</sup> Cerro de Pasco Copper Corporation started

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<sup>567</sup> See CONTRERAS, *supra* note 517 at 61–62.

<sup>568</sup> See *id.* at 62.

<sup>569</sup> Erick Langer, *supra* note 483.

<sup>570</sup> Cf. DEUSTUA, *supra* note 535 at 26.

<sup>571</sup> See CONTRERAS, *supra* note 564 at 136.

<sup>572</sup> See DEUSTUA, *supra* note 535 at 24; Assadourian et al., *supra* note 523 at 59.

<sup>573</sup> See generally BONILLA, *supra* note 207 at 23; Assadourian et al., *supra* note 523 at 52; Flores-Galindo, *supra* note 540; DEWIND, *supra* note 541.

<sup>574</sup> See CONTRERAS AND CUETO, *supra* note 529 at 232.

mining operations in 1902. During its first decades of operations in the region of Cerro de Pasco, “the company needed massive numbers of unskilled laborers, more than had ever been brought together in one productive enterprise in Peru.”<sup>575</sup> Thanks to *enganche*, this mining company managed to organize its workforce, which was composed of *transitional proletarians*<sup>576</sup> or *peasant-miners*,<sup>577</sup> rather than full-time workers. Indeed, peasant-miners would only work in the mines for a few months, considering their strong connections with their land and agricultural activities, which they refused to disengage from.<sup>578</sup> As Josh DeWind explains, “The constant migration of unskilled peasants to and from the mines became the outstanding characteristic of the labor system...”<sup>579</sup>

For the Cerro de Pasco Copper Corporation, the high turnover of workers was convenient because it allowed it to evade dealing with workers’ health problems and kept them disorganized, neutralizing any political activism.<sup>580</sup> More importantly, the *enganche* system “drained wealth out of the peasant economy” in favor of the mining company.<sup>581</sup> Although peasant-miners did resist both *enganche* and the harsh working conditions in the mines by fleeing the mining center, refusing to work, sabotaging, or striking, these were rather spontaneous and short-lived outbursts.<sup>582</sup> In other mining geographies in the Andes, peasant-miners also resisted proletarianization by escaping their *enganche* obligations and

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<sup>575</sup> See DEWIND, *supra* note 541 at 152–53.

<sup>576</sup> See Flores-Galindo, *supra* note 540 at 78; BONILLA, *supra* note 207 at 16.

<sup>577</sup> See DEUSTUA, *supra* note 535 at 23.

<sup>578</sup> See Flores-Galindo, *supra* note 540 at 78–79; BONILLA, *supra* note 207 at 16, 24; Erick Langer, *supra* note 483 at 44; Contra DEWIND, *supra* note 541 at 155 (arguing that it what forced peasant-miners back to their agricultural lands was low salaries offered by Cerro de Pasco Copper Corporation, which did not allow them to cover their basic living expenses); EDUARDO BEDOYA AND ALVARO BEDOYA, *supra* note 549 at 22.

<sup>579</sup> DEWIND, *supra* note 541 at 152.

<sup>580</sup> See Flores-Galindo, *supra* note 540 at 80.

<sup>581</sup> DEWIND, *supra* note 541 at 575.

<sup>582</sup> See *id.* at 316–21.

keeping their connections to their communal origin.<sup>583</sup> As Carlos S. Assadourian et al. argue,

the transition from peasants to mining workers in the Andes represents, at the same time, a rupture and continuity. A rupture, because it is not obviously the same to farm the land than to work in a mine shaft, to depend on oneself than to depend on others, to work with the hands than to handle machinery. And continuity, because many ex-miners do not abandon their association to their community and retire in their lands.<sup>584</sup>

All told, the transition from peasant to full-time miners was a slow process that only consolidated in the mid-1950s.<sup>585</sup>

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Mineral deposits discovered in her American colonies made Spain rich and powerful. In particular, Potosí's wealth was miraculous and unique, soon becoming a land of opportunity and ostentation.<sup>586</sup> In response to Spain's bold amassing of wealth and their imposition of draft labor, the indigenous peoples of Peru-Bolivia questioned and resisted the regalian doctrine and the *mita* system. The Altiplano indigenous peoples challenged the *status quo* and expressed a feeling of entitlement to mineral resource rights via direct appropriation strategies, such as sharecropping, lottery pay-days, or pilfering rocks on their way outside the mine shafts. While the wars of independence put an end to the Spanish oppression in the mines, direct appropriation strategies did not fully disappear. Rather, undercapitalized mining entrepreneurs promoted or tolerated these practices as a result of the lack of a consolidated labor force. In fact, the birth of the Republican era did not fully

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<sup>583</sup> See Assadourian et al., *supra* note 523 at 70 (translation by author).

<sup>584</sup> See *id.* at 68. (translation by author).

<sup>585</sup> See Flores-Galindo, *supra* note 540 at 79.

<sup>586</sup> See LANE, *supra* note 175 at 9, 10, 15, 93.

replace colonial structures and practices, which lasted until the mid-twentieth century.<sup>587</sup> Moreover, as I show next, direct appropriation strategies endure in present-day ASM-activities.

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<sup>587</sup> See Assadourian et al., *supra* note 523 at 13.

#### CHAPTER 4.- CONTEMPORARY LOTTERY MINERS: THE LA RINCONADA, UPINA AND SECOCHA GOLD RUSHES

<<In the summit of the Peruvian Andes, the mining  
settlement closest to Heaven is also the nearest to  
Hell>>

Marlen Castro<sup>588</sup>

No Peruvian informal mine exemplifies the ambivalent track record of the ASM sector better than La Rinconada. La Rinconada (*see* Figure 1 above) is a permanent mining settlement erected in the foothills of the *Sleeping Beauty* mountain, in the Apolobamba Mountain Range, in Puno, Southern Peru.<sup>589</sup> Located in the Andean *puna*, at 17,000 feet above sea level, as high as the Everest basecamp, it is the highest permanently inhabited town in the world.<sup>590</sup> Temperatures can drop to as low as -14.8 °F,<sup>591</sup> making ranching and agriculture extremely difficult. Except for a small health facility, a police station, and a primary school, the settlement lacks any evidence of formal government.

Celebrated for its rich gold deposits, once considered extraordinary and idyllic,<sup>592</sup> La Rinconada also owns a dreadful reputation due to its extreme poverty, deplorable working conditions, and alleged lawlessness. Legends about the village's perils,

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<sup>588</sup> Marlen Castro, *Un golpe de suerte*, TRINCHERA, <https://www.trinchera-politicaycultura.com/ediciones/807/info-04.html>. (translated and adapted by author).

<sup>589</sup> While La Rinconada started as a gold rush site, today it configures a permanent settlement. *Cf.* Deborah Fahy Bryceson & Sara Geenen, *Artisanal frontier mining of gold in Africa: Labour transformation in Tanzania and the Democratic Republic of Congo*, 115 AFR AFF (LOND) 296–317, 313 (2016) (arguing that there are three artisanal frontiers: the rush site, the boom settlement, and the permanent settlement).

<sup>590</sup> See John B. West, *Highest Permanent Human Habitation*, 3 HIGH ALTITUDE MEDICINE & BIOLOGY 401–407 (2002).

<sup>591</sup> See Federico Gamarra Chilmaza, *Estudio sociolaboral de La Rinconada y Cerro Lunar* (2005), <http://www.papelesdesociedad.info/IMG/pdf/sociolaboral-rinconada-cerro-lunar.pdf> at 21.

<sup>592</sup> Interview with Juan Carlos Ramírez, *Former Vice-Minister of Mines of Peru* (2019) (arguing that while La Rinconada holds colossal resources, they have not led to progress. To the contrary, they have led miners to bars and human exploitation); Interview with Tomás (Tommy) Cenzano Sierralta, *Representative of Cooperativa San Francisco* (2019); Interview with Liliana Cenzano, (2019).

viciousness, and ruthlessness are abundant, emphasizing its high indices of criminality,<sup>593</sup> uncontrolled use of guns,<sup>594</sup> and human sacrifices performed by miners to compel their luck.<sup>595</sup> “Entertainment takes the form of fighting, robbing, raping, and murdering,” exaggerates Mark Pieth.<sup>596</sup> The proliferation of night clubs and “*prosti-bares*” (brothels) is a fact, though, as evidenced by the hundreds of young women forced into prostitution.<sup>597</sup> It comes as no surprise that La Rinconada is generally portrayed as an “infernal place”<sup>598</sup> or “no man’s land.”<sup>599</sup>

Although its modern exploitation dates back to the mid-twentieth century, it was not until the early 2000, following the record-breaking price of gold, that tens of thousands of dreamers arrived in the village, men and women alike.<sup>600</sup> While official data reports

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<sup>593</sup> Allegedly, seventy people die every year as consequence of robberies and bar fights. Yet, there are no official numbers. See William Finnegan, *A Fortune at the Top of the World*, THE NEWYORKER (2015), <https://www.newyorker.com/magazine/2015/04/20/tears-of-the-sun> (last visited Jan 23, 2019); See also Interview with Jacinto Flores, *supra* note 278 (claiming that during the first semester of 2019 twenty-eight people were killed); Interview with anonymous cachorro worker #1, (2019) (“La Rinconada is too dangerous. I would never go back”); La República, *Puno: Aduviri a favor de declarar emergencia en La Rinconada por delincuencia* (2019), <https://larepublica.pe/sociedad/1407137-puno-aduviri-favor-declarar-emergencia-rinconada-delincuencia/> (last visited Mar 10, 2019); Martin Enserink, *Hypoxia city*, 365 SCIENCE (2019); INTERNATIONAL LABOR ORGANIZATION, *La Rinconada: Realidad Minera Artesanal Emblemática* 56 (2004), [http://white.lim.ilo.org/ipec/boletin/documentos/sist\\_rinconada\\_pe.pdf](http://white.lim.ilo.org/ipec/boletin/documentos/sist_rinconada_pe.pdf); El Mundo, *supra* note 10 (reporting 1,500 cases of domestic violence in La Rinconada every year).

<sup>594</sup> According to Pieth, miners carry guns on them all the time. See *supra* note 31 at 16; see also El Mundo, *supra* note 10. Yet, during my visit to La Rinconada I did not see any armed miners.

<sup>595</sup> Reports of human sacrifices in the mining center exist, but some stories seem exaggerated. See e.g. Brook Larmer, *The Real Price of Gold*, THE NATIONAL GEOGRAPHIC, 2009, <https://www.nationalgeographic.com/magazine/2009/01/gold/>; BERNARD ROBERT-CHARRUE, *La Rinconada: El Oro del Glaciar* (2003), <https://www.youtube.com/watch?v=Y1eIQ9GhGzU>; VERITÉ, *Risk Analysis of Indicators of Forced Labor and Human Trafficking in Illegal Gold Mining in Peru* 59 (2016), [https://www.verite.org/wp-content/uploads/2016/11/Indicators-of-Forced-Labor-in-Gold-Mining-in-Peru\\_0.pdf](https://www.verite.org/wp-content/uploads/2016/11/Indicators-of-Forced-Labor-in-Gold-Mining-in-Peru_0.pdf) (last visited Oct 13, 2019); MARIE (WRITER) ARANA, SILVER, SWORD, AND STONE: THREE CRUCIBLES IN THE LATIN AMERICAN STORY 3 (2019); PIETH, *supra* note 31 at 25.

<sup>596</sup> PIETH, *supra* note 31 at 16; see also Koenig, *supra* note 9 (“Life has no value. People are killed for carrying a rock that may contain some tiny veins of gold”).

<sup>597</sup> See CÉSAR MOSQUERA, *Trabajo infantil en la minería peruana* 111–134 (2006), [http://mineralis.cetem.gov.br/bitstream/cetem/1308/1/genero\\_e\\_trabalho\\_infantil7.pdf](http://mineralis.cetem.gov.br/bitstream/cetem/1308/1/genero_e_trabalho_infantil7.pdf); see also VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 13 (arguing that there are 300 “prosti-bares” in La Rinconada); PIETH, *supra* note 31 at 25 (estimating 4,500 women sexually exploited in La Rinconada).

<sup>598</sup> See Barragán, *supra* note 498.

<sup>599</sup> Interview with Trinidad Carlos, Legal Counsel of Puno’s Ombudsman Office (June 19, 2019).

<sup>600</sup> See MINISTRY OF LABOR OF PERU, PRINCIPALES RESULTADOS DE LA RINCONADA Y CERRO LUNAR 107 15 (2015) (on file with author) (reporting a population distribution of 56% men and 44% women).

12,000 inhabitants, the unofficial population estimate is between 50,000 and 70,000,<sup>601</sup> 85 percent of whom are engaged directly in ASM-activities.<sup>602</sup> Mining jobs follow customary norms. Instead of salaries, contractors recompense their workforce using an oral contract called *cachorro*. In this system, miners work without pay for 28 days, followed by two days during which miners may keep whatever ore they extract from the shafts.

Although miners believe *cachorro* puts them close to winning the lottery,<sup>603</sup> in practice this contract operates as a cruel, large-scale, collective lottery in which payment is uncertain and at times non-existent. While *cachorro*'s parochialism is undeniable, it is far from an isolated practice in the Peruvian Andes. Lottery-type employment arrangements are present in other areas of Puno as well as other regions in Peru (e.g. Arequipa, Ayacucho, and La Libertad).<sup>604</sup> Here lies the importance of deconstructing *cachorro* as a paradigmatic direct appropriation strategy in certain contemporary ASM camps in the Andes.

In this chapter, I navigate through the history of this mining settlement and describe the development of its peculiar employment system.<sup>605</sup> This is the first attempt to explain and dissect *cachorro* in academia. I then turn to other case studies in different camps in the Southern Peruvian Andes where similar lottery-like arrangements are found.

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<sup>601</sup> See Miguel Ego Aguirre, *Evaluación Ambiental Inicial del Área de Influencia de las Actividades Mineras de La Rinconada - Perú* (2017); see also Martin Enserink, *Hypoxia City*, SCIENCE (Sept. 13, 2019), <https://science.sciencemag.org/content/365/6458/1098>; Oscar Espinoza, *La Rinconada, el 'dorado' helado*, EL PAIS (Sept. 9, 2017), [https://elpais.com/elpais/2017/09/06/planeta\\_futuro/1504706117\\_915831.html](https://elpais.com/elpais/2017/09/06/planeta_futuro/1504706117_915831.html).

<sup>602</sup> See ALIANZA POR LA MINERÍA RESPONSABLE (AMR), *Minería y Derechos Humanos: Una mirada desde el sector Artesanal y de Pequeña Escala* 145 (2017), [https://www.responsiblemines.org/wp-content/uploads/2017/05/ARM\\_Mineria-y-DDHH.pdf](https://www.responsiblemines.org/wp-content/uploads/2017/05/ARM_Mineria-y-DDHH.pdf).

<sup>603</sup> See GAMARRA, *supra* note 8.

<sup>604</sup> See e.g. Ministry of Energy and Mines of Peru, *supra* note 270; Interview with Máximo Gallo, *supra* note 303; VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31.

<sup>605</sup> Here, it is important to acknowledge that bibliographic information on La Rinconada is very limited; there are few academic works available, though dozens of newspaper articles. To complete this section, I have relied on interviews to key players in La Rinconada and access to GP's public records, wherever possible.

## A. *Brief History of La Rinconada*

### 1. **Early Days**

Mining activities in La Rinconada date back to the Inca Empire.<sup>606</sup> However, activities at the time were limited to hand-gathering of gold nuggets<sup>607</sup> or to superficial tunneling, since the Incas lacked the technology to evacuate mine water from mine shafts and prevent flooding.<sup>608</sup> During the colonial rule, the Spanish conquistadors exploited La Rinconada through the Jesuit Mission,<sup>609</sup> but by the end of the eighteenth century most mining activities in Puno were either abandoned or significantly reduced.<sup>610</sup> According to Mario Cuentas, the Irigoyen family and later colonel Moya, the prefect of Puno, exploited La Rinconada deposits after the wars of independence.<sup>611</sup> Antonio Raimondi, a famous Italian explorer and naturalist, visited the area in 1864. He entered in his travel journal: “There is no doubt that Mount Ananea holds enormous riches.”<sup>612</sup> Cuentas also argues that during the Pacific War, Chilean occupation forces exploited La Rinconada intensely,<sup>613</sup> but they eventually abandoned the area due to extreme weather conditions.<sup>614</sup>

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<sup>606</sup> See generally Alberto Regal, *Las minas incaicas*, REVISTA DE LA UNIVERSIDAD CATOLICA (1946), <http://repositorio.pucp.edu.pe/index/handle/123456789/53553>; GAMARRA, *supra* note 8 at 12; ALIANZA POR LA MINERÍA RESPONSABLE (AMR), *supra* note 602 at 145.

<sup>607</sup> See Mario Cuentas, *Evaluación cualitativa del impacto ambiental generado por la actividad minera en La Rinconada Puno*, July, 2009.

<sup>608</sup> See Alberto Regal, *supra* note 606 at 45; Pablo Cruz & Florian Téreygeol, *Yanaconas del rayo. Reflexiones en torno a la producción de metales en el espacio surandino (Bolivia, siglos xv-xvi)*, ESTUDIOS ATACAMEÑOS 19–44, 19 (2014).

<sup>609</sup> See Cuentas, *supra* note 607 at 38. See also Tomás Cenzano Cáceres, *Curriculum Vitae. On file with author* (1916). According to Castillo and Arce, current “Urviola” and “Amor Nuevo” tunnels date from colonial time. See Ever Castillo & Yuber Arce, *Riesgos laborales de los trabajadores de la minería informal en el Centro Poblado La Rinconada: 2016, 2018*; see also ALIANZA POR LA MINERÍA RESPONSABLE (AMR), *supra* note 602 at 146.

<sup>610</sup> Cf. NILLS JACOBSEN, *supra* note 435 at 73.

<sup>611</sup> See e.g. Cuentas, *supra* note 607 at 38.

<sup>612</sup> See ANTONIO RAIMONDI, *ORO DEL PERÚ* 126 (2004).

<sup>613</sup> See Cuentas, *supra* note 607 at 38.

<sup>614</sup> Interview with Roberto Zegarra, *Professor at Universidad Nacional del Altiplano and mining entrepreneur* (2019).



## 2. Modern Discovery (1946-1990)

The discovery of today's mineral deposit is attributed to Tomás Cenzano Cáceres.<sup>615</sup> The son of artisanal miners himself, he was born in Huancavelica in 1916 (Central Andes).<sup>616</sup> He became an orphan when he was eight years old, developing a sense of independence and self-sufficiency early.<sup>617</sup> As a young man, he worked for Cerro de Pasco Copper Corporation.<sup>618</sup> After reading Raimondi's travel books in the company's library, he became interested in topography and was particularly struck by his account on the Apolobamba Cordillera.<sup>619</sup>

According to his daughter, Liliana, Cenzano arrived in Puno by 1946, when he was 30 years old, using Raimondi's travel books.<sup>620</sup> He had also heard stories of abandoned or collapsed mines in the area with rich gold treasures inside (“*tapado*”).<sup>621</sup> After moving around the San Antonio de Putina area, he arrived in Ananea in 1947.<sup>622</sup> Living on a tiny budget, he spent the first years sleeping in a shack.<sup>623</sup> Upon his arrival, he found few artisanal miners working in the foothills of *Sleeping Beauty* using *quimbaletes*, an artisanal leg driven rock grinder.<sup>624</sup> Despite disbelief from his peers and relatives,<sup>625</sup> he convinced

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<sup>615</sup> Interview with Liliana Cenzano, *supra* note 592; Rosa Delgado, *Riqueza Aurífera de San Antonio de Potosí palanca para el desarrollo integral del sur*, DIARIO EL PERUANO, December 24, 1990, at B12; CORPORACIÓN MINERA ANANEA S.A., *Estudio de Impacto Ambiental - Unidad Económica Administrativa Ana María de Puno y Planta de Beneficio de 25 Ana María de 25 tm/día. Puno, San Antonio de Putina, Ananea (on file with author)* 7 (1999); GAMARRA, *supra* note 8 at 12.

<sup>616</sup> Interview with Liliana Cenzano, *supra* note 592.

<sup>617</sup> *Id.*

<sup>618</sup> *Id.*

<sup>619</sup> *Id.*

<sup>620</sup> *Id.*

<sup>621</sup> *See id.*

<sup>622</sup> Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592.

<sup>623</sup> Interview with Liliana Cenzano, *supra* note 592.

<sup>624</sup> *Id.*; Interview with Reiner Paredes, *supra* note 309.

<sup>625</sup> Interview with Liliana Cenzano, *supra* note 592 (claiming that his friends and family questioned his decision to live in the highlands).

locals to explore the mountain for gold and mounted a rudimentary laboratory to test his rock samples, cutting through the glacier ice that covered the hard rock.<sup>626</sup> “For my father, mining was an art. He could speak to the mountain gods (the “*apus*”), who led him to the gold-bearing veins.”<sup>627</sup> Cenzano finally struck it rich and established himself in La Rinconada, where his four children were born and raised.<sup>628</sup> “He discovered a development pole for Puno,” adds Liliana.<sup>629</sup>

In 1952, Cenzano filed five mining claims to the area, becoming the legal owner of the gold deposit.<sup>630</sup> In 1979, he incorporated “*Compañía Minera Aurífera Ana María S.A.*” and managed to mechanize his operations by installing a small processing plant (25 metric tons per day), following a USD 900,000 loan from Peru’s national mining bank (“*Banco Minero*”).<sup>631</sup> From the very beginning Cenzano started subleasing sections of his mining property to other miners.<sup>632</sup> The most successful ones managed to grow their activities and hire their own workers, thus becoming *contractors*.<sup>633</sup> Apparently, by 1987, 400 people already worked in the mine, paying Cenzano twelve grams of gold per year to operate in sections of his mining rights.<sup>634</sup> As I discuss later, this outsourcing mechanism would forever mark the destiny of La Rinconada.

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<sup>626</sup> *Id.*

<sup>627</sup> *Id.*

<sup>628</sup> *Id.* (“As a kid, I remember that instead of playing with dolls, me and my siblings played with gold nuggets. Gold was everywhere”); Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592 (“My father came to La Rinconada by himself. He started his business alone, though later he had contractors working for him”).

<sup>629</sup> Interview with Liliana Cenzano, *supra* note 592.

<sup>630</sup> See Instituto Geológico, Minero y Metalúrgico del Perú (INGEMMET), *Sistema de Derechos Mineros y Catastro (Sidemcat)* (2019), <https://www.ingemmet.gob.pe/sidemcat> (last visited Sep 4, 2019).

<sup>631</sup> See CORPORACIÓN MINERA ANANEA S.A., *supra* note 615.

<sup>632</sup> See *id.* at 5.; Interview with Roberto Zegarra, *supra* note 614; PACHAS, *supra* note 176 at 171.

<sup>633</sup> Interview with Jacinto Flores, *supra* note 278.

<sup>634</sup> *Id.*; CORPORACIÓN MINERA ANANEA S.A., *supra* note 615.

In 1987, Cenzano signed a mining assignment agreement for 20 years in favor of Francisco Cárdenas, a fellow artisanal miner.<sup>635</sup> Discrepancies between the two escalated and resulted in complex legal disputes.<sup>636</sup> Each of the parties sought support from the contractors, who by then had organized themselves around cooperatives,<sup>637</sup> following a similar trend in other ASM landscapes.<sup>638</sup> These tensions, as well as the political violence, poverty, and unemployment that characterized Peruvian society during the 1980s,<sup>639</sup> exacerbated the emigration to La Rinconada from nearby towns and settlements.<sup>640</sup> Eventually, thousands of men flocked to the village “turning a lonely prospector’s camp into a squalid shantytown on top of the world.”<sup>641</sup> According to Liliana Cenzano, at some point in time, people came in “from everywhere” and “attempted to take the gold mine away from my father.”<sup>642</sup>

Without any governance institutions, industrial, housing, and commerce land uses overlapped as a consequence of the massive influx of people, prompting the chaotic village that we see today. The mining settlement occupies an area of four square miles and is organized in fifteen neighborhoods (*see* Figure 9).<sup>643</sup> Most families live in single-room

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<sup>635</sup> See CORPORACIÓN MINERA ANANEA S.A., *supra* note 615.

<sup>636</sup> See GAMARRA, *supra* note 8 at 12; *see also* ALIANZA POR LA MINERÍA RESPONSABLE (AMR), *supra* note 602 at 146.

<sup>637</sup> See CORPORACIÓN MINERA ANANEA S.A., *supra* note 615 at 7. The names of the three cooperatives are: Cooperativa Minera Lunar de Oro Ltda, Cooperativa Minera San Francisco de Rinconada Ltda, and Cooperativa Minera Cerro San Francisco Ltda.

<sup>638</sup> See PACHAS, *supra* note 176 at 106 (arguing that in Puno, cooperatives around artisanal miners are generally incorporated to bargain and dialogue with the formal owner of the mining rights).

<sup>639</sup> This was especially true in the nearby Azángaro province, which suffered terrorist attacks during the 1980s and 1990s. *See* Report to the CMA Board prepared by General Manager Adalberto Rivadeneira. On file with author, (2003); Interview with Reiner Paredes, *supra* note 309; Eberth Cirilo Calsin, *La informalidad del contrato de trabajo en la minería artesanal del oro: Asiento minero “La Rinconada” departamento de Puno*, REPOSITORIO DE TESIS - UNMSM, 115 (2015), <http://cybertesis.unmsm.edu.pe/handle/cybertesis/9316> (last visited Jan 19, 2019).

<sup>640</sup> See GAMARRA, *supra* note 8 at 12; Interview with Reiner Paredes, *supra* note 309.

<sup>641</sup> Larmer, *supra* note 595.

<sup>642</sup> Interview with Liliana Cenzano, *supra* note 592.

<sup>643</sup> *See e.g.* Ulises Giraldo, *Minería Informal en la Cuenca Alta del Río Ramis. Impactos en el paisaje y evolución del conflicto socio ambiental*, 2017.

dwellings made of corrugated metal, which does not protect from low temperatures.<sup>644</sup> Houses lack running water, sewage, or heating.<sup>645</sup> While electricity is available since 2000,<sup>646</sup> the village lacks a waste collection system, creating critical sanitary issues as thirty-six tons of waste are dumped daily in improvised landfills or sewers.<sup>647</sup> Low temperatures prevent the proliferation of vectors and epidemics, but they affect the health and living conditions of the population.<sup>648</sup> As Pieth crudely puts it, La Rinconada is the world's "largest gold-mining shanty town."<sup>649</sup>

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<sup>644</sup> See MINISTRY OF LABOR OF PERU, *supra* note 600 at 14; see Gilmar Goyzueta & Ciria Trigos, *Riesgos de salud pública en el centro poblado minero artesanal La Rinconada (5200 msnm) en Puno, Perú*, 26 REVISTA PERUANA DE MEDICINA EXPERIMENTAL Y SALUD PÚBLICA (2009), <https://rpmesp.ins.gob.pe/index.php/rpmesp/article/view/1331> (last visited Jan 22, 2019).

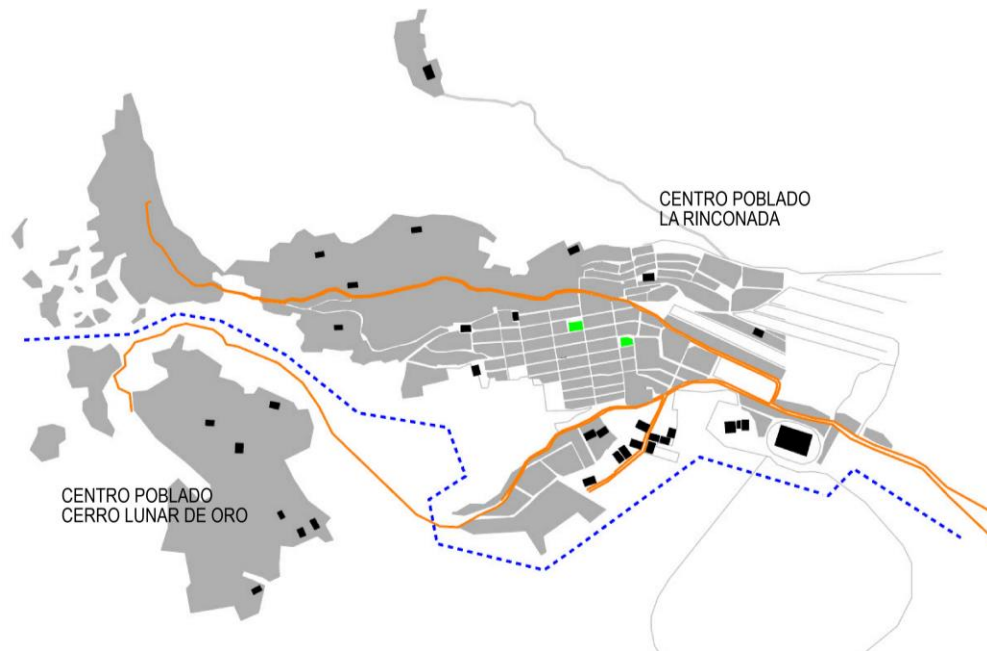
<sup>645</sup> See MINISTRY OF LABOR OF PERU, *supra* note 600 at 14; GREEN BUILDING COMPANY & URBES, *Estrategias para la mejora de la habitabilidad, Centro Poblado La Rinconada. Propuesta para el Ministerio de Energía y Minas* 53 20 (2017).

<sup>646</sup> See e.g. Giraldo, *supra* note 643 at 23.

<sup>647</sup> See Green Building Company & Urbes, *supra* note 275, at 27.

<sup>648</sup> See INT'L LAB. ORG., *La Rinconada: Realidad Minera Artesanal Emblemática* 56 (2004), [http://white.lim.ilo.org/ipecc/boletin/documentos/sist\\_rinconada\\_pe.pdf](http://white.lim.ilo.org/ipecc/boletin/documentos/sist_rinconada_pe.pdf); Interview with Roberto Zegarra, Professor at Universidad Nacional del Altiplano and mining entrepreneur (June 19, 2019) ("Workers prefer to take night shifts to work at night because the cold does not let you sleep. Workers resort to alcohol to fight the cold weather.").

<sup>649</sup> PIETH, *supra* note 31 at 16.



**Figure 9. La Rinconada's urban footprint**

(Source: Green Building Company)<sup>650</sup>

### **3. Expansion and Bankruptcy (1990 to 2007)**

Following legal disputes, between 1993 and 1994 Cenzano sold his rights over the mining concessions.<sup>651</sup> Note, though, that Cenzano himself, his eldest son, Tomás (“Tommy”) Cenzano Sierralta, and other relatives remained in La Rinconada as contractors or mill operators (e.g. Isidro Cenzano is a famous mill operator in the area).<sup>652</sup> Despite numerous attempts from the new owners of the mining property to upgrade the operation

<sup>650</sup> GREEN BUILDING COMPANY AND URBES, *supra* note 645 at 18.

<sup>651</sup> Fifty-one percent to Cooperativa Minera Cerro San Francisco de La Rinconada Ltda. and in 1994 the remaining 49% to Metales y Finanzas S.A. (Metalfin). See CORPORACIÓN MINERA ANANEA S.A., *supra* note 615; Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592 (“This was a good deal. He got a good price out of this contract”).

<sup>652</sup> Interview with Liliana Cenzano, *supra* note 592.

and seek partnerships to relaunch the company (e.g. Fleming Bank<sup>653</sup>), by 1998 debts piled up and operations became harder due to pressing social issues.<sup>654</sup> Creditors opted to capitalize on their credits under a new vehicle, “*Corporación Minera Ananea*” (“CMA”),<sup>655</sup> but it would soon declare bankruptcy.<sup>656</sup>

In 2001, the new Board of Directors, composed of CMA’s creditors, approved an emergency plan to salvage the company.<sup>657</sup> Among other aspects, the new administration sought to regularize the contractual relationship between CMA and hundreds of contractors through formal mining lease agreements,<sup>658</sup> and entered into a joint venture agreement to secure capital.<sup>659</sup> The passing of Peru’s first ASM legislation in 2002 proved critical in the regularization process. Contractors felt that access to title (i.e. mining lease agreements) would grant them legal stability and bring about improved living and working conditions.<sup>660</sup>

In 2004, MINEM installed a roundtable to address growing social tensions in the mining center. The roundtable lasted three years, included twelve sessions and was

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<sup>653</sup> Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592; Interview with Luis Carlos Rodrigo, *supra* note 218.

<sup>654</sup> Report to the CMA Board prepared by General Manager Adalberto Rivadeneira. On file with author, *supra* note 639; *see also* PACHAS, *supra* note 176 at 172 (arguing that CMA increased the royalty fee, aggravating the mining center’s social equilibrium). Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592 (arguing that the new management of CMA, including Jorge Bedoya and Metalfin, did well financially and produced more than 500 kilos of gold).

<sup>655</sup> CMA shareholders included: Minera Condestable (25%), Jorge Bedoya (21%), Tomás Cenzano (15%), Francisco Cardenas (18%) and Cooperativa Minera Cerro San Francisco de La Rinconada Ltda. (8%). Report to the CMA Board prepared by General Manager Adalberto Rivadeneira. On file with author, *supra* note 639. GAMARRA, *supra* note 8 at 12. Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592 (“By then, my father was already 80 years old. He wanted the mine to continue for the benefit of Puno”). Note that Jorge Bedoya declined my invitation for an interview for this dissertation.

<sup>656</sup> File No. 158-2001/CRP-ODI-CAMARA dated January 23, 2000.

<sup>657</sup> Creditors included a local bank, the Peruvian tax agency, a blast contractor, and a supplier of explosives. *See* Report to the CMA Board prepared by General Manager Adalberto Rivadeneira. On file with author, *supra* note 639.

<sup>658</sup> *See id.*

<sup>659</sup> *See id.*; Cuentas, *supra* note 607 at 38–39; ALIANZA POR LA MINERÍA RESPONSABLE (AMR), *supra* note 602 at 147.

<sup>660</sup> *See* EDGARDO GARCÍA, GUILLERMO MEDINA & MICHAEL PRIESTER, *Construyendo consensos en la minería artesanal: desde el conflicto minero hacia la formalización de la minería artesanal en la zona de La Rinconada, Peru* 10 (2008).

mediated by the Swiss cooperation agency.<sup>661</sup> After years of tensions and negotiations, in 2007 CMA's shareholders and creditors finally decided to step down from the business and offered to sell their shares to the contractors, now organized around the "*Central de Cooperativas Mineras Rinconada y Lunar de Oro Ltda*" ("CECOMIRL"). While CMA's creditors and shareholders had originally asked for USD 6 million,<sup>662</sup> the parties settled in USD 1.25 million, and, from then on, the contractors became the new owners of CMA.<sup>663</sup> In other words, the new owners of the mining rights—CECOMIRL—are the beneficiaries of the mining leases entered into with CMA and the contractors. The historical implications of this deal cannot be underestimated: it is the first time in Peru's ASM history in which artisanal miners take over the mining company for which they used to work.<sup>664</sup>

Yet, according to ASM legislation, small-scale vehicles (PPM) cannot be composed of individuals, corporations, and cooperatives at the same time. This unorthodox situation has been detected by MINEM and may have legal repercussions in the future, which include deeming CMA as a mid-scale mining company (LSM), rather than PPM. The ramifications are significant.<sup>665</sup>

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<sup>661</sup> See PACHAS, *supra* note 176 at 173. For a detailed summary of the negotiation process, see GARCÍA, GUILLERMO MEDINA, AND PRIESTER, *supra* note 660.

<sup>662</sup> Meeting minute dated March 21, 2007, on file with author. See also PACHAS, *supra* note 176 at 218.

<sup>663</sup> See PACHAS, *supra* note 176.

<sup>664</sup> See *id.* at 219.; see also GARCÍA, GUILLERMO MEDINA, AND PRIESTER, *supra* note 660 at 22.

<sup>665</sup> On June 27, 2019, MINEM denied CMA the renovation of its small-scale miner registration (PPM), questioning the composition of its shareholders. CMA has appealed this decision before MINEM; the appeal is still pending. See Ministry of Energy and Mines of Peru, *Informe 078-2019-MEM/DGFM-PPM. On file with author* (2019). Among other considerations, if CMA loses its PPM registry, this means that LSM regulations become applicable to it and that law enforcement of the mine corresponds now to Peruvian Environmental Enforcement Agency-OEFA. In my interview with OEFA officials, though the final decision is pending, they are prepared to intervene the area. Telephone interview with Tessy Torres, *Executive Director of OEFA* (2020).

#### 4. Mining Operations

Today, La Rinconada's gold deposit comprises five mining concessions and one processing plant (*see* Appendix 10). Gold is found in quartz veins (i.e. gold-bearing veins are encased in hard rock) at the heart of *Sleeping Beauty* and is thus difficult to mine.<sup>666</sup> Mining extraction itself is an extremely risky livelihood requiring intensive physical effort and exposes formal and informal miners to toxic substances and insecure tunnels, flooding, and collapse.<sup>667</sup>

Mining operations are characterized by two circuits of gold production: one formal and the other semi-formal. Figure 10 below summarizes the entangled formal and semi-formal gold production circuits in La Rinconada. The formal circuit is run by CMA, who owns the mining concession and the processing plant, but only exploits a small section of them. CMA has the legal status of a PPM before MINEM, it retains around 100 workers,<sup>668</sup> and its operations are considered professional, mechanized, and safe.<sup>669</sup> In 2018, CMA declared an official production of 2,500 gold ounces (USD 3.2 million).<sup>670</sup> Nonetheless, given that CMA only exploits a small portion of its mining concessions, this figure does not reflect the rest of the production which remains off-the-books. Official data is unavailable but some estimate that the whole mining settlement produces between USD 60

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<sup>666</sup> See ROBERT-CHARRUE, *supra* note 595.

<sup>667</sup> See e.g. Christopher H. Gammons et al., *Mercury concentrations of fish, river water, and sediment in the Río Ramis-Lake Titicaca watershed, Peru*, 368 SCIENCE OF THE TOTAL ENVIRONMENT 637–648 (2006); Giraldo, *supra* note 643 at 141; see also Finnegan, *supra* note 593 at 13 (claiming that every year accidents in the mines caused by explosives, collapses or asphyxiation kill around 30 people).

<sup>668</sup> These workers are under the payroll of CMA, but they are allegedly awarded lottery pay-days as a 'bonus' to compensate for low wages. Interview with Jesús Álvarez, *supra* note 174.

<sup>669</sup> See ANNA ENSING, *Hazardous Child Labour in Peru: Lessons from Research* (2008), <http://www.ucw-project.org/attachment/ensing.pdf>. For example, CMA operations have EIA approved by the national government in September 2001 (Resolución No. 298-2001-EM/DGAA).

<sup>670</sup> See Ministry of Energy and Mines, *Producción Minera*, ESTADÍSTICA, [http://www.minem.gob.pe/\\_estadisticaSector.php?idSector=1&idCategoria=10](http://www.minem.gob.pe/_estadisticaSector.php?idSector=1&idCategoria=10).

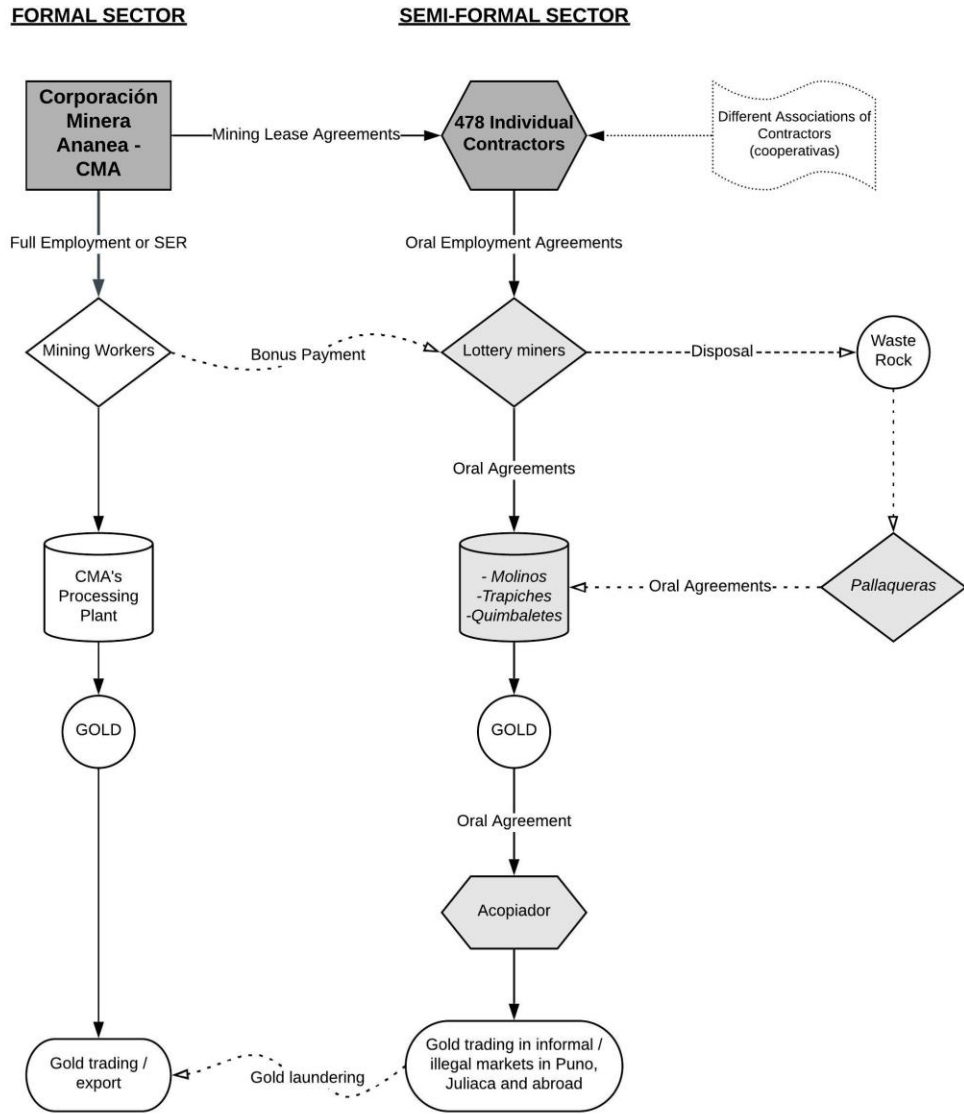


and 460 million per year.<sup>671</sup> As Tommy Cenzano puts it, “La Rinconada mineral deposit is quite unique and we’ve barely scratched it yet.”<sup>672</sup>

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<sup>671</sup> See e.g. Larmer, *supra* note 595; Arana and Nemirofsky, *supra* note 4 at 29; GARCÍA, GUILLERMO MEDINA, AND PRIESTER, *supra* note 660 at 9. Tommy Cenzano calculates that La Rinconada produces 3,000 pounds of gold monthly. Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592.

<sup>672</sup> Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592; see also El Mundo, *supra* note 10.



**Figure 10. Current operations in La Rinconada**

(Source: By author)

By contrast, the semi-formal circuit is run by the contractors and takes place in the remaining sections of the deposit. A total of 478 contractors are operating individual tunnels or galleries. Each one of them has entered into a separate mining lease with CMA,

which is notarized and recorded in the public registry.<sup>673</sup> The mining lease assigns each contractor an exclusive working area (e.g. a tunnel) in exchange for an upfront fee of 20 grams of gold and a ten percent royalty.<sup>674</sup> Besides binding all contractors to respect the boundaries of the area granted to them, the mining lease requires them to comply with labor and environmental, health and safety regulations.<sup>675</sup>

Overlapping sections and trespassing among contractors is frequent, requiring the mediation of CMA.<sup>676</sup> While CMA is jointly liable for each contractor's mining and labor obligations under the Mining Law, there are no enforcement or adjudication mechanisms at hand. Each contractor works as an independent entity and is responsible for the construction of tunnels, many of which are located inside the glacier,<sup>677</sup> for which it must secure capital, machinery, feedstock, explosives, and recruitment of the all-male workforce.<sup>678</sup> "You need a lot of capital to open a tunnel, as there are more than 600 feet of sterile rock before you can even see a gold vein," admits one contractor.<sup>679</sup> The outsourced sections of the mine use intensive labor force, low capital, and poor technology.<sup>680</sup> Each contractor operates under its own technology and rules,<sup>681</sup> so work is conducted in a

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<sup>673</sup> Interview with Reiner Parede, Public servant of the Ministry of Energy and Mines of Peru based in Puno, (June 25, 2019).

<sup>674</sup> The agreement establishes that should the deposit contain a high ore concentration, the royalty will increase to 20%. *See* Mining Lease Agreement between CMA and Josefina Ramos de Vilca, On file with author.

<sup>675</sup> *See* GAMARRA, *supra* note 8.

<sup>676</sup> Interview with anonymous contractor #2, (2019); Interview with Jacinto Flores, *supra* note 278. In fact, CMA has constituted an executive committee to adjudicate boundary problems among artisanal miners. Report to the CMA Board prepared by General Manager Adalberto Rivadeneira. On file with author, *supra* note 639. *See also* Mining Lease Agreement between CMA and Josefina Ramos de Vilca, *supra* note 674.

<sup>677</sup> *See* AUTORIDAD NACIONAL DEL AGUA, *Estado Situacional del Glacial Riticucho (Distrito Ananea, Dpto. Puno)* (2017).

<sup>678</sup> *See* GAMARRA, *supra* note 8.

<sup>679</sup> To become a contractor in 1991, a source indicated that he had to pay USD 1,500 to his *cooperativa*. Yet, this fee significantly increased to USD 4,500 in the mid-2000s. Interview with anonymous contractor #2, in Puno, Peru (June 24, 2019).

<sup>680</sup> *See e.g.* Giraldo, *supra* note 643 at 30 (arguing that 10% of the operations are mechanized, 25% semi-mechanized, and 65% are still manual).

<sup>681</sup> Interview with Miguel Ego-Aguirre, *Environmental expert* (2019).

disordered manner with varying gradients and directions in pursuit of gold-bearing veins (“*busconeo*”).<sup>682</sup> Tommy Cenzano reckons that miners have dug thirty-one miles of tunnels inside *Sleeping Beauty*.<sup>683</sup> As mentioned before, the contractors are grouped under three cooperatives, which in turn are organized around CECOMIRL.

The day-to-day operation is handled by a foreman (“*capataz*”) who is responsible for recruiting the workforce.<sup>684</sup> The number of miners working for contractors varies according to season, prices of gold, and fluctuations of gold veins.<sup>685</sup> Contractors do not provide salaried jobs to the workforce; they rely on *cachorro* instead. I unpack the *cachorro* arrangement next, through the eyes of Jacinto Flores, a lottery miner.

## 5. A Typical *Cachorro* Day<sup>686</sup>

Before unpacking this arrangement, it is key to clarify and distinguish two different moments in *cachorro*. First, concerning the time in which the miner works for the contractor (e.g. 28 days of unpaid work), the *cachorro* worker behaves as a subordinate worker, following the tasks and instructions of the foreman, working collaboratively with fellow miners to complete the targets set, and handing in whatever ore he produces to the contractor. For a lack of a better term, I call this period the *subordination period*. Second, after accruing some time to extract ore in his own benefit (e.g. one or two days per month), the worker enters the mine and works independently in a frantic race to appropriate as much

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<sup>682</sup> See GARCÍA, GUILLERMO MEDINA, AND PRIESTER, *supra* note 660 at 6.

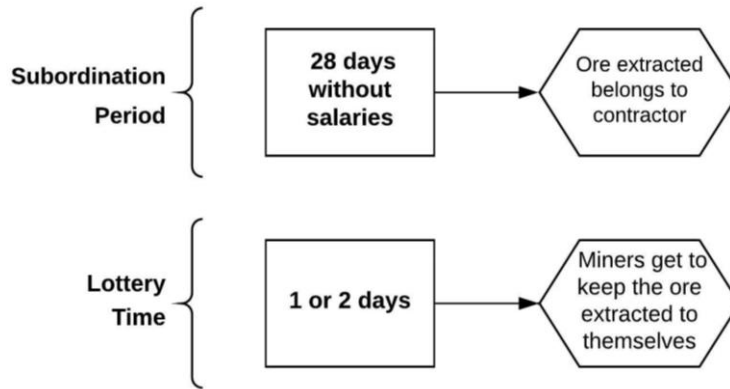
<sup>683</sup> Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592.

<sup>684</sup> See GAMARRA, *supra* note 8.

<sup>685</sup> See *id.*

<sup>686</sup> This section is based on multiple interviews conducted in Puno, Juliaca and La Rinconada during my fieldwork. The protagonist of this story is a *cachorro* miner named Jacinto Flores (a pseudonym for safety reasons), *supra* note 278.

ore as he can, but for a very limited time. I call this period the *lottery time*. Figure 11 below depicts the subordination period and the lottery time.



**Figure 11. The *cachorro* arrangement**

(Source: By author)

Jacinto is a proud *cachorro* miner. He was born in Carabaya, Puno, in 1968. His family owned a car shop in Juliaca (a town 25 miles away), where trucks from La Rinconada were regularly serviced. This was how he met a contractor for the first time, who encouraged him to visit the mining settlement. In 1989, Jacinto started selling bread and sodas in the cold streets of La Rinconada. Traveling to the settlement would take him one full day of travel due to the lack of paved roads. Once he realized his friends were making more money in the mines, he decided to give mining a try.

He established himself in the village in 1990, leaving his family behind. Jacinto remembers having spent one week in bed after his first day of work due to how badly sores his body was. In 1990, the mining operation was more rudimentary than today. Mine shafts were so small that Jacinto needed to crawl to go in and out. What is more, the mine did not

run at nights due to lack of electric power. “There were no mills to crush the ore, so women were hired to take care of this process,” he recalls.<sup>687</sup>

Jacinto works for one contractor for 28 days and, in exchange, he gets two days to mine for his own benefit.<sup>688</sup> Since Jacinto started working in the mines, other variants have emerged, such as “*cachito*” or “*cachetada*” (12 hours of extraction for every 15 days of work).<sup>689</sup> Jacinto is allowed to work simultaneously for multiple contractors or move from one vein to another under a new contractor.<sup>690</sup> This regime relies not only on his skills and physical effort, but also on luck because he could simply receive nothing. Indeed, Jacinto acknowledges that this is a highly risky and uncertain venture.<sup>691</sup>

Jacinto remembers that in his early days as a miner, in addition to lottery pay-days, his contractor would provide him housing, food, and supplies (e.g. kerosene for his lamp). Considering his inexperience, his first job was as “*saquero*” (men that take away discarded rock from the tunnels, generally on their backs or wheel barrels). Then he became a watchman and later a drilling assistant. But to get a promotion he needed to build a strong bond with the contractor and behave obsequiously.

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<sup>687</sup> *Id.*

<sup>688</sup> See e.g. GARCÍA, GUILLERMO MEDINA, AND PRIESTER, *supra* note 660 at 7; PIETH, *supra* note 31 at 17.

<sup>689</sup> See e.g. MARÍA DEL CARMEN PIAZZA, *Niños que trabajan en la minería artesanal de oro en el Perú* (2001); GAMARRA, *supra* note 8; Gilmar Mendiola, *Grado de relación entre la satisfacción laboral y el desempeño de los trabajadores del operador minero Miguel Mamani Chambi en el centro poblado Lunar de Oro, Ananea, en el primer semestre del año 2016*, 2016; Castillo and Arce, *supra* note 609 at 59; see also Finnegan, *supra* note 593 (“I found so many variants of the scheme, however—and so many miners passionately attached to their variant—that the traditional description of *cachorro* seems to me inadequate. It’s a lottery, but, because of pilfering, it runs every day, not once a month”); PACHAS, *supra* note 176 at 151. During my visit to La Rinconada, I found other alternatives of *cachorro*, such as two days of extraction for every five, fifteen or eighteen days of work. Also, a contractor explained that at times of lower yields, he remunerated his workers differently: the first 60 feet drilled correspond to the contractor and the next ten correspond to *cachorro* workers. Interview with anonymous contractor #2, *supra* note 676.

<sup>690</sup> See GAMARRA, *supra* note 8.

<sup>691</sup> Interview with Paredes, *supra* note 250.

Jacinto starts his day very early. After having breakfast, he chews coca leaves to fight altitude and exhaustion, and prays to *Pachamama* (Mother Earth) for a good day. Before entering into the tunnel, he touches the rock and crosses himself. “You must ask for permission,” he explains. Rituals and payments to *Pachamama* as retribution for the benefits she will provide are widespread.<sup>692</sup>

During the subordination period, the foreman orders Jacinto to complete drilling, blasting, and cleaning tasks. Failure to comply with would result in lesser time to exploit the mine for his own benefit. During his lottery time, however, Jacinto is not allowed to choose where to mine. The foreman tells him where to go and enforces certain rules: he spares an overexploited area of the mine for *cachorro*,<sup>693</sup> he establishes a maximum of hours, or requires a group of miners to share the same vein, which reduces the final yield.<sup>694</sup> Jacinto explains that many contractors spare the richest vein for his closest friends and family,<sup>695</sup> preventing workers from cashing their accrued time.<sup>696</sup> “Some contractors are abusive, but nobody speaks up because if you finger point, you know that no contractor would hire you again,” he complains. He once spent eight straight months without pay because of poor yielding veins (“*blanqueado*”) and had no alternative but to live out of his

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<sup>692</sup> See PACHAS, *supra* note 176 at 134–35.

<sup>693</sup> Interview with anonymous *cachorro* worker #1, *supra* note 593 (“Supervisors give away the worse spots during *cachorro* days”); Interview with Jesús Álvarez, *supra* note 174 (“Supervisors keep the best shafts to themselves and their families. They prevent *cachorros* from getting to best gold veins. *Cachorros* exploit the poorest sections of the mine”).

<sup>694</sup> See Glave, Manuel & Kuramoto, Juana, *Minería, Minerales y Desarrollo Sustentable en Perú*, in MINERÍA, MINERALES Y DESARROLLO SUSTENTABLE EN AMÉRICA DEL SUR 529–591 (Equipo Minería, Minerales y Desarrollo Sustentable (MMDS) America del Sur ed. 2002), available at [http://www2.congreso.gob.pe/sicr/cendocbib/con4\\_uibd.nsf/7832DF547B40C2FF05257EF2006E308A/\\$FILE/Miner%C3%ADa\\_Minerales\\_y\\_Desarrollo\\_Sustentable.pdf](http://www2.congreso.gob.pe/sicr/cendocbib/con4_uibd.nsf/7832DF547B40C2FF05257EF2006E308A/$FILE/Miner%C3%ADa_Minerales_y_Desarrollo_Sustentable.pdf).

<sup>695</sup> He can also give the worse areas to those miners who he personally dislikes. See GAMARRA, *supra* note 8 at 43.

<sup>696</sup> María Robles, *Identifying Gender Based Violence through Masculinities in the Informal Gold Mine of La Rinconada, Peru* (unpublished dissertation) (on file with The Graduate Institute of International and Development Studies), 2017.

small savings. Furthermore, contractors may delay the payment of *cachorreo* days.<sup>697</sup> While CMA may mediate between *cachorreo* workers and contractors, it does not carry a register of the investment, production, technology, or number of workers retained by each contractor.<sup>698</sup>

In the absence of an adjudication mechanism, albeit informal, the worker has only two options: to exit the contract by changing to another contractor, losing his lottery pay-days accrued, or to resort to informal self-help mechanisms.<sup>699</sup>

Jacinto uses explosives to break the tunnel walls and extract the ore, which he then puts in small sacks. While Jacinto does not know *a priori* the value of the rocks extracted, good quality ore contains small gold particles (“*chispas*”) that are visible to the expert eye. He then takes the ore for crushing in nearby, privately-operated sledgehammers (*quimbalete*) or electric ball mills (according to the technology and operation capacity, they are called “*molino*” or “*trapiche*”). The crushing takes two or three hours and costs 8 USD per bucket (“*balde*”). If he trusts the mill operator, he comes back later to pick up the grounded ore. If not, he must stay in the mill overseeing the crushing process.

Jacinto then mixes the ore dust with water and mercury—he uses about 10 grams of mercury to produce one gram of gold.<sup>700</sup> Without personal protection equipment, he separates the amalgamated mercury by panning and then squeezes it by hand through a fine cloth to separate the liquid mercury from the gold-mercury amalgam.<sup>701</sup> This process is

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<sup>697</sup> See GAMARRA, *supra* note 8.

<sup>698</sup> See *id.* at 28–29, 41.

<sup>699</sup> See e.g., Lisa Bernstein, *Opting out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. OF LEGAL STUD. 115–157 (1992); ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 143–144 (1991).

<sup>700</sup> Cf. PIETH, *supra* note 31 at 20.

<sup>701</sup> See Gammons et al., *supra* note 667 at 132.



very inefficient, as it only recuperates 30 to 40 percent of gold particles.<sup>702</sup> The tailings containing residual mercury (and gold!) are discarded into settling ponds, uncontrolled drainages, or sold to nearby processing plants for further processing with cyanide.<sup>703</sup> Highly toxic compounds contaminate fish and humans downstream.<sup>704</sup>

Jacinto is well aware of the risks mercury amalgamations poses to his own health. “Of course, I know the perils. I manipulate mercury with my bare hands! My brother recently died from lung cancer, after spending 20 years in the mines,” he adds. If *cachorreros* get sick, they have to pay for the medical help they get at the only public health post in town.<sup>705</sup>

He then takes the gold-mercury amalgam to one of the hundred smelting shops in town (*acopiadores*) to burn off the mercury and obtain a gold ball.<sup>706</sup> Flaring contaminates indoor areas and the vicinity.<sup>707</sup> Although it is possible to capture and recycle the mercury vapors by using a simple retort, ASM normally bypasses this step.<sup>708</sup> Families that burn mercury at home have high levels of mercury in their blood<sup>709</sup> and children present nervous impairment attributable to mercury.<sup>710</sup> Mercury has been found in surface water, soils, and

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<sup>702</sup> Interview with Miguel Ego-Aguirre, *supra* note 681.

<sup>703</sup> See Gammons et al., *supra* note 667; JUANA KURAMOTO, *supra* note 214; Interview with Miguel Ego-Aguirre, *supra* note 681.

<sup>704</sup> See Kuramoto, *supra* note 213, at 28.

<sup>705</sup> Interview with anonymous nurse, (2019) (“Health services have improved. We used to have one doctor; now we have two. Of course, this is far from adequate considering the number of people living in this village. However, when we ask the Ministry of Health for more resources and supplies, they say ‘miners are rich, they can take care of themselves’”).

<sup>706</sup> Flaring the mercury off the gold-mercury amalgam contaminates indoor areas and the vicinities. Although it is possible to capture and recycle the mercury vapors by using a simple retort, ASM typically bypasses this step. See Olaf Malm, *Gold Mining as a Source of Mercury Exposure in the Brazilian Amazon*, 77 ENVIRONMENTAL RESEARCH 73–78 (1998).

<sup>707</sup> See Olaf Malm, *Gold Mining as a Source of Mercury Exposure in the Brazilian Amazon*, 77 ENVIRONMENTAL RESEARCH 75 (1998).

<sup>708</sup> See e.g. Gammons et al., *supra* note 667; Marcello M. Veiga and Christian Beinhoff, *supra* note 62.

<sup>709</sup> See Kuramoto, *supra* note 213, at 31.

<sup>710</sup> See Marie Arana & Gina Nemirofsky, *Dreaming of El Dorado: In La Rinconada, Peru, the highest human habitation in the world, legions of miners seek gold and one young girl seeks an education*, 88 THE VIRGINIA

stream sediment around La Rinconada and Lake Titicaca, located approximately 100 miles away.<sup>711</sup> In addition to mercury pollution, tunneling and infrastructure installed to capture water for mining and households have irreparably damaged the glacier.<sup>712</sup>

Over the years, Jacinto has developed a friendship with Mario, an *acopiador* whom he trusts. “I want to become formal, but the government has forgotten about us. I have been an *acopiador* for 20 years now. I started as a *cachorrero* but I got sick,” he adds.<sup>713</sup> Most *acopiadores* must attract their clients with beer, candy, and discounts. After ten minutes of flaring, the shopkeeper weighs the gold ball, uses a cellphone app to check the international price of gold, and hands Jacinto USD 200.<sup>714</sup> This equates to Jacinto’s monthly salary, though he still must pay for the equipment he rented and the mill fees,<sup>715</sup> so the number of intermediaries limits his final cut.<sup>716</sup> All these transactions remain off-the-books. Although official data is unavailable or unreliable, each *cachorro* worker produces an estimated ten grams of gold per month during his lottery pay-day (USD 440).<sup>717</sup> While this amount is

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QUARTERLY REVIEW 26–47, 36 (2012) (reporting that 70% of La Rinconada children suffer chronic malnutrition and 95% exhibit some form of nervous impairment); PIETH, *supra* note 31 at 20 (arguing that children in nearby town Santiago de Putina “do not grow” do to mercury abuse in La Rinconada).

<sup>711</sup> See Arana and Nemirofsky, *supra* note 710 at 40 (reporting that mercury levels in public spaces are 5,000% higher than permissible levels); Interview with Trinidad Carlos, *supra* note 599 (“Ironically, communities around La Rinconada demand healthier rivers and ecosystems, but some do mining themselves. We live in a vicious circle”).

<sup>712</sup> AUTORIDAD NACIONAL DEL AGUA, *supra* note 677 (reporting that the glacier area has shrunk from 1.47 km<sup>2</sup> in 1970 to 0.96 km<sup>2</sup> in 2017).

<sup>713</sup> Interview with anonymous *acopiador*, (2019).

<sup>714</sup> *Acopiadores* operate illegally, so *cachorreros* do not get the best price for the gold they bring. Some *cachorreros* prefer to sell in Juliaca the gold balls they produce, but the risk of theft is too high as minibuses are sometimes intercepted in the highway by thieves and, allegedly, by corrupt police officers. Interview with Jacinto Flores, *supra* note 278.

<sup>715</sup> See GAMARRA, *supra* note 8.

<sup>716</sup> Interview with Miguel Ego-Aguirre, *supra* note 681; see also Interview with Lenin Valencia, *supra* note 362 (acknowledging the problem of too many intermediaries in the ASM sector); Telephone interview with Gonzalo Tamayo, *supra* note 221 (“When you eliminate the intermediary, you can get to the artisanal worker and offer him better conditions, less pollution and more security”).

<sup>717</sup> See MIGUEL EGO-AGUIRRE, *Evaluación Ambiental Inicial del Área de Influencia de las Actividades Mineras de La Rinconada - Perú* (2017); but see MINISTRY OF LABOR OF PERU, *supra* note 593 (claiming that the average miner’s monthly income is approximately USD 300, though 23% of miners make more than

higher than Peru's minimum wage (USD 280), many miners today claim to barely earn it in a month because the gold seams are getting exhausted.<sup>718</sup>

Jacinto then wires the money to his wife in Juliaca but keeps enough to support himself in the mining center for the following month. Hiding gold or money at home is not an option. "I'm scared that I'd be robbed. They robbed my mining camp a few times. They stole my tools, jacket, and boots." In turn, the *acopiadores* supply gold to clients in larger cities of Puno, Bolivia, Brazil, and elsewhere.<sup>719</sup> A report from the New York Times in 2020 reveals that La Rinconada's gold is likely to have reached top brands, such as Tiffany & Co, Apple Inc, Samsung Electronics Co., showing the weaknesses in the commercialization and traceability of gold production worldwide.<sup>720</sup>

Miners complement their income by pocketing some small rocks on their way out of the shafts, a practice called "*cuñaqueo*," which is tolerated by most contractors.<sup>721</sup> *Cachorreros* have unionized to push for better working conditions but not much has changed.

Considering salaries are uncertain, women must contribute to the household income.<sup>722</sup> In actuality, they play a critical role in the family subsistence.<sup>723</sup> Women are not

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USD 500); Brook Larmer, *supra* note 588 (estimating the monthly income in 10 grams of gold); Interview with Lenin Valencia, *supra* note 354 (estimating the miner's monthly income in 15 grams of gold or USD 630).

<sup>718</sup> Interview with Jacinto Flores, *supra* note 278 (claiming that cachorro workers make between USD 40 and USD 75 per month today); Martin Enserink, *supra* note 593 at 1102; El Mundo, *supra* note 10.

<sup>719</sup> See Finnegan, *supra* note 593; see also Interview with Jacinto Flores, *supra* note 278 (arguing that each *acopiador* risks his life coming down to Juliaca with gold nuggets on him, since he can get robbed or killed); VERITÉ, *supra* note 595 at 27.

<sup>720</sup> See Brenna Hughes, Mitra Taj & Peter Hobson, *Special Report: Sleeping Beauty-How Suspect Gold Reached Top Brands*, THE NEW YORK TIMES MAGAZINE, March 13, 2020, <https://www.nytimes.com/reuters/2020/03/13/world/asia/13reuters-gold-peru-swiss-specialreport.html>. On due diligence obligations for governments and private sector, see generally SINGO AND SEGUIN, *supra* note 16 at 9–10.

<sup>721</sup> Interview with Alvarez, *supra* note 251.

<sup>722</sup> See e.g. MOSQUERA, *supra* note 597; INTERNATIONAL LABOR ORGANIZATION, *supra* note 593 at 10.

<sup>723</sup> See PACHAS, *supra* note 176 at 121–22.

allowed to work inside the tunnels because the female spirit that owns the gold can become jealous, affecting men's courtship process and *hiding* the gold seams.<sup>724</sup> In fact, offerings and payments by male workers to the mountain deity are aimed at seducing this female spirit.<sup>725</sup> Women, however, are allowed to work in the processing of minerals.<sup>726</sup> They work by manually sorting out the discarded ore from piles of debris extracted from tunnels (an activity called "*pallaqueo*"), washing the material, or recollecting ore with a brush, sometimes joined by their children.<sup>727</sup> *Pallaqueo* is exclusively conducted by women<sup>728</sup> and yields two to seven grams of gold per month (USD 90-300).<sup>729</sup> It involves selecting and crushing interesting looking rocks, which is an extremely dangerous task since it is carried out in very steep and stable piles of waste rock, close to improved roads where mining trucks circulate.<sup>730</sup> Women then take the ore for further processing, using the same facilities and methods that men do. But *acopiadores* are said to cheat *pallaqueras* and pay them unfair prices.<sup>731</sup>

Women and children also work in street food stalls or small shops. In practice, women work more hours than men but receive lesser payment.<sup>732</sup> Children work full-time

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<sup>724</sup> See Pachas, *supra* note 85 at 174.

<sup>725</sup> See *id.* at 174.

<sup>726</sup> See *id.* at 174.

<sup>727</sup> See e.g., Mosquera, *supra* note 279; Int'l Labor Org., *supra* note 277, at 10.

<sup>728</sup> On *pallaqueras*, see e.g. GAMARRA, *supra* note 8; OLINDA OROZCO ZEVALLOS, GUADALUPE ETO CHERO & FRANCO ARISTA RIVERA, *Pallaqueras entre piedras y oro. Diagnostico participativo en las regiones de Arequipa, Ayacucho y Puno* (2017); Carmen Cazorla Zen, *Las Pallaqueras o CCori Capa Koya*, ARQUEOLOGIA Y SOCIEDAD 343–352 (2012); Interview with anonymous pallaquera, (2019).

<sup>729</sup> MINISTRY OF LABOR OF PERU, *supra* note 600 at 22 (reporting that women work 42% more hours per week than miners, but only make USD 225 per month on average); OLINDA OROZCO ZEVALLOS, GUADALUPE ETO CHERO, AND FRANCO ARISTA RIVERA, *supra* note 728 at 69 (estimating that 70% of pallaqueras make less than USD 300 per month).

<sup>730</sup> See Ensing, *supra* note 296. (According to Enrique Tandeter, during the Colonial period, *pallaqueo* referred to workers that sift through the debris of abandoned mines in Potosí). See also Coercion and Market : Silver Mining in Colonial Potosí, 1692-1826 5 (1992).

<sup>731</sup> Interview with anonymous pallaquera, *supra* note 728.

<sup>732</sup> See MINISTRY OF LABOR OF PERU, *supra* note 272, at 22, 61.

on weekends, during their school vacation, or after school,<sup>733</sup> even though Peruvian law prohibits child labor in the mines. For many inhabitants of La Rinconada the tasks performed by children in the mines are not considered actual work despite the profit derived.<sup>734</sup>

## **B. Other Lottery Miners in Peru's ASM Sector**

Lottery mining is deeply rooted in Puno. In the Carabaya and Sandia provinces, workers accept lottery pay-days, but unlike La Rinconada, contractors must pay for food and shelter, resembling the earlier versions of *cachorro*.<sup>735</sup> Outside the Puno region, we can find lottery miners in Ayacucho (Southern-Central Andes), Arequipa (Southern Andes), or La Libertad (Northern Andes).<sup>736</sup> Next, I document the existence of lottery-like systems in two mining camps: Upina (Puno) and Secocha (Arequipa).

### **1. Upina Lottery Miners**

Traditionally an agricultural and shepherding community, the Upina Peasant Community in Puno (Sandia) is now engaged in ASM-activities.<sup>737</sup> This community is registered as a PMA before MINEM and has completed all steps of the GP's formalization process. That is to say, it is a *formal* ASM operation. Access to Upina is extremely difficult (see Figure 12). Traveling by car from Juliaca to Macusani takes approximately three

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<sup>733</sup> See PIAZZA, *supra* note 689; Interview with anonymous cachorro worker #2, (2019).

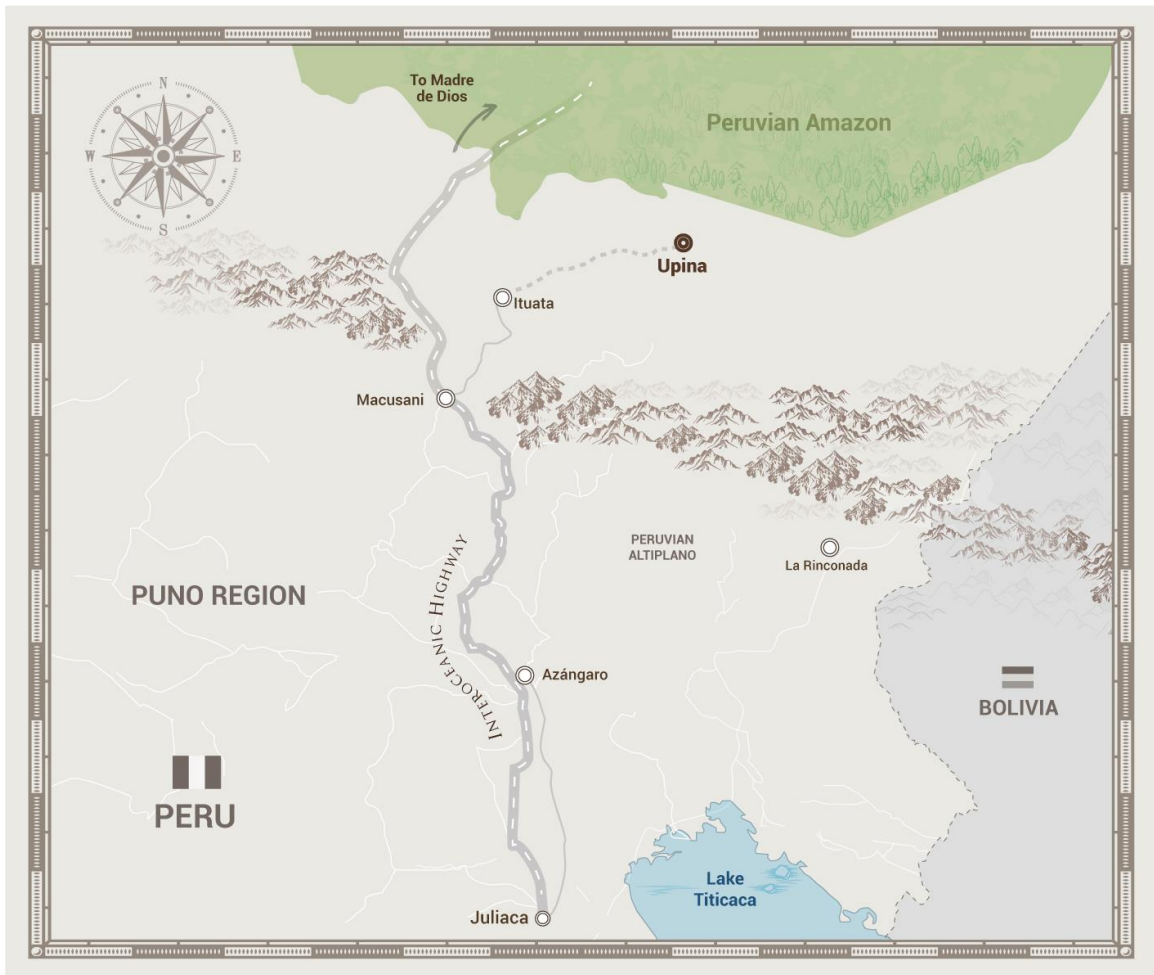
<sup>734</sup> See INT'L LABOR ORG., *supra* note 277, at 14.

<sup>735</sup> Interview with Roberto Zegarra, *supra* note 614; Interview with Jesús Álvarez, *supra* note 174.

<sup>736</sup> Interview with Máximo Gallo, *supra* note 303. In La Libertad, the massive workforce is employed by ASM entrepreneurs without salaries. In exchange they get lottery pay-days. The ore extracted by miners during their lottery time is called "*capacho*."

<sup>737</sup> See COMUNIDAD CAMPESINA UPINA, *Instrumento de Gestión Ambiental para la Formalización de Actividades de Pequeña Minería y Minería Artesanal (IGAFOM). Aspecto Preventivo del Proyecto "Mucumayo"* (2018).

hours, driving on the Interoceanic Highway. From Macusani, located at 15,000 feet above sea level, drivers take the detour to Ituata village, a road surrounded by beautiful snow-covered Andean mountains. Ninety minutes later, the trip continues in a meandering dirt trail that descends to 9,000 feet above sea level. The weather and geography changes abruptly from Altiplano barren and cold conditions to subtropical mountains covered with forest and warmer temperatures.<sup>738</sup>



**Figure 12. Upina Map**

(Source: Grace Calle)

<sup>738</sup> Temperatures vary between 37°F and 70°F. *Id.*

After descending for two hours, the trail suddenly ends in an improvised rest stop, where drivers find the last shops and restaurants before entering into the wilderness. Men offer rides on the back of their old motorcycles for USD 12 to get to the mining camps scattered in the mountain tops. Dozens of motorcycles go in and out of the rest stop every hour. This is the only access to the Upina mine: a one-hour ride up and down steep mountains as a motorcycle passenger, in a dangerous but unique crossing, eschewing precipices, foliage, and cascades.

While the Upina community holds title to the surface lands, the mining rights belong to “*Compañía Minera Ayapata S.A.*” (see Appendix 11).<sup>739</sup> In June 2018, the latter assigned a small section of the mining concession (i.e. 166 out of 1,000 hectares) to the Upina community under a mining lease agreement, thus allowing ASM operations.<sup>740</sup> The agreement does not bind the community to pay a royalty, but it must pay the good standing fees to MINEM. In addition, some members of the community have entered into individual mining lease agreements in exchange for a small royalty fee.<sup>741</sup>

The mining operations are scattered around different sections of the communal lands, known as “*Media Naranja*”, “*Corimayo*”, “*Carmen*”, “*Vicunamayo*”, “*Buenavista*”, “*Quinsamayo*”, and “*Matacaballo*,”<sup>742</sup> where miners have erected their improvised camps, made of plastic, corrugated metal, and wood. The camps are located in

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<sup>739</sup> Code 13007000X01. It was claimed in 1978 by Donato Placido Calcina and Tomás (Tommy) Cenzano Sierralta and remains in good standing to date. The mining property was later transferred to *Compañía Minera Ayapata S.A.*, where Tomás (Tommy) Cenzano Sierralta serves as general manager.

<sup>740</sup> See Arequipa Public Record (SUNARP), Registry docket No. 20002763, Entry No. 005405.

<sup>741</sup> Fourth other mining lease agreements appear in the public record in favor of individuals, presumably also members of the Upina community, for a 5% royalty fee (Yohn Calsina Chipana: 2.13 hectares; Jesus Asqui Mayta: 1.95 hectares; Elena Quispe Colque: 1.95 hectares; Ana Ysabel Sanya (1.95 hectares).

<sup>742</sup> See COMUNIDAD CAMPESINA UPINA, *supra* note 737.

steep slopes, accessible only by foot or motorcycle. They lack running water or sewage, but they do have electricity and common spaces, including dining halls and one soccer field. Dozens of small shops offer groceries, phone calls, and bank wires. At some camps, miners can also sell the gold-mercury balls they produce to a handful of gold smelter shops. Unlike other ASM landscapes, the Upina community has proscribed alcohol and prostitution. “This is a decent mining settlement,” adds Javier Accha, a mining contractor.<sup>743</sup>

To secure laborers, contractors like him offer free housing and food, as well as lottery pay-days, in a customary agreement called “*chichiqueo*.” Accordingly, for every five days of work, *chichiqueo*-workers (“*chichiqueros*”) accrue one day to mine for their own benefit, normally on Saturdays. On Sundays, the mine is closed, and nobody is allowed to work.<sup>744</sup> Young men from Azángaro or San Anton travel hundreds of miles to this mining site lured by mining jobs, though lacking salaries. Workers justify this system: “This is my luck,” claims one *chichiquero*, a 27-year-old man from Juli, Puno.<sup>745</sup> “We have always worked this way,” argues one of his fellow miners.<sup>746</sup> “There are no jobs in my hometown of Azángaro,” adds another worker.<sup>747</sup>

Miners claim to make between USD 480 and 600 a month.<sup>748</sup> Considering the remoteness of the mine and the cost of travel, miners spend two or three months isolated in the valley before going back home for a month or so for a break.<sup>749</sup> “I miss my family terribly but I want my children to school and have a better education than me,” revealed a

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<sup>743</sup> Interview with Javier Accha, *President of Upina Peasant Community and Mining Operator* (2019).

<sup>744</sup> Group interview with anonymous *chichiqueo* workers, *supra* note 372.

<sup>745</sup> *Id.*

<sup>746</sup> *Id.*

<sup>747</sup> *Id.*

<sup>748</sup> *Id.*

<sup>749</sup> *Id.*



*chichiquero* worker.<sup>750</sup> When I asked *chichiqueros* if they would prefer a waged job, they all agreed that they preferred quick cash.<sup>751</sup> “We don’t even know what full employment status means and what it entails, anyway,” replied one *chichiquero*. Paradoxically, while the Upina community has fully completed the government’s ASM formalization program, this has not changed the legal status of *chichiqueros*, who remain invisible to the government. “Formalization is of no good to us, nothing has changed since the contractor got formal title,” claims a 34-year-old *chichiquero*.<sup>752</sup>

While *chichiqueros* must secure their own personal protection equipment,<sup>753</sup> the contractor bears the cost of feedstock (including explosives, mercury, fuel), machinery, and equipment, as well as the costs associated with running the mining camp (e.g. housing, water, food, electricity, etc.).<sup>754</sup> “Operating a mine is expensive. It is a risky business too. I cannot afford to pay salaries. I don’t have the money,” explains Accha.<sup>755</sup> Official data on *chichiqueros* is non-existent. Javier estimates that there are approximately 100 mining contractors and 3,000 workers in Upina.<sup>756</sup> The community is now investing to train workers in environmental, health and safety obligations, he claims.<sup>757</sup>

All mining activities are conducted underground. Without investment in mining exploration, miners open up rudimentary tunnels using explosives and hand tools, following the richest gold-bearing veins. The ore is then crushed in small electric ball mills and amalgamated with water and mercury. The processing plant’s capacity is 10 metric

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<sup>750</sup> *Id.*

<sup>751</sup> *Id.*

<sup>752</sup> *Id.*

<sup>753</sup> *Id.*

<sup>754</sup> Interview with Javier Accha, *supra* note 743.

<sup>755</sup> *Id.*

<sup>756</sup> *Id.*

<sup>757</sup> *Id.*

tons per day.<sup>758</sup> “We want to phase out chemicals. We are testing new processing methods,” claims Accha.<sup>759</sup> Discarded waste rock is dumped in the river creeks, disrupting the otherwise green landscape. But the waste rock is further processed by other types of miners, the “*playeros*” or “*ganancieros*,” who recover gold using ancestral technology. They build artificial river dams to change the waterbody and create small platforms, where they place carpets made of knitted common reed grass. Every other month, the miners go back to the platforms to retrieve whatever gold has been trapped by the reeds and, if necessary, replace the carpets. The job is extremely tough as they spend hours in the cold waters.<sup>760</sup> These *playeros* and *ganancieros* are also members of the Upina community.

## 2. Secocha Lottery Miners

Secocha is located in the region of Arequipa, in the Southern Peruvian Andes (*see* Figure 13).<sup>761</sup> Traveling by car takes two and a half hours from Camaná to Ocoña. Traditionally an agricultural land, many villagers have now shifted to mining as their main source of income. Attracted by the hypnotic effect of gold, thousands of gold-seekers from areas as far as Apurímac, Cusco, Lima, Puno, or Ucayali, now amount to 20,000.<sup>762</sup> “Secocha has welcomed people looking for jobs from all over Peru,” explains a local informant.<sup>763</sup>

Mining in Secocha dates back to the early twentieth century. “*Posco Misky S.A.C.*” was the first mining company to operate in the area but was forced to close down after it

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<sup>758</sup> See COMUNIDAD CAMPESINA UPINA, *supra* note 737.

<sup>759</sup> Interview with Javier Accha, *supra* note 743.

<sup>760</sup> Group interview with anonymous chichiqueo workers, *supra* note 372.

<sup>761</sup> See Diario Correo, *Secocha, el pueblo del oro a orillas del Ocoña*, 2015.

<sup>762</sup> See Nelly Hanco, *La realidad de Secocha en números*, Diario Correo, 2019.

<sup>763</sup> Interview with anonymous contractor # 3, (2020).

was destroyed by a landslide.<sup>764</sup> “*Caravelí S.A.C.*” took over the mining concessions but does not exploit them (*see* Appendix 12).<sup>765</sup> Seizing the opportunity, in 2002-2003 artisanal miners squatted on the mining property. The first-comers claimed their working areas and started opening tunnels, providing notice of their possession to fellow miners.<sup>766</sup> In the absence of formal rights, miners’ rules are prevalent, constituting the social order.<sup>767</sup> Interestingly, whenever a miner decides to depart, he transfers his tunnel to buyers through purchase agreements.<sup>768</sup> Over the years, some artisanal miners have gained economic power and have been able not only to mechanize their operations but also to retain dozens of workers.<sup>769</sup> In turn, other sections of the deposit are exploited by poor, individual artisanal miners that operate uncoordinatedly.<sup>770</sup>

Organized around the “*Asociación de Pequeños Productores, Mineros Artesanales y Contratista Secocha–Urasqui*” (“ASSPMACSU”), miners submitted to MINEM an affidavit to start the formalization process in 2016, but in the absence of mining lease agreements, formalization is not promising.<sup>771</sup> Clashes between *Caravelí S.A.C.*, the formal owner of the mineral deposit, and artisanal miners eventually escalated, leading to MINEM’s mediation, though with little success.<sup>772</sup>

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<sup>764</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 48.

<sup>765</sup> Telephone interview with anonymous ASM expert in Secocha, (2020).

<sup>766</sup> *Id.*

<sup>767</sup> *Id.*

<sup>768</sup> *Id.*

<sup>769</sup> *Id.*

<sup>770</sup> *Id.*

<sup>771</sup> *Id.* Similarly, in 2015 the President of ASSPMACSU, Guillermo Huamaní, demanded the GP to pass a new ASM regulation. See Diario Correo, *Secocha, el pueblo del oro a orillas del Ocoña*, 2015.

<sup>772</sup> See also, MINEM, *Reinician tratos para suscribir contratos de explotación entre empresas mineras y mineros artesanales de Secocha* (2015) <http://www.minem.gob.pe/detallenoticia.php?idSector=9&idTitular=6750> ; MINEM, *Mesa de intermediación entre empresas y mineros artesanales de Arequipa logra importantes acuerdos* (2015), <http://www.minem.gob.pe/detallenoticia.php?idSector=20&idTitular=6828> According to a local source, ASSPMACSU has attempted to buy the mining concessions from *Caravelí S.A.C.*, but the latter did not accept the offer. Interview with anonymous contractor # 3, *supra* note 763.

ASM entrepreneurs retain their workforce through lottery-type arrangements, even though some pay daily wages instead.<sup>773</sup> ASM entrepreneurs prefer to retain their friends and relatives. Labor conditions are extremely unsafe. Workers use hand tools such as picks, shovels, wheelbarrows, and explosives to extract the ore, but lack basic personal protection equipment (e.g. boots, gloves, helmets, or respirators). The ore extracted is then crushed and processed with mercury using *quimbaletes* in the area or sold to *Caravelí S.A.C.*'s processing plant, located in Huanuhuanu.<sup>774</sup> The amalgamated gold-mercury ball is finally sold to *acopiadores* located in Chala, a nearby town.<sup>775</sup> In addition to males working inside the galleries, approximately 2,000 women work as *pallaqueras*, sorting out the waste rock discarded by men.<sup>776</sup>

The mushrooming of ASM-activities in Secocha has increased pollution<sup>777</sup> and crime. Toxic wastes are mismanaged and imperil people's health.<sup>778</sup> The village lacks water and sewage supply.<sup>779</sup> A wave of murders prompted the request to declare Secocha in state of emergency.<sup>780</sup> The village has become an attractive pole for human trafficking, as evidenced by the growing number of bars and brothels.<sup>781</sup> National and regional

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<sup>773</sup> See e.g. Ministry of Energy and Mines of Peru, *supra* note 270; Telephone interview with anonymous ASM expert in Secocha, *supra* note 765.

<sup>774</sup> The processing plant concession is called "*Chacchuille*" (P0100133). Despite the plant has the capacity to produce 50 tons, it currently produces more than 150 tons. The company has no incentive to invest in mining extraction but neither to allow the formalization of artisanal miners, eliciting a perverse cycle. Telephone interview with anonymous ASM expert in Secocha, *supra* note 765.

<sup>775</sup> See VALDÉS, BASOMBRÍO, AND VERA, *supra* note 31 at 53.

<sup>776</sup> See OLINDA OROZCO ZEVALLOS, GUADALUPE ETO CHERO, AND FRANCO ARISTA RIVERA, *supra* note 728 at 55.

<sup>777</sup> Mine tailings contaminate agricultural activities downstream, sparking protests against mining activities. See Nelly Hanco, *Aguas residuales de la minería artesanal escurren sin control en Secocha*, Diario Correo, 2018; José Libandro Pérez, *Minería contamina cultivos en Secocha*, Diario Los Andes, 2019; Roxana Mamani, *Arequipa: Agricultores de Secocha protestan contra minería*, Diario La Republica, 2019.

<sup>778</sup> In 2018, 20 children were diagnosed with mercury in their blood. See Elard Parrillo, *Sobreviviendo con mercurio en Secocha, la «Rinconada arequipeña»* (2018).

<sup>779</sup> See Nelly Hanco, *La realidad de Secocha en números*, Diario Correo, 2019.

<sup>780</sup> See La República, *Arequipa: Solicitan declarar en emergencia pueblo de Secocha*, 2019.

<sup>781</sup> See Nelly Hanco, *Prostitución se desborda en zona minera de Secocha*, Diario Correo, 2018.

government's controls are nonexistent. In light of this context, Secocha is now called "Arequipa's La Rinconada."<sup>782</sup>



**Figure 13. Map**

(Source: Grace Calle)

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Direct appropriation strategies in contemporary ASM-activities are highly legitimate and persistent, exemplifying long tensions between the mining workforce and

<sup>782</sup> See Elard Parrillo, *Sobreviviendo con mercurio en Secocha, la «Rinconada arequipeña»* (2018).

the state. Today's mushrooming ASM camps cannot be solely explained by sky-rocketing prices of gold, but also by the failure of the regalian doctrine in Peru's constitutional system. The *Patrimony of the Nation* concept enshrined in the constitution promises that the country's vast mineral wealth is the bequest of present and future generations. Two factors impede the fulfillment of this promise. First, access to mineral deposits works on a first-come, first-served basis, favoring capitalized LSM players, who in addition can afford to keep mining concessions inactive for decades, blocking other potential resource users. Second, the redistribution of mineral rents from the national to the subnational governments is ill-defined and insufficient to turn LSM mining activities into a transformative sector.<sup>783</sup>

Furthermore, the mining concession system does not dovetail with the Andean culture of reciprocity, mutuality, and associative work relations, nor does it apply well in poor rural areas, where undertaking artisanal mining activities represent a quick source of economic relief, albeit temporary. Feeling excluded by LSM in the distribution of mining concessions,<sup>784</sup> like the *k'ajchas* of Potosí, Peru's emerging ASM popular class now demands the legitimate right to access and exploit the mineral resources, regardless of existing property rights.<sup>785</sup> Simply put, ASM operations—the mining of the poor—now embody a resistance to existing mining, centralized tenure rules and a demand for a new

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<sup>783</sup> See e.g. Barrantes, *supra* note 192 at 70; Aldo F. Ponce & Cynthia McClintock, *The Explosive Combination of Inefficient Local Bureaucracies and Mining Production: Evidence from Localized Societal Protests in Peru*, 56 LATIN AMERICAN POLITICS AND SOCIETY 118–140 (2014).

<sup>784</sup> See Damonte, *supra* note 331 at 957.

<sup>785</sup> See e.g. Cortés-McPherson, *supra* note 21 at 4.

social contract based on their own terms and rules. In this context, lottery mining embodies a law of resistance.<sup>786</sup>

This legitimacy crisis, of course, transcends the mining sector itself. As Flores-Galindo puts it, “old domination mechanisms do not work anymore... those dominated do not accept them anymore.”<sup>787</sup> The government has failed to engage with the emerging popular classes—what José Matos Mar called the *popular overflow* in the 1980s—to favor the integration of these incipient institutions and create a new basis for the state’s legitimacy.<sup>788</sup>

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<sup>786</sup> Cf. LUCY CHARLOTTE FINCHETT-MADDOCK, PROTEST, PROPERTY AND THE COMMONS : PERFORMANCES OF LAW AND RESISTANCE 20 (2016) (“A law of resistance simply refers to the type of law that might exist outside of the positive law institution of the state. It is also a form of law that, like any form of democratic law, derives from consensus”).

<sup>787</sup> Alberto Flores-Galindo, *La tradición autoritaria. Violencia y democracia en el Perú*, in SOMBRAS COLONIALES Y GLOBALIZACIÓN EN EL PERÚ DE HOY 19–56, 49 (2013).

<sup>788</sup> See *id.* at 49. (citing José Matos Mar); see also DURAND, *supra* note 116.

## CHAPTER 5. DISSECTING CONTEMPORARY LOTTERY-LIKE ARRANGEMENTS

*<<Gold gives you power, you feel omnipotent, you  
can buy anything you want, including girls>>.*  
Informal miner in Puno<sup>789</sup>

*Cachorro* entails the direct appropriation of ore by the mass working force. In many cases, it involves the mobilization of whole families to mining regions, as women must support the family income.<sup>790</sup> Moreover, *cachorro* is deeply ingrained in Andean cultural principles, which makes it representative and legitimate. Considered extremely peculiar, clandestine, and wild, Peruvian scholarship has shown little interest in analyzing the *cachorro* arrangements in the ASM sector. Some specialists suggest, though, that *cachorro* is an ancestral practice with reminiscences of the Inca *minka* (the duty to work for the community),<sup>791</sup> “*yanaconaje*” (sharecropping),<sup>792</sup> or Spanish *mita*.<sup>793</sup> In actuality, its origin and nature remain understudied.

In this chapter, using interviews and historical information, I provide an in-depth analysis of *cachorro*'s origin and main cultural attributes. First, I contend that this arrangement came about as the natural way of organizing employment and distributing risk

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<sup>789</sup> Interview with Roberto Zegarra, *supra* note 614 (quoting an informal miner).

<sup>790</sup> See Carmen Cazorla Zen, *Las Pallaqueras o Cori Capa Koya*, ARQUEOLOGIA Y SOCIEDAD 343–352 (2012).

<sup>791</sup> Telephone interview with César Ipenza, *supra* note 331.

<sup>792</sup> See PIAZZA, *supra* note 689. “*Yanaconaje*” (or “*yanaconazgo*”) is recognized as the Peruvian form of sharecropping. While it underwent a series of transformations throughout centuries, by the late eighteenth century the “*yanacona*” became a labor-service tenant in the Andes, while in the coast he paid his rent with a percentage of the crop produced. Yet, it also involved the granting of small loans to the *yanacona* by the landowner, which were repaid with interest after the harvest. See e.g. Bill Albert, *Yanaconaje and Cotton Production on the Peruvian Coast: Sharecropping in the Cañete Valley during World War I*, 2 BULLETIN OF LATIN AMERICAN RESEARCH 107–116, 107 (1983); JOSÉ CARLOS MARIÁTEGUL, SEVEN INTERPRETIVE ESSAYS ON PERUVIAN REALITY 62–68 (1971); MATOS MAR, *supra* note 392; CONTRERAS AND CUETO, *supra* note 529 at 98. For other sharecropping agreements in the agricultural sector, see ROLANDO ROJAS, LA REVOLUCIÓN DE LOS ARRENDIERS: UNA HISTORIA PERSONAL DE LA REFORMA AGRARIA (2019).

<sup>793</sup> See e.g. GAMARRA, *supra* note 8 at 42; Arana and Nemirofsky, *supra* note 710 at 31.



in a decaying mining sector, characterized in the 1940s by shortages of labor force, high business risk, and relatively low prices of gold. I then dissect the main features of *cachorro* and show how it prevented La Rinconada from complete chaos and falling into *de facto* open access. This is the first academic work to dissect this lottery-type arrangement in the Peruvian context.

### A. *The Origin of Cachorro: An Explanation*

*Cachorro* appeared in La Rinconada in the 1940s, in a context of a decaying mining sector. Unlike other ASM landscapes where debt peonage developed, in La Rinconada lottery mining emerged instead. Four factors help explain this development. First, when Tomás Cenzano arrived in the area in 1946, he did not have enough capital to pay salaries, let alone to loan money to potential workers, ruling out the possibility of debt peonage. Consistent with traditional artisanal mining patterns elsewhere,<sup>794</sup> I believe Cenzano resorted to giving away lottery pay-days and leasing sections of his mining property to contractors in exchange for gold nuggets to avoid incurring in high labor costs and thus shift business risks.<sup>795</sup> According to this mutuality understanding between Cenzano and his workforce, he received unpaid manpower in exchange for an opportunity to try their luck in the mines, in addition to covering worker's food and shelter expenses.<sup>796</sup>

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<sup>794</sup> According to Víctor Hugo Pachas, the ASM sector is characterized by the dependency situation between the owner of the mine and the massive workforce. While low-tech mining requires intense labor force, the owner of the mine is unable to retain workers as he lacks liquid assets, so he gives away lottery pay-days instead. This sort of understanding tends to disappear, he claims, as mechanization of work reduces the number of workers needed in the operation. PACHAS, *supra* note 176; Telephone interview with Víctor Hugo Pachas, *supra* note 374. See MOSQUERA, *supra* note 219 at 23 (arguing that while the prospection process is individual, the development of the ore deposit requires some sort of partnership with the labor force); Erick Langer, *supra* note 483 at 36.

<sup>795</sup> Cf. Verbrugge and Geenen, *supra* note 24 at 419 (arguing that revenue-sharing arrangements create opportunity for social mobility and allows ASM operators to shift the risk to the workforce).

<sup>796</sup> Cf. Verbrugge, *supra* note 20 at 1039.

Second, considering migrants bring to the mining settlements their own set of experiences, imageries and preconceptions, workers flocking to La Rinconada did not come from contexts where SER was present.<sup>797</sup> On the contrary, most workers came from agricultural or ranching livelihoods, and would only work in the mines for short periods. “During the twentieth century, ASM miners are composed of peasant communities who shift from agricultural to mining activities intermittently, and only as a complement to their regular income,” argues Pachas.<sup>798</sup> Offering themselves as independent laborers turned out to be more familiar and appealing to a seasonal and non-permanent working force.

Third, a significant number of La Rinconada inhabitants came from Azángaro province (approximately 50 miles away). The relevance of this fact is twofold. On the one hand, Azángaro was one of the provinces comprised in the *mita* service, where it had long-lasting consequences for its indigenous population.<sup>799</sup> Considering Azángaro’s long tradition in mining,<sup>800</sup> it seems likely that values inherent to Potosí’s labor force, such as the custom to appropriate a piece or share of the ore, were latent among the Azángaro emigrants and could have been reproduced elsewhere.

On the other hand, once occupied by the Qaluyo, Pukara, Kolla, and Inca cultures, the Azángaro indigenous communities were well-known for their inborn rebellious and untamable character.<sup>801</sup> The Azángaro people’s character may explain their resistance to wage labor relations in ASM. Moreover, in his study of the Altiplano, MIRAGES OF

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<sup>797</sup> Interview with Iris Olivera and Ciro Salazar, *supra* note 49.

<sup>798</sup> Telephone interview with Víctor Hugo Pachas, *supra* note 374.

<sup>799</sup> See generally NILS JACOBSEN, *supra* note 435 at 56; RENÉ CALSÍN ANCO, HISTORIA DE AZÁNGARO 49 (2005); COTLER, *supra* note 382 at 26.

<sup>800</sup> Cf. ARANA, *supra* note 595 at 2 (“The business of digging deep into the earth’s entrails to wrest glittering treasures has long, abiding roots on this continent and, in many ways, defines the people we Latin Americans have become”).

<sup>801</sup> See CALSÍN ANCO, *supra* note 799 at 59; Interview with Liliana Cenzano, *supra* note 592; Telephone interview with Javier Yrigoyen, *supra* note 293.

TRANSITION: THE PERUVIAN ALTIPLANO, 1780–1930, Nills Jacobsen underscores how the Azángaro population “adapted well to the changes in institutions, production relations and state structures over centuries.”<sup>802</sup> This adaptability to new institutions and power relations might have contributed to the construction of Cenzano’s new working ethos.

Finally, the preference for payments in ore instead of salaries can be simply explained by the unavailability of current money at the time.<sup>803</sup> In other words, it was easier for Cenzano to pay workers with whatever they found in the mines rather than carrying cash to a remote location in the 1940s.

## ***B. Dissecting Cachorro***

In this section, I dissect the main features of *cachorro*, namely, (a) flexibility, mobility and orality; (b) individualism, masculinity, and resistance to waged labor relations; (c) ‘get- quick-rich’ mindset; (d) kinship, reciprocity and risk-sharing; and (e) legends and superstition. Note that this section is chiefly concerned with the lottery period.

### **1. Flexibility, Mobility, and Orality**

*<<I arrived at La Rinconada in 1990 and started working as a seasonal worker to create capital>>.*<sup>804</sup>

Perhaps the most distinguishable feature of informal mining in general, and the *cachorro* system in particular, is its flexibility, mobility, and orality. Unlike enslaved workers or debt peons, workers in La Rinconada may go in and out of the mining town as

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<sup>802</sup> NILLS JACOBSEN, *supra* note 435 at 43.

<sup>803</sup> Cf. Donald L. Winters, *Postbellum Reorganization of Southern Agriculture: The Economics of Sharecropping in Tennessee*, 62 AGRICULTURAL HISTORY 1–19, 2 (1988).

<sup>804</sup> Interview with anonymous contractor #1, (2019).

they see fit.<sup>805</sup> “Miners are *there* because they want to be *there*,” claims one representative from the ombudsman office in Puno.<sup>806</sup> Likewise, Yrigoyen, argues that *cachorro* is a consensual practice because “miners know exactly what they are getting into.”<sup>807</sup> It is precisely this plasticity what attracts temporary or seasonal workers into ASM.<sup>808</sup> Working in the mine is thus perceived as a quick way of accessing cash, however dangerous and risky. Additionally, as mentioned earlier, *cachorro* workers can shift from one contractor to another according to the fluctuation of gold-bearing veins, gold prices, or superstition. This mobility allows them to look for better mining opportunities and diversify their risk.

*Cachorro*'s flexibility and mobility are only possible due to its oral nature. Oral agreements furnish ASM with the necessary equilibrium in a context of uneven social relations.<sup>809</sup> These agreements are only valid and recognizable within local circles, fitting well into a culture of prevalent informality.<sup>810</sup> However, while the flexibility, mobility, and orality of this agreement may seem advantageous for some miners, in actuality, they are limited by two factors: (a) the absence of alternative jobs deters miners' freedom to move somewhere else;<sup>811</sup> and (b) if miners choose to abandon a contractor, they lose the time

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<sup>805</sup> Interview with Jacinto Flores, *supra* note 278.

<sup>806</sup> Interview with Trinidad Carlos, *supra* note 599.

<sup>807</sup> Telephone interview with Javier Yrigoyen, *supra* note 293.

<sup>808</sup> Interview with Iris Olivera and Ciro Salazar, *supra* note 49.

<sup>809</sup> See Pachas, *supra* note 85 at 180.

<sup>810</sup> Interview with Pedro Solano, *supra* note 265.

<sup>811</sup> To quote a *cachorro* worker, “I cannot leave. This is the only job I can do. I prefer to stay here than traveling somewhere else.” Interview with anonymous *cachorro* worker #6, (2019). Yet, I met with men in Puno that had decided to quit their jobs in La Rinconada and take jobs as taxi drivers or in the hotel industry. Even though they make less money, they have stability and better living conditions. “I would never go back. I studied tourism and currently work in a hotel in Puno. I feel safe and free of crime. La Rinconada is too dangerous.” Interview with anonymous *cachorro* worker #1, *supra* note 593; Interview with anonymous *cachorro* worker #2, *supra* note 733.

accrued of lottery pay-days and have to start all over again.<sup>812</sup> *Cachorreros* are thus trapped in a vicious circle.

## 2. Individualism, Masculinity, and Resistance to Waged Labor Relations

<<Cachorreros do not want anything to do with the state >>.<sup>813</sup>

During the subordination period, miners cooperate among themselves inside and outside the tunnels, under the threat of reduced lottery pay-days. Yet, during the lottery time miners work individually and defend their autonomy.<sup>814</sup> Each worker thus represents an individual entity,<sup>815</sup> relying on his expertise, hard work, tools, and of course, good luck.<sup>816</sup> Individuality vindicates miner's masculinity as they invest tremendous physical effort<sup>817</sup> and endurance.<sup>818</sup> Miners accept the dangers and personal health risks involved in their mining livelihoods.<sup>819</sup>

Why do miners reject waged labor relations?<sup>820</sup> First, in a waged labor relationship the mine owner (or contractor) captures all the value of the ore extracted within his

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<sup>812</sup> One particular situation that may also hinder miner's mobility is the following. Imagine a miner worked for 28 days. If he is not paid with lottery pay-days on day 29 or 30, will he leave the contract without remuneration or will he wait to cash his accrued lottery pay-days later? I believe it is likely that he will wait for a few days, maybe weeks, to try to cash his right. If he does not wait, he risks losing it all. In other words, even though miners can apparently enter into or terminate a *cachorro* contract without any limitation, in practice they risk losing their accrued remuneration, trapped in a vicious circle and have no exit. Additionally, miners can find it difficult to leave the mining center because they want to recover the money they have already invested in traveling to the mine, equipment, feedstock, etc. Cf. Marie-Rose Bashwira et al., *Not only a man's world: Women's involvement in artisanal mining in eastern DRC*, 40 RESOURCES POLICY 109–116, 114 (2014).

<sup>813</sup> Telephone interview with Gonzalo Tamayo, *supra* note 221.

<sup>814</sup> Interview with anonymous ball mill operator, (2019).

<sup>815</sup> Interview with Juana Kuramoto, *supra* note 83.

<sup>816</sup> Sometimes *cachorro* workers would mix their rocks into one single bucket to share the crushing fees charged by the mills and therefore save money.

<sup>817</sup> See also Martin Enserink, *supra* note 593 at 1102 (“Some of my colleagues have died at a young age—50, 48, 45”).

<sup>818</sup> According to Brook Larmer, the local saying goes “Off to work I go, I don't know if I'll make it back”, *supra* note 595; see also Martin Enserink, *supra* note 593 at 1102.

<sup>819</sup> Interview with Roberto Zegarra, *supra* note 614 (“When a miner looks himself in the mirror, he feels aged and tired”).

<sup>820</sup> See e.g. PIETH, *supra* note 31 at 17 (arguing that miners prefer *cachorro* than regular employment).

property. Conversely, working independently and off-the-books grants miners the opportunity to directly appropriate ore and thus obtain a higher cut.<sup>821</sup> Indeed, under no other circumstance would miners appropriate ore directly. “You don’t work for a salary because you expect to get more with *cachorro*. You feel comfortable working as *cachorrero* even if you get nothing because you know you will get another chance next time.”<sup>822</sup> As a miner in La Rinconada puts it, “Without [*cachorro*] in the equation, the job [is] not worth doing.”<sup>823</sup> Miners accept thus an uncertain payment scheme because they understand profit is a reward for the risk taken and their hard work.

Second, unlike waged labor, payment in lottery pay-days creates a source of immediate cash.<sup>824</sup> “Miners do not think in the long run. They prefer immediate cash over salaries. They come from a cultural background in which they make a living on a day-by-day basis,” notes Yrigoyen.<sup>825</sup> Precisely, ore can be quickly transformed into gold and sold to the dozens of smelter shops in town, allowing rapid cash to be spent in food, alcohol, entertainment, and women.<sup>826</sup> According to Peruvian labor laws, employers are not allowed to pay their employees in cash so, in addition to circumventing pension and income tax deductions (all of which would reduce worker’s net income), receiving a payroll check would be inconvenient because it has to be cashed or deposited in a bank.

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<sup>821</sup> Cf. L. Van Crowder, *Extension for Profit: Agents and Sharecropping in the Highlands of Ecuador*, 50 HUMAN ORGANIZATION 39–42, 41 (1991) (arguing that sharecropping in Ecuador was the rational response to low salaries).

<sup>822</sup> Interview with Roberto Zegarra, *supra* note 614.

<sup>823</sup> See Finnegan, *supra* note 593.

<sup>824</sup> Interview with Iris Olivera and Ciro Salazar, *supra* note 49; Valencia, *supra* note 221.

<sup>825</sup> Telephone interview with Javier Yrigoyen, *supra* note 293.

<sup>826</sup> Cf. Deborah Fahy Bryceson & Sara Geenen, *Artisanal frontier mining of gold in Africa: Labour transformation in Tanzania and the Democratic Republic of Congo*, 115 AFR AFF (LOND) 296–317, 311 (2016).

To sum up, for the massive workforce the opportunity of finding a gold nugget outweighs the lack of basic labor rights. This takes us to the next component of *cachorro*, a get-rich-quick mindset.

### 3. A Get-quick-rich Mindset

Although ASM is generally recognized as a poverty-driven activity,<sup>827</sup> some miners are also attracted to the sector because it grants the possibility of accumulating wealth.<sup>828</sup> The dream of striking it rich pushes miners to work for as many contractors and as many shifts as possible in La Rinconada,<sup>829</sup> enduring the worse imaginable living and working conditions. Thus, for the massive workforce gold does not simply represent a way to escape poverty but it also enables quick access to certain goods, such as a house, a car, a motorcycle, starting a business, or paying for their children's education.<sup>830</sup> This also explains why *cachorro* is more attractive than salaries.<sup>831</sup>

Yet, there is also something about gold that makes people venerate it. “Gold has a peculiar power over the imagination of mankind,” claims William Parker Morrel.<sup>832</sup> Considered the most beautiful of all metals, gold has seduced humans throughout history,

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<sup>827</sup> See e.g. Siegel and Veiga, *supra* note 12 at 51.

<sup>828</sup> See Damonte, *supra* note 84 at 963 (arguing that ASM has become a vehicle for economic mobility); Cf. Verbrugge and Geenen, *supra* note 24 at 419; Robles, *supra* note 696.

<sup>829</sup> See Koenig, *supra* note 9.

<sup>830</sup> Cf. Kelly, *supra* note 87 at 101 (“Working in mining towns brings opportunities to improve social status and to save money to invest in other ventures—such as building a house, getting seed money for a business, or saving for marriage—and that mining can help people to achieve these objectives more quickly than other employment”); Cf. Hilson et al., *supra* note 20 at 86. Most actors from La Rinconada interviewed agreed that their mining occupation allowed them to buy a house, a motorcycle or pay for their children's education. Interview with anonymous *cachorro* worker #7, (2019); Interview with anonymous *cachorro* worker #2, *supra* note 733; Interview with anonymous contractor #1, *supra* note 804.

<sup>831</sup> In 2016, Gilmar interviewed 24 *cachorros* and concluded that 37% were always satisfied with their remuneration, 37.5% were sometimes satisfied, and only 12% were almost always satisfied. See Gilmar Mendiola, *supra* note 689.

<sup>832</sup> WILLIAM PARKER MORRELL, THE GOLD RUSHES 3 (1940).

giving rise to legends, exaggerations, myths, fantasies, and delusions.<sup>833</sup> Indeed, gold has become a symbol of wealth, fertility and religious affiliation.<sup>834</sup> As Peter L. Bernstein notes,

People have become intoxicated, obsessed, haunted, humbled, and exalted over pieces of metal called gold. Gold has motivated entire societies, torn economies to shred, determined the fate of kings and emperors, inspired the most beautiful works of art, provoked horrible acts by one people against another, and driven men to endure the hardship in the hope of finding instant wealth and annihilating uncertainty...[G]old has stirred the passions of power and glory, for beauty, for security, and even immortality.<sup>835</sup>

La Rinconada's population "is obsessed with gold,"<sup>836</sup> claims Brook Larmer. Miners' thirst for gold has inspired them to "seek it out by hard labor in the waste places of the earth."<sup>837</sup> By directly appropriating the ore, the massive workforce gets an opportunity of having a big hit, making thousands of dollars in a single day<sup>838</sup> or achieving significant savings if the price of gold goes up.<sup>839</sup> Risk-taking has all the excitement of gambling;<sup>840</sup> it is like buying "a lottery ticket in the hope of drawing the highest prize."<sup>841</sup> Moreover, as a risk-taking activity, gambling reinforces miners' masculinity.<sup>842</sup>

Nonetheless, gold has also the power to blind miners about their actual and prospective performance. As Fahy Bryceson opines,

gold rushes are high-risk journeys into the unknown, with a strong possibility of disconnection between ends and means; the mirage that the

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<sup>833</sup> See Deborah Fahy Bryceson, *Artisanal gold-rush mining and frontier democracy: Juxtaposing experiences in America, Australia, Africa and Asia*, in BETWEEN THE PLOUGH AND THE PICK: INFORMAL, ARTISANAL AND SMALL-SCALE MINING IN THE CONTEMPORARY WORLD 31–62, 54 (Kuntala Lahiri-Dutt ed. 2018).

<sup>834</sup> See EUGENIA W. HERBERT ET AL., SOCIAL APPROACHES TO AN INDUSTRIAL PAST: THE ARCHAEOLOGY AND ANTHROPOLOGY OF MINING 2 (1998).

<sup>835</sup> PETER L. BERNSTEIN, THE POWER OF GOLD : THE HISTORY OF AN OBSESSION 1, 367 (c2000).

<sup>836</sup> Larmer, *supra* note 5.

<sup>837</sup> MORRELL, *supra* note 832 at 3.

<sup>838</sup> See GAMARRA, *supra* note 8.

<sup>839</sup> See PIAZZA, *supra* note 689.

<sup>840</sup> See GAMARRA, *supra* note 8; PIETH, *supra* note 31 at 20.

<sup>841</sup> Gary Noy, *Gold rush stories : 49 tales of seekers, scoundrels, loss, and luck* / 5 (2017).

<sup>842</sup> See Robles, *supra* note 696.



individual sees on the future horizon as opposed to miners' meagre means to realize their goals given their lack of mining skill and the unpredictability of conditions at the mining site.<sup>843</sup>

In this line of reasoning, lottery miners are overoptimistic about their good luck and future.<sup>844</sup> To some extent, *cachorro* is an example of the overconfidence effect because miners' subjective confidence in their own ability to perform successfully during their lottery pay-days is greater than their objective (actual) performance.<sup>845</sup> Simply put, there is a disconnection between the amount of effort invested in finding and processing gold and the amount of gold that results after the process.<sup>846</sup>

#### 4. Kinship, Reciprocity, and Risk-Sharing

*<<The Altiplano history is full of difficult times and you need to help to be helped. When a friend of yours tells you 'come work with me in the mines', you take a chance and collaborate with him>>.*<sup>847</sup>

Andean communities since pre-Inca times were characterized by communal property and economic systems.<sup>848</sup> Organized around kinship communities (*ayllus*), they resorted to customary norms to coordinate the use of natural resources and agricultural lands, and offer unpaid labor force for the common good.<sup>849</sup> Reciprocity, in particular, was “one of the foundations of socio-economic organization of Andean communities.”<sup>850</sup> It

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<sup>843</sup> Deborah Fahy Bryceson, *supra* note 833 at 32.

<sup>844</sup> Cf. Bryceson and Geenen, *supra* note 826 at 310 (“[M]iner’s self-making is propelled by an optimism that their mine work will prove to be economically advantageous”).

<sup>845</sup> Cf. Daniel Kahneman, *Don’t Blink! The Hazards of Confidence*, THE NEW YORK TIMES MAGAZINE, 2011, <https://www.nytimes.com/2011/10/23/magazine/dont-blink-the-hazards-of-confidence.html>.

<sup>846</sup> Cf. BERNSTEIN, *supra* note 835 at 9; Interview with anonymous *cachorro* worker #1, *supra* note 593 (“I was not lucky and didn’t make any money. I was 11 years old and had no experience. I could not see the gold particles in the ore I extracted”).

<sup>847</sup> Interview with Roberto Zegarra, *supra* note 614.

<sup>848</sup> See MATOS MAR, *supra* note 392 at 179; Efraín Gonzales de Olarte, *Economía de la comunidad campesina : aproximación regional*, INSTITUTO DE ESTUDIOS PERUANOS, 18–19 (1986).

<sup>849</sup> See Daniel Cotlear, *Desarrollo campesino en los Andes : cambio tecnológico y transformación social en las comunidades de la sierra del Perú*, INSTITUTO DE ESTUDIOS PERUANOS, 23 (1989).

<sup>850</sup> Alberti and Mayer, *supra* note 392 at 13 (translation by author).

regulated the provision of labor, services, and goods among communities.<sup>851</sup> While members of the *ayllu* entered into reciprocal relations under egalitarian terms (symmetric reciprocity), at the same time the Inca received unpaid labor services from his subjects in exchange for safety and religious guidance (asymmetric reciprocity).<sup>852</sup> As Enrique Mayer puts it, reciprocity worked like an umbilical cord that nourished the people connected through it in a constant cycle.<sup>853</sup> Over centuries, these reciprocal exchanges have adapted and evolved towards more feasible exchanges in the contemporary Andes.<sup>854</sup>

In my opinion, direct appropriation strategies are well-embedded in a culture of reciprocity, mutuality, and associative work relations, even patronage or clientelism.<sup>855</sup> According to Roberto Zegarra, early versions of the *cachorro* arrangement were premised on the principle *help to be helped*.<sup>856</sup> “In the Altiplano, if you want to survive, you need to collaborate with your close kin. If you want to build your house, all your family will come to your aid. You will help me back one day. We live in a status of *joyful sadness* (“*tristeza festiva*”).”<sup>857</sup> In Azángaro, in particular, business relationships were “infused with a sense of obligation, trust, and friendship due to patronage relationships.”<sup>858</sup>

Therefore, when a mining prospector hit a rich vein (e.g. Cenzano or the contractors), he would offer his kinship or friends the opportunity to work with him.<sup>859</sup>

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<sup>851</sup> See *id.* at 14.

<sup>852</sup> See *id.* at 15–18, 22–26.

<sup>853</sup> See Enrique Mayer, *Las reglas de juego en la reciprocidad andina*, in RECIPROCIDAD E INTERCAMBIO EN LOS ANDES PERUANOS 37–65, 38–39 (1974).

<sup>854</sup> See *id.* at 38. See also Benjamín Orlove, *Reciprocidad, desigualdad y dominación*, in RECIPROCIDAD E INTERCAMBIO EN LOS ANDES PERUANOS 290–45, 303 (1974).

<sup>855</sup> Cf. FRANKLIN PEASE, *CURACAS, RECIPROCIDAD Y RIQUEZA* (1999).

<sup>856</sup> Interview with Roberto Zegarra, *supra* note 614.

<sup>857</sup> *Id.*

<sup>858</sup> See NILLS JACOBSEN, *supra* note 435 at 127–28; see also ETHEL DEL POZO-VERGNES, *DE LA HACIENDA A LA MUNDIALIZACIÓN: SOCIEDAD, PASTORES Y CAMBIOS EN EL ALTIPLANO PERUANO* (2004).

<sup>859</sup> Interview with Reiner Paredes, *supra* note 309. As discussed earlier, in the case of *chichiqueo* in Upina, Puno, the contractor would cover the costs of food and housing for miners.

Family ties justify the absence of salaries as part of a system of reciprocal exchanges.<sup>860</sup> Here, note that in the Andean culture reciprocity can be *asymmetrical* too, in which case the value of the goods or services exchanged is not equivalent or proportional (e.g. in lottery mining, free labor in exchange for a right to try one's luck in the mines). Asymmetric reciprocity reflects the status of individuals and the respect towards the superior.<sup>861</sup> Indeed, the closer the family relationship, the more generous the exchange.<sup>862</sup>

To some extent, earlier versions of *cachorro* denoted a risk-sharing or mutuality agreement premised on kinship (i.e. *cachorro* is reserved to close relatives and friends only) and solidarity (i.e. when the yields decrease, the mine owner grants additional lottery time to his workers to help them alleviate the loss).<sup>863</sup> The original *cachorro* arrangement “was a fine rule”, claims Reiner Paredes, “as the contractor took most of the risks and costs, including food and shelter in an uncertain business.”<sup>864</sup>

However, things evolved in La Rinconada when the gold-bearing veins were depleted and the supply of workers surmounted the demand for manpower.<sup>865</sup> What had started as an “artisanal risk-sharing agreement,” as Tommy Cenzano likes to call it,<sup>866</sup> eventually regressed into something different. *Cachorreros* were no longer provided with shelter, food, and feedstock, which put them in a very vulnerable position. Worse still, the contractor kept the best areas to himself and offered the overexploited gold seams to his

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<sup>860</sup> In the “*hacienda*” (farm) system, also present in the Peruvian Altiplano, the “*faena*” or work without pay was the way by which the peasants paid the landowner for using his land to cultivate. According to Del Pozo, this was a reminiscence from the colonial *mita*. See *supra* note 858 at 65.

<sup>861</sup> See Mayer, *supra* note 853 at 43.

<sup>862</sup> See *id.* at 42.

<sup>863</sup> Interview with Roberto Zegarra, *supra* note 614; Interview with anonymous contractor #1, *supra* note 804.

<sup>864</sup> Interview with Reiner Paredes, *supra* note 309.

<sup>865</sup> *Id.*

<sup>866</sup> Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592.

workforce.<sup>867</sup> Hence, the miners' right to lottery pay-days were significantly and arbitrarily reduced and altered.

In the absence of adjudication mechanisms, however informal, when the contractor defaults his payment of lottery time, the worker can only resort to self-help mechanisms (e.g. use gossip to morally sanction the breaching party). Whether these norms work effectively to deter breaches is arguable,<sup>868</sup> especially if the supply of miners is greater than the demand for workers. Perhaps it was precisely the oversupply of workers that shifted the risks in the contemporary version of *cachorro*, limiting workers' bargaining power. Simply put, there were too many workers available that working conditions tended to downgrade with time.

Note, however, that *cachorro* is different from other Andean or Inca institutions. While *cachorro* shares the concept of a turn or shift to work from the *mita*, the *mita* consisted of a draft labor system, whereas *cachorro* relies on consent and volition. What is more, *mitayos* received salaries; *cachorros* do not. As regards *yanacónaje* (sharecropping), as I discuss later, miners are not entitled to a percentage of the ore produced in a particular time but are entitled to lottery pay-days in which they work for their own benefit and at their own risk. Finally, while *cachorro* and the *minka* entail communal work, the *minka* work was performed for the benefit of the entire community, not a private party like in *cachorro* (i.e. the contractor).

## 5. Legends and Superstition

*<<You need to pay to Pachamama. If you do not pay  
to her, the gold becomes the devil's money and  
haunts you>><sup>869</sup>*

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<sup>867</sup> Interview with Reiner Paredes, *supra* note 309.

<sup>868</sup> Cf. Bernstein, *supra* note 699; ELLICKSON, *supra* note 699 at 143–144.

<sup>869</sup> Interview with anonymous *cachorro* worker #1, *supra* note 593.

The final component of *cachorro* is related to legends and superstition associated with bounty, good luck, and the supernatural. Legends in La Rinconada are widespread and include the discovery of an enormous gold block the size of a horse head and weighing over 100 pounds.<sup>870</sup> Moreover, the surrounding rivers in Ananea were said to be “strewn with glittering nuggets.”<sup>871</sup> Prevalent stories of immense fortunes made feed miners’ imagination to date. Besides the Cenzano family, tales on how contractors made fortunes include Francisco Cárdenas, Gabriel Miranda, and Percy Torres, whose names resonate in La Rinconada streets.<sup>872</sup> Torres is said to have extracted pounds of gold from his mine section.<sup>873</sup> More colorful, though, is the story around Torres’ daughter, a millionaire now exiled in Spain, who has amassed large properties from the Spanish jetsetter, including singer Rocío Jurado and torero José Ortega Cano.<sup>874</sup> Less glamorous are the stories of current contractors. “I am not rich. I am sick with silicosis. But it was worth it. My five sons went to college. I have enough money to eat and live,” confessed one contractor.<sup>875</sup>

The fate of *cachorreros* is harder to track down. While Jacinto insisted that “I don’t know any rich miner,”<sup>876</sup> another lottery miner acknowledged making USD 4,500 in a single lottery pay-day!<sup>877</sup> Other workers interviewed recognized making—over a lifetime—enough money to buy a house, a car, or a motorcycle.<sup>878</sup>

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<sup>870</sup> See Arana and Nemirofsky, *supra* note 710 at 32.

<sup>871</sup> See *id.* at 32.

<sup>872</sup> Interview with Jacinto Flores, *supra* note 278.

<sup>873</sup> Interview with Reiner Paredes, *supra* note 309.

<sup>874</sup> See El Mundo, *supra* note 10; Robles, *supra* note 696.

<sup>875</sup> Interview with anonymous contractor #1, *supra* note 804.

<sup>876</sup> Interview with Jacinto Flores, *supra* note 278.

<sup>877</sup> Interview with anonymous cachorro worker #4, (2019), <https://repository.graduateinstitute.ch/record/295528>.

<sup>878</sup> Interview with anonymous cachorro worker #2, *supra* note 733; Interview with anonymous cachorro worker #6, *supra* note 811.

To compel their luck and obtain protection or guidance, the massive workforce relies on supernatural rituals and religious offerings.<sup>879</sup> Miners—who usually come from Aymara or Quechua communities with strong practices of magical-religious rituals<sup>880</sup>—claim that paying the mountain deities with alcohol, coca leaves or animal sacrifices spares them from accidents and leads their way to the rich gold seams.<sup>881</sup> Such payments materialize an oral understanding between the miner and the spirits in the mines, allowing the coexistence between miners and nature.<sup>882</sup> Such imageries of luck and superstition in natural resource prospecting and extraction are ancient and widespread in the Andes (and beyond),<sup>883</sup> even in contexts of highly capitalized mining operations.<sup>884</sup> As Lane notes, mines are “not simply holes in the ground from which one extract[s] wealth; they [are] sacred spaces or portals to the underground.”<sup>885</sup>

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<sup>879</sup> See Finnegan, *supra* note 593; Cf. Bryceson and Geenen, *supra* note 826 at 310.

<sup>880</sup> See MATOS MAR, *supra* note 392 at 202.

<sup>881</sup> Interview with Roberto Zegarra, *supra* note 614; Larmer, *supra* note 595; Interview with anonymous cachorro worker #1, *supra* note 593; Pachas, *supra* note 85 at 28.

<sup>882</sup> See Pachas, *supra* note 85 at 191.

<sup>883</sup> In Madagascar, rumors of sapphires ‘the size of footballs’ and of fortunes made in a single day make mining irresistible for newcomers. See Rosaleen Duffy, *Gemstone Mining in Madagascar: Transnational Networks, Criminalisation and Global Integration*, 45 THE JOURNAL OF MODERN AFRICAN STUDIES 185–206 (2007). In Tanzania and Mongolia, ASM miners seek advice from diviners and shamans to positively affect their share. See e.g. Jønsson and Fold, *supra* note 220; Ipei Shimamura, *Ancestral Spirits Love Mining Sites: Shamanic Activities Around a Copper-gold Mining Site in Mongolia*, 16 INNER ASIA 393–408 (2014); Jønsson and Fold, *supra* note 220 (“[In Tanzania] miners’ belief in good and bad luck and the power of medicinal charms to bring luck and ensure against mining accidents is widespread amongst inexperienced, veteran and old timer miners”). Gold prospectors in Papua New Guinea sacrifice pigs and make offerings to the spirits, including food and cash. See Daniele Moretti, *Ecocosmologies in the Making: New Mining Rituals in Two Papua New Guinea Societies*, 46 ETHNOLOGY 305–328 (2007). Bolivian miners in Oruro are allegedly involved in the sacrifice of human babies as an offering to the Earth. See La República, *Wajtacha: el macabro ritual que sacrifica niños para que haya más oro en las minas* (2019), <https://larepublica.pe/mundo/1417022-bolivia-abandonan-bebe-sindrome-down-mina-wajtacha-san-jose>. In Benin, “If the mountain and its protecting shrines are being ‘mistreated’, that is, if gold is being extracted, something must be given in return.” Tilo Grätz, *Moralities, risk and rules in West African artisanal gold mining communities: A case study of Northern Benin*, 34 RESOURCES POLICY 12–17, 15 (2009); see also IZAGUIRRE, *supra* note 459 at 6 (describing El Tío, the spirit that rules the depths of today’s Potosí mine). In Madre de Dios (Peru), there are reports of sacrifices of young women to Mother Earth. See Cortés-McPherson, *supra* note 21 at 1.

<sup>884</sup> Erick Langer, *supra* note 483.

<sup>885</sup> LANE, *supra* note 175 at 28.

Legends, superstition, and even nostalgia of the early days of abundance<sup>886</sup> reinforces miners' confidence and feed their dreams of a better though uncertain future. The phrase *it is my luck* (“*es mi suerte*”) strongly resonates among contractors and workers alike, highlighting the belief in predestined strokes of luck.<sup>887</sup> In fact, the quest for their own good luck is worker's *raison d'être*, keeping them together, vindicating their right to try their luck in the mines.<sup>888</sup> In short, lottery mining constitutes the social fabric in this mining geography.

### C. *Opportunistic Behavior*

One of the puzzling features of *cachorro* is the opportunity of deceit it creates. As we saw in the Potosí case, without decent salaries and exposed to great perils, the *mitayos* tended to underperform during their *corvée* work, which eventually forced the royal administrators to introduce mining quotas to compel productivity and deter worker's *laziness*. Furthermore, *mingas* spared the most promising sections of the mines from their weekday work so they could go back and mine them for their own benefit on weekends. In this line of reasoning, how can contractors in La Rinconada make sure their workforce does not underachieve and, worse still, conceal or spare potentially good-looking veins for their lottery time? I tackle these problems next.

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<sup>886</sup> Nostalgia drives miners to go for more, but it also makes them forget about their current shortcomings. See e.g. Patricia Nelson Limerick, *The Gold Rush and the Shaping of the American West*, 77 CALIFORNIA HISTORY 30–41, 34 (1998) (“Nostalgia is a remarkably powerful force in the human mind, at work in every sphere of our lives. [...] And yet I would put participation in mining rushes right up there with wartime combat, in terms of miserable experiences that come, really rapidly, to glow in memory with a charm they never had in their immediacy”).

<sup>887</sup> See e.g. PIETH, *supra* note 31 at 17.

<sup>888</sup> Cf. Robles, *supra* note 696.

First, to make sure his workers perform satisfactorily and prevent them from being deliberately lethargic, the contractor sets specific tasks during each working day, such as minimum targets of drilling, blasting, or cleaning up. As a contractor admits, “I tell them to deliver 60 feet or four cuts of hard rock. No one wants to lose their turn so they work well.”<sup>889</sup> So whenever a worker drifts, the foreman would punish him by taking away either his lottery pay-day or some hours thereof.<sup>890</sup> To keep track of his workers’ performance, the foreman keeps a log where he jots down any misconduct.<sup>891</sup> There is also an attendance list to control who shows up for work.<sup>892</sup>

Second, logic dictates that a self-interested miner would conceal the finding of rich veins from his foreman if he can get away with it easily and unpunished. Nonetheless, several practical matters hinder this opportunistic behavior. On the one hand, gold-bearing veins are encased in hard rock, so unlike placer gold deposits, ore needs to be extracted, crushed, and amalgamated with mercury. Although an expert eye could distinguish potentially rich veins inside the tunnels, the miner ignores *ex ante* the value of the rocks extracted until they are processed. Simply put, miners extract ore, not gold nuggets.<sup>893</sup> In addition, the discovery of a rich vein can be hardly concealed considering the number of miners working in the tunnels, 24/7, all year round. More importantly, according to *cachorro* rules miners are not entitled to choose what vein to mine on their lottery pay-days. Hence, the effort of finding and concealing a mineralized vein from the foreman would prove futile.

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<sup>889</sup> Interview with anonymous contractor #1, *supra* note 804.

<sup>890</sup> Interview with Roberto Zegarra, *supra* note 614; Interview with Jacinto Flores, *supra* note 278.

<sup>891</sup> Interview with Jacinto Flores, *supra* note 278.

<sup>892</sup> *Id.*

<sup>893</sup> For example, in Bolivia, spite of the tight relationships between the owner and workers of a “*balsa*” (raft) in alluvial gold mining, the workers are never left out of sight. One member of the owning family is always on board precisely because gold flakes and nuggets are easily pocketable. *See* Salman, *supra* note 75 at 1126.



Despite the above, some contractors allow their workers to keep to themselves good-looking rocks on their non-lottery pay-days (*cuñaqueo*).<sup>894</sup> In the words of Jacinto, “Once you finish your workday, you have two hours to extract additional ore using your hand tools. Some contractors allow it, some do not. You get a little extra money this way. You then take your *balde* to the mill. You can also accumulate small rocks at home until you have a good amount worth processing.”<sup>895</sup> *Cuñaqueo* is part of the legend and superstition associated with gold extraction, but is also a way of contractors of showing some solidarity at times of poor gold yields: “We normally allow it because it is the worker’s luck.”<sup>896</sup>

Besides *cuñaqueo*, some workers also pilfer rocks on their way out of the tunnels during the subordination period (this activity is sometimes referred to as “*ratoneo*”).<sup>897</sup> Overall it seems that these small *thefts* are tolerated. From a practical matter, ore pocketing is hard to detect by the foreman considering the dozens of miners working at the time. Perhaps the cost of policing and enforcing a *no-pocketing rule* overcomes the value of the hidden rocks<sup>898</sup> or the positive effect assigned to pocketing outweighs a more stringent enforcement (i.e. ore pocketing helps to keep the workforce motivated).

To conclude, even though the lottery arrangement creates space for opportunistic behavior and deceit, in practice this can only materialize in the systematic pocketing of promising rocks (*ratoneo*), as many as the miner’s pockets can hide, but not in the

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<sup>894</sup> Finnegan argues that this practice is called “*huachaca*.” See Finnegan, *supra* note 593. During my visit to La Rinconada, none of the interviewees acknowledged this word, though they did acknowledge *cuñaqueo*.

<sup>895</sup> Interview with Jacinto Flores, *supra* note 278.

<sup>896</sup> Interview with anonymous contractor #1, *supra* note 804.

<sup>897</sup> Interview with Jacinto Flores, *supra* note 278; Cf. Larmer, *supra* note 595; Martin Enserink, *supra* note 593 at 1102.

<sup>898</sup> Interview with Luis Carlos Rodrigo, *supra* note 218.

concealment of a significant rich vein that the miner would never be able to keep for himself, as occurred in Potosí.

#### ***D. The Contemporary K'ajchas?***

Here, I argue that *cachorro* workers epitomize a contemporary version of Potosí's *k'ajchas*. In addition to the strong historical and cultural connections between Azángaro and Potosí raised earlier, as well as the phonetic resemblance between the words *cachorro* and *k'ajcheo* (also “*caccheo*”), there are multiple similarities between these informal practices.

First, *cachorro* and *k'ajcheo* embody the resistance to waged labor relations and the vindication of a natural right to directly appropriate ore by the workforce. Through these arrangements, workers assured higher incomes than those readily available to them,<sup>899</sup> slowing down the emergence of a formal working force in light of workers' control over production. In Potosí, “indigenous people seem to have sought not to become wageworkers wholly dependent on their salary but instead to establish a greater degree of economic autonomy and independence.”<sup>900</sup> This is also the case in La Rinconada.

Second, both the *k'ajchas* and the lottery miners were neither waged laborers nor mining concessionaires.<sup>901</sup> That is to say, they both existed in between the legal systems, in a hybrid realm, unrecognized by the official law.<sup>902</sup> What is more, the *k'ajchas* as much as *cachorreros* divided the public opinion and state bureaucracies.

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<sup>899</sup> See Barragán, *supra* note 498 at 14.

<sup>900</sup> Cf. Barragán, *supra* note 382 at 219.

<sup>901</sup> Cf. Barragán, *supra* note 498 at 3.

<sup>902</sup> Cf. *id.* at 3.

Third, both *cachorreros* (at least during their lottery time) and *k'ajchas* represent individualism and hard work. As independent workers, they conducted all phases of the mining extraction and processing on their own, absorbing the cost of equipment, feedstock, and processing fees, and selling the ore through clandestine, parallel systems. The establishment of an unofficial economic circuit created economic losses to the mine owners and mill operators (in the Potosí case) and to the national economy in the form of unpaid taxes (in the La Rinconada case), though in both cases artisanal miners exploited unprofitable deposits that would have otherwise remained unexploited. The intrepid character of both *cachorreos* and *k'ajchas* also created safety problems inside the tunnels as they had no incentive to keep the pillars of the mine shaft untouched.

Fourth, over time, and in their own context, the *k'ajcheo* and *cachorro* grew in legitimacy and persistence. As shown from my interviews in Puno, working in the mine for a few months is socially perceived as a quick, valid way of accessing cash.

Fifth, while arguably characteristic of all gold rush villages, both *cachorreos* and *k'ajchas* enjoyed the good life, including alcohol, partying, and women.<sup>903</sup> While Potosí was deemed a place for vice and corruption,<sup>904</sup> in part due to *k'ajchas*'s indiscipline,<sup>905</sup> in La Rinconada “the local custom says that you need to drink alcohol and have sex with girls,”<sup>906</sup> so “everyone is drinking alcohol, day or night, even in the morning.”<sup>907</sup>

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<sup>903</sup> See Lewis Hanke, *supra* note 386 at 10–11.

<sup>904</sup> See e.g. BAKEWELL, *supra* note 385 at 24 (arguing that miners dedicated to drinking, gambling and womanizing); LANE, *supra* note 175 at 2, 108 (arguing that by 1600, Potosí had more brothels, taverns, and gambling dens per capita than any other city in the Spanish colonies); Márquez, *supra* note 509 at 11 (arguing that colonial mining camps were renowned as places where drinking and card-playing were common).

<sup>905</sup> See Martiré, *supra* note 469 at 291; TANDETER, *supra* note 393 at 121.

<sup>906</sup> Interview with Trinidad Carlos, *supra* note 599; Interview with Juan Carlos Ramírez, *supra* note 592; El Mundo, *supra* note 10.

<sup>907</sup> Interview with Jacinto Flores, *supra* note 278; see also PIETH, *supra* note 31 at 16 (claiming that alcohol and coca are the only protection against altitude and weather conditions).

To conclude, in the same way in that *k'ajcheo* has not completely disappeared from present-day Bolivia's mining sector, the *cachorreros* personify the artisanal miner's resistance and disconformity in the Peruvian Altiplano.

### ***E. Cachorro As A Cultural Focal Point***

A final point I want to raise is related to the relative social order that still characterizes La Rinconada and prevents it from complete chaos and land grabbing. Daniel Fitzpatrick has studied the complex interaction between legal and informal rules in the Global South. Developing countries, he claims, are characterized by multilayered and polinormative property rights systems in which different state and non-state precepts coexist in an *uneasy balance*.<sup>908</sup> In such countries, the same parcel of land may be simultaneously claimed by both formal and informal users. The holder of a formal right granted by the government will rely on state authorities to enforce its rights and try to exclude local claimants because the cost of self-help is prohibitive.<sup>909</sup> In turn, local claimants will disregard official law, resist formalization, and rely on their own informal norms.<sup>910</sup> According to Daniel Fitzpatrick, this interaction can lead to conflict and deadlock exclusion when parties try to enforce their rights, turning the resource into *de facto* open access.<sup>911</sup>

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<sup>908</sup> See Daniel Fitzpatrick, *Evolution and Chaos in Property Right Systems: The Third World Tragedy of Contested Access Essay*, 115 YALE L.J. 996–1049 (2005).

<sup>909</sup> See *id.* at 1002.

<sup>910</sup> See *id.* at 1000.; see also Brian Z. Tamanaha, *The Rule of Law and Legal Pluralism in Development*, 3 HAGUE JOURNAL ON THE RULE OF LAW 1–17, 11 (2011) (“Two coexisting bodies of law, state and customary, are brought into clash in a manner that unsettles both, allowing competing claimants to point to different legal sources in support of their conflicting positions [...] State law may assert that official title is superior, but people within the community can effectively place a cloud over ownership by resisting state issued titles”).

<sup>911</sup> See Fitzpatrick, *supra* note 908 at 1020.

Why have the interactions between centralized (formal law) and decentralized rules (informal law) not brought about Fitzpatrick's anticipated outcome of open access in the La Rinconada case? I contend that the setting up of the outsourcing scheme (which relies on the granting of lottery pay-days) has resulted in an uneasy balance that has prevented the gold deposit from falling into open access or uncontrolled conflict. In my view, this equilibrium was the result of a compromise between La Rinconada's founding father, Tomás Cenzano, and the increasing number of encroachers, which alleviated the growing pressure both from existing miners in the village and potential newcomers.

Considering the tumultuous stampede of miners, it is remarkable that Cenzano (later CMA) could work part of his mining concessions peacefully and collect a royalty payment from more than 400 contractors. Here, I assume that CMA today is capable of excluding others, contractors, miners, and newcomers alike, because: (a) it produces gold worth USD 3 million per year, which is a suggestion of some form of social order, as imperfect as it may be; (b) while there are reports of increasing violence, these are mostly connected with bar fights and thefts outside the tunnels; and (c) the existing non-academic literature and journalistic reports unanimously agree that *cachorro* is the prevailing social contract and that miners do not trespass or otherwise interfere with CMA operations.

Following Professor Robert C. Ellickson's famed classification<sup>912</sup>, to exclude others and enforce his formal mining rights, Cenzano had different social control mechanisms at hand. He could have resorted to self-help mechanisms, such as the use of force or agreement, though the cost of either expelling or bargaining with thousands of miners was prohibitive. Instead, he could have sought state intervention, but public authorities were

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<sup>912</sup> Cf. ELLICKSON, *supra* note 699 at 126–127.

either nonexistent or unwilling to help. Therefore, Cenzano's last option was to create a coalition or partnership with the encroachers. I contend that this coalition around *Sleeping Beauty* was the result of the organization of the outsourcing scheme by which: (a) Cenzano ceded part of his formal property to the encroachers (contractors and lottery miners alike) in exchange for a reasonable royalty payment; (b) Cenzano managed to keep the best gold-bearing veins to himself; and (c) Cenzano and his contractors did not tyrannically locked newcomers out from the mining deposits, since all migrants had theoretical access to lottery pay-days.

Hence, to avoid prohibitive transaction costs (e.g. expelling or negotiating with tens of thousands miners), Cenzano relied on a handful of contractors (perhaps even the first encroachers to his mining property) to organize the workforce by distributing lottery pay-days to newcomers. This is how Cenzano (and later CMA) managed to absorb the growing pressure and coexist over the past six decades.<sup>913</sup> On top of that, shared cultural principles among a relatively homogenous group of people facilitated this cooperation and understanding.<sup>914</sup> As described above, the shared cultural principles included the rejection of waged labor, the necessity of highly flexible and mobile working conditions, the family as a unit of production, Andean reciprocity, and superstition, among others. These values thus worked as focal points to facilitate coordination among Cenzano, CMA, contractors, and a massive workforce under the outsourcing agreement. By reproducing a giant lottery,

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<sup>913</sup> Cf. Pachas, *supra* note 85 (arguing that in ASM, the verbal nature of the agreement between the mine owner and mine workers allows parties to prevent conflict and maintain balance).

<sup>914</sup> Cf. Gary D. Libecap, *Contracting for property rights* / 22 (1989) (claiming that differences across the parties in information regarding the resource, production cost, size, wealth and political experience will hinder the formation of coalitions or consensus to adjust or reassign property rights).

with obvious historical, familiar, and cultural resemblances, all players knew “what to do and predict what other players would do.”<sup>915</sup>

### ***F. Cachorro Under Legal Lenses***

Having discussed the origin and main features of the *cachorro* arrangement, it is now important to shed light on what legal categories it may fall into. Although some may consider *cachorro* as property, a joint-venture agreement, sharecropping, or a contingency fee, in this section I argue that it should be treated as an employment agreement, though an exploitative one.

#### **1. Property**

A property entitlement consists of multiple characteristics, known as the bundle of sticks,<sup>916</sup> which include the right to use, to exclude, and to transfer an asset to others. To be effective, property rights should also be enforceable. Is *cachorro* property? Lottery miners are granted a turn or shift to extract ore from the tunnels in a particular time and place. As such, lottery pay-days have a direct connection with property: the mining concession, the tunnels, ore, gold nuggets, etc. However, it would be inadequate to characterize the lottery time as property entitlements. First, lottery pay-days are ill-defined (how much time and when they can be cashed is contingent upon the will of each contractor or foreman, and

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<sup>915</sup> Richard O. Zerbe & C. Leigh Anderson, *Culture and Fairness in the Development of Institutions in the California Gold Fields*, 61 THE JOURNAL OF ECONOMIC HISTORY 114–143, 117 (2001). It is important to note, however, that this coalition lasted for decades (roughly from 1980 to 2000 when CMA bankrupted), it finally broke up in 2007, when the contractors took over CMA and became the legal owners of the mineral deposit. Even though the consolidation of mine ownership and mine operation in one single entity (i.e. CECOMIRL) is problematic, it marks the end of the coalition around *Sleeping Beauty* and the start of a new, but uncertain time.

<sup>916</sup> See e.g. TERRY LEE ANDERSON, PROPERTY RIGHTS : A PRACTICAL GUIDE TO FREEDOM AND PROSPERITY / 1–12 (2003).

subject to arbitrary and capricious rules). Second, lottery pay-days are not transferable rights (the time accrued cannot be transferred, sold, or leased; it can only be cashed by the miner himself). Third, they are not recordable (some foremen keep a log of the worker's misconduct vis-à-vis the cashing of the lottery pay-day, but this log does not have *erga omnes* effect). Finally, lottery pay-days are not enforceable (there are no formal adjudication mechanisms available).

## **2. Joint-venture Agreement**

The early versions of the *cachorro* system evidenced a sort of mutuality or partnership between the mine owner and his worker in which both somewhat shared the risks and costs of the risky endeavor.<sup>917</sup> Its contemporary form, however, cannot be characterized as a joint-venture agreement. While contractors and miners share a common purpose (i.e. mining of *Sleeping Beauty* for gold), they do not share the risks and losses in the same way and do not have an equal voice in controlling the project. Worse still, the miner's reward is contingent upon arbitrary and capricious rules and is not a predictable share or percentage of the ore exploited,<sup>918</sup> discarding any form of associative enterprise.<sup>919</sup>

## **3. Contingency Fee or Sharecropping**

While the ore that miners extract for themselves as part of their lottery time resembles a contingent reward, *cachorro* cannot be framed as a contingency fee because the ore is not a percentage of the contractor's profit (that is to say, a percentage of what the

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<sup>917</sup> See BLACK'S LAW DICTIONARY, (10th ed. c2009).

<sup>918</sup> See e.g. MOSQUERA, *supra* note 219 at 23; Grätz, *supra* note 883.

<sup>919</sup> In contrast to La Rinconada, in mining settlements in Bolivia, Colombia, and Ecuador miners do enter into oral risk-sharing or partnership agreements (i.e. they take turns to mine a tunnel, share a percentage of the ore extracted, or share the profits obtained). Lottery-like systems do not reflect any of such relationships.



miner extracted during the subordination period). Rather, his payment is a separate reward that is cashed in one or two days and is unrelated to whatever the worker extracted on behalf of the contractor for the rest of the month. For this same reason, *cachorro* cannot be framed as a sharecropping agreement either, since the mine owner and the workers, in actuality, do not *share* the output extracted. The difference is evident if we consider that under the *cachorro* system a miner can get a sack of rocks that may contain nothing at all.

#### 4. Employment Agreement

During the subordination period, which accounts for most of the work carried out throughout a month, miners undertake tasks on behalf of and under the direction of contractors, who ultimately own the means of production and the ore extracted. In light of these elements, I contend that the *cachorro* arrangement, both during the subordination and lottery periods, can be best framed as an atypical employment agreement.<sup>920</sup> Nonetheless, this employment agreement is incompatible with Peruvian labor laws<sup>921</sup> and some of its features can be deemed exploitative, if not slavery-like.<sup>922</sup> “*Cachorro* should

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<sup>920</sup> Cf. MINISTRY OF LABOR OF PERU, *supra* note 600 at 13; Interview with Gabriela Soto, *Chief of Cabinet at the Ministry of Labor of Peru* (2019) (“Are *cachorro* workers self-dependent? They comply with a schedule, there is punishment, they have lunch breaks, they follow orders. There are clear elements of a standard employment agreement”).

<sup>921</sup> Interview with Roberto Zegarra, *supra* note 614; Interview with Luis Carlos Rodrigo, *supra* note 218; Interview with Trinidad Carlos, *supra* note 599; *see also* PIETH, *supra* note 31 at 17 (“Employment conditions have not changed much since the days of the Incas and the Spaniards”).

<sup>922</sup> The Peruvian Constitution prohibits slavery, servitude, and trafficking in human beings in all its forms. CONSTITUCIÓN, Art. 2, para. 24b (Peru). It states that no one should be made to work without giving his or her consent and without remuneration, which should be fair and sufficient. CONSTITUCIÓN, art. 2 para. 15 and art. 24 (Peru). Assessing whether *cachorro* amounts to slavery or forced labor is a complex question and should be analyzed on a case by case basis, considering the endless variations of *cachorro* and its idiosyncratic nature. Forced labor has been documented and studied in ASM camps in Madre de Dios. *See e.g.* FABIAN NOVAK & SANDRA NAMIHAS, *LA TRATA DE PERSONAS CON FINES DE EXPLOTACION LABORAL: EL CASO DE LA MINERIA AURIFERA Y LA TALA ILEGAL EN MADRE DE DIOS* (2009); EDUARDO BEDOYA AND ALVARO BEDOYA, *supra* note 549. Even though traditional forms of chattel slavery may have well disappeared, “new and subtle forms have taken their place.” Nina Lassen, *Slavery and Slavery-Like Practices: United Nations Standards and Implementation*, 57 *NORDIC J. INT’L L.* 197–227, 199 (1988).

be proscribed. The fact that it is allegedly an ancestral practice does not mean we should tolerate it in the twenty-first century,” argues César Ipenza.<sup>923</sup> The most problematic feature of *cachorro* is the violation of the right to fair remuneration because payment is uncertain

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Slavery refers to “the status or condition of a person over whom any or all of the powers attaching to the right of ownership are exercised.” LEAGUE OF NATIONS, *Convention to Suppress the Slave Trade and Slavery*, 60 LNTS 253 (1926), <https://www.refworld.org/docid/3ae6b36fb.html>. Slavery requires the deprivation of individual liberty and autonomy, which is maintained through coercion and violence. See JEAN ALLAIN, *SLAVERY IN INTERNATIONAL LAW OF HUMAN EXPLOITATION AND TRAFFICKING* 120 (2013). On the other hand, forced labor is “all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntary.” INTERNATIONAL LABOUR ORGANIZATION (ILO), *Forced Labour Convention (ILO)* (1930), <https://www.refworld.org/docid/3ddb621f2a.html>. In La Rinconada, though, the element of deprivation of liberty, coercion, violence or menace of penalty are generally missing. Overall, workers seem free to enter and leave the mining settlement as they please. Although Arana and Nemirofsky suggest that *cachorreros* surrender their identity card to the contractor while they are engaged in the lottery-like system, there is no evidence to support such claim. All sources in La Rinconada denied this practice. See Arana and Nemirofsky, *supra* note 710. However, as a representative of the Ministry of Labor puts it, “From an academic standpoint, while [*cachorro*] violates labor rights, health and safety norms, it does not constitute forced labor because there is no threat or deceit and there is apparently consent to work. But if the *cachorro* worker receives a loan or tools from his contractor and he is not allowed to leave until he finishes paying the debt, then the case study changes.” Interview with Sergio Quiñonez, *supra* note 367; Interview with Renata Bregaglio, *Human Rights expert* (2019) (“I do not see the exploitative intention. They are adults, celebrating a labor contract, they are not deprived of their identification card and they can leave as they please). In fact, whether *cachorreros* receive loans from contractors is an open question that requires more investigation. Although during my interviews in La Rinconada I did not hear such stories, this would not seem unlikely in light of the risks associated with gold-mining (miners can spend months without producing any income) and the strong bonds (trust and solidarity) that exist between the *cachorro* and the contractor. For example, a 2016 research work suggests that cooperatives induce indebtedness from lottery miners when yields are low. See VERITÉ, *supra* note 595 at 59. If miners do receive loans, we could be facing a case of debt peonage or servitude. Cf. EDUARDO BEDOYA AND ALVARO BEDOYA, *supra* note 549. The UN Special Rapporteur on contemporary slavery argued that “Forced labor in Peru, as in other parts of Latin America, is most likely to be a result of a system of debt bondage called *enganche*. The system lures workers into a situation of debt bondage, typically in the areas of illegal logging, informal mining and the harvesting of chestnut and Brazil nuts... Men and adolescents are often recruited through deception, being offered working conditions and workers’ rights that are subsequently not complied with in practice. Often, the workers receive advance payments in cash or goods during their first three months of work, which are then deducted from the salary, using a mechanism of overestimating the goods provided and underestimating the quantity and quality of the gold handed over, so that the worker is indebted to his ‘patron’.” UNITED NATIONS HUMAN RIGHTS COUNCIL, *supra* note 563. A recent publication argues that young male teenagers are sometimes brought from other cities to La Rinconada to work in the mines through deceit. Ojo Público, *Trata de personas se consolida en Puno alrededor de la minería ilegal y la venta de cerveza* (2019), <https://ojo-publico.com/1382/trata-de-personas-se-consolida-en-puno-alrededor-de-la-mineria-ilegal-y-la-venta-de-cerveza> (last visited Oct 13, 2019). For a description of ‘contemporary’ forms of slavery, see David K. Androff, *The Problem of Contemporary Slavery: An International Human Rights Challenge for Social Work*, 54 INT’L SOC. WORK 209–222 (2011). See also Lassen, *supra* note; SILVIA SCARPA, *TRAFFICKING IN HUMAN BEINGS: MODERN SLAVERY* (2008); Kevin Bales & Peter T. Robbins, “No one shall be held in slavery or servitude”: A critical analysis of international slavery agreements and concepts of slavery, 2 HUMAN RIGHTS REVIEW; DORDRECHT 18–45 (2001).

<sup>923</sup> Telephone interview with César Ipenza, *supra* note 331.

and at times non-existent.<sup>924</sup> The Peruvian Constitution stipulates that no citizen should be made to work without remuneration, which in addition should be *fair* and *sufficient*.<sup>925</sup> Moreover, the Constitutional Court has determined that the right to remuneration is inalienable and comprises the right to be rewarded for the service provided, as well as not to be arbitrarily deprived thereof.<sup>926</sup> Nevertheless, in La Rinconada salaries are uncertain and workers bear the risk of not finding gold-bearing veins, not the employer.<sup>927</sup>

In 2014, Peru's Ministry of Labor concluded that lottery-like systems cannot be deemed as a payment-in-kind wage (i.e. payment in ore instead of current money) because they merely award an *opportunity* to extract ore, not ore itself (or a share of the ore).<sup>928</sup> Moreover, even though labor laws allow employers to pay salaries in-kind,<sup>929</sup> Peruvian labor law forbids the payment of salaries *exclusively* in-kind.<sup>930</sup> In other words, at least part of the salary must be paid in current money. More importantly, the employer must always assure that the worker is paid the minimum wage.<sup>931</sup> As explained before, the *cachorro* system does not comply with these minimum constitutional standards.

In addition to the violation of the right to a fair remuneration, the *cachorro* arrangement violates the following labor standards: (a) environmental, health and safety

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<sup>924</sup> Interview with Jacinto Flores, *supra* note 278; GARCÍA, GUILLERMO MEDINA, AND PRIESTER, *supra* note 660 at 7; Interview with Renata Bregaglio, *supra* note 922; Interview with Sergio Quiñonez, *supra* note 367 (arguing that if miners cannot cash their *cachorro* reward on the date established, then there is deceit from the employer/ contractor).

<sup>925</sup> CONSTITUCIÓN, Art. 2, para. 15 and art. 24 (Peru).

<sup>926</sup> “Article 23. The State must prioritize employment relations, in its diverse forms, especially the protection of mothers, minors and those who are impeded to work [...] Employment relations cannot limit the exercise of constitutional rights nor ignore or diminish the worker's dignity. No one shall be required to work without remuneration or without his free consent.” (Translation by author). CONSTITUCIÓN, Art. 23 (Peru).

<sup>927</sup> Interview with Gabriela Soto, *supra* note 920.

<sup>928</sup> See MINISTRY OF LABOR OF PERU, *supra* note 11; see also PIAZZA, *supra* note 689 at 11; GARCÍA, GUILLERMO MEDINA, AND PRIESTER, *supra* note 660 at 7.

<sup>929</sup> Supreme Decree 003-97-TR (article 6).

<sup>930</sup> See MINISTRY OF LABOR OF PERU, *supra* note 11. Interview with Gabriela Soto, *supra* note 920.

<sup>931</sup> Interview with Jorge Toyama, *supra* note 347.

regulations (workers are responsible for their own equipment and receive no training);<sup>932</sup> (b) the prohibition of unhealthy or dangerous working conditions (workers do not have health or life insurance nor the proper equipment and gear);<sup>933</sup> (c) the right to rest, leisure and vacation (workers involves non-stop work, even though some contractors give Saturdays off);<sup>934</sup> and the right to social security (workers do not contribute to a public or private social security fund).<sup>935</sup>

In this context, *cachorro* configures a case of bogus, fraudulent or disguised self-employment, in which case the labor law mandates the incorporation (assimilation) of all workers into the contractors' payroll in a SER or waged labor relation (alternatively, on CMA's payroll as it is jointly liable for the miner's labor and social rights). Even if the Ministry of Labor is incapable or unwilling to issue such mandate—and it seems to be the latter case<sup>936</sup>—this controversy could be easily adjudicated in court in favor of workers.

But, is it possible for CMA or contractors to absorb the miners as SER employees? I think this would be impractical for three reasons. First, there is simply no need for 50,000 workers in the operation of the mineral deposit.<sup>937</sup> Actually, La Rinconada is a case of too many people exploiting a limited resource in a giant tragedy of the commons. “Mineral deposits cannot be exploited through dozens of independent, small-mining operations. This

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<sup>932</sup> See MINISTRY OF LABOR OF PERU, *supra* note 600 at 58 (reporting that 88% of miners in La Rinconada have not received training or courses).

<sup>933</sup> See e.g. VERITÉ, *supra* note 595 at 612 (“Workers in La Rinconada also face a set of unique risks associated with working and living at extremely high altitudes, including altitude sickness, pulmonary and cerebral edema”).

<sup>934</sup> Additionally, contractors have employed children in the past in violation of Peru's child labor regulations. See MINISTRY OF LABOR OF PERU, *supra* note 600 at 58 (reporting that 83% of miners declared to have started working in the settlement between the age of 15 and 29).

<sup>935</sup> See GARCÍA, GUILLERMO MEDINA, AND PRIESTER, *supra* note 660 at 7.

<sup>936</sup> Interview with Gabriela Soto, *supra* note 920 (arguing that staff of the Ministry of Labor cannot visit La Rinconada due to safety concerns); Telephone interview with Lucía Ruiz, *supra* note 268.

<sup>937</sup> Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592 (arguing that an efficient operation of the gold deposit would only demand 600-800 people). No single corporation based in Peru has 50,000 employees in their payroll.

is not sustainable or rational,” argues Juana Kuramoto.<sup>938</sup> Absorbing 50,000 miners would also entail an unbearable cost for CMA or its contractors, triggering massive layoffs, social turmoil, or instability. As Tommy Cenzano explains, “La Rinconada needs to shift to a more rational exploitation methods in the future, one in which there is no room for so many workers.”<sup>939</sup>

Second, *cachorro* has gained wide acceptance not only in La Rinconada but also in Puno society at large. It has thus become both highly legitimate and persistent,<sup>940</sup> evidencing that informal institutions are often more important than formal institutions in maintaining and regulating resource use.<sup>941</sup> Yrigoyen claims that “*cachorro* is very entrenched in Puno’s culture. Miners work this way because their parents and grandparents were also *cachorreros*. Changing their mindset is impossible.”<sup>942</sup> In a similar view, the former Vice-minister of Mines confirms that “Eliminating *cachorro* is simply impossible.”<sup>943</sup> In consequence, there is no guarantee that after imposing a top-down solution (i.e. assimilating informal miners as the contractors’ employees) *cachorro* will disappear from *Sleeping Beauty*.<sup>944</sup> On the contrary, “If government inspectors came up here and ordered a mine closed, the inspectors would leave by nightfall, and the next day the mine would be open again.”<sup>945</sup>

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<sup>938</sup> Interview with Juana Kuramoto, *supra* note 83.

<sup>939</sup> Interview with Tomás (Tommy) Cenzano Sierralta, *supra* note 592.

<sup>940</sup> Interview with anonymous *cachorro* worker #2, *supra* note 733 (“In Puno, we all have relatives and friends working in La Rinconada”).

<sup>941</sup> See Putzel et al., *supra* note 52 at 463; see also Sara Geenen, *A dangerous bet: The challenges of formalizing artisanal mining in the Democratic Republic of Congo*, 37 *RESOURCES POLICY* 322–330, 323 (2012).

<sup>942</sup> Telephone interview with Javier Yrigoyen, *supra* note 293.

<sup>943</sup> Interview with Miguel Inchaústegui, *supra* note 289.

<sup>944</sup> Cf. Geenen, *supra* note 941 at 326 (arguing that externally imposed formalization processes do not work); Cf. Putzel et al., *supra* note 52 at 463 (arguing that newly formalized regimes often fail due to lack of enforcement, especially in remote locations); Salo et al., *supra* note 52 at 1065; Duff and Downs, *supra* note 78 at 8 (claiming that Peru’s formalization program was imposed without coordination or co-creation).

<sup>945</sup> Finnegan, *supra* note 593 (citing a La Rinconada inhabitant).

Third, and finally, many *cachorro* workers are seasonal workers that travel to the mining center for a short period, changing from contractor according to their own interests. A full-time, open-ended job-type solution would hamper this mobility. Thus, they require an escape valve that allows them some elasticity.

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*Cachorro* is an old employment agreement characterized by (a) flexibility, mobility and orality; (b) individualism, masculinity, and resistance to waged labor relations; (c) a get-quick-rich mindset; (d) Andean reciprocity and risk-sharing; and (e) legends and superstition. Considering its cultural qualities result familiar, it is now widely accepted, especially in the region of Puno. In my view, in the mid-twentieth century *cachorro* came about as the natural way of organizing employment and distributing risk in a context of a decaying mining sector, characterized by shortages of labor force, high risk, and relatively low prices of gold.

Nonetheless, what had started as an artisanal risk-sharing agreement, eventually regressed into an exploitative system, while the number of workers increased exponentially, reducing their bargaining power vis-à-vis the contractors. Under today's human rights lens, certain aspects of *cachorro* result non-negotiable, such as the right to minimum wage and rest. However, its legitimacy and persistence represent a challenge to any government-based intervention that aims to introduce decent work standards in the Peruvian Altiplano.

The next chapters discuss alternative solutions to regularize lottery-like systems in Peru's contemporary ASM.

## CHAPTER 6: HERNANDO DE SOTO, THE CALIFORNIA GOLD RUSH, AND THE PROPERTY RIGHTS SILVER BULLET

<<*I studied American history and found parallels to the Peruvian situation in the United States of the eighteenth and nineteenth centuries: Issues such as manifest destiny, the Louisiana Purchase, the gold rush, and rapid westward expansion all informed my understanding of what was occurring in Peru*>>.

Hernando de Soto<sup>946</sup>

Persistent informality in the ASM sector has puzzled scholars. The dominant explanation is that the state bureaucracy has locked out informal miners due to formalization barriers of entry, such as red tape and high fees.<sup>947</sup> De Soto best incarnates this legalist approach to informality. His work has been both influential and controversial.<sup>948</sup> Praised by Bill Clinton as the best economist ever and by Mike Davis as the Messiah of people's capitalism,<sup>949</sup> he has become a polarizing figure in development circles.<sup>950</sup>

In response, de Soto proposes a comprehensive titling program that integrates miners' informal rules already on the ground into one unified property rights system.<sup>951</sup> He puts forth the California Gold Rush ("CGR") as an archetypical example of a legal system

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<sup>946</sup> See HERNANDO DE SOTO, *How Peru's Poor Defeated Terrorism* 5 (2016), [https://www.ild.org.pe/pdf/2016-10-27\\_WEB-ILD-How-Peru's-Poor-Defeated-Terrorism.pdf](https://www.ild.org.pe/pdf/2016-10-27_WEB-ILD-How-Peru's-Poor-Defeated-Terrorism.pdf).

<sup>947</sup> See VERBRUGGE, BESMANOS, AND BUXTON, *supra* note 133; Duff and Downs, *supra* note 78 at 555.

<sup>948</sup> See e.g. Fontana, *supra* note 161 at 41 ("In the last 20 years, several national governments – Egypt, Peru, Tanzania, and Philippines among them – ran titling programs inspired by de Soto's ideas and the work of ILD. Additionally, some big organizations, like the United States Agency for International Development [USAID], Inter-American Development Bank [IDB] and World Bank revived their interest in land titling programs, clearly declaring the influence of de Soto on some of their projects"); Carol M. Rose, *Invasions, innovation, environment*, in HERNANDO DE SOTO AND PROPERTY IN A MARKET ECONOMY 21–40 (Barros, Benjamin D. ed. 2010); Ray Bromley, *A New Path to Development? The Significance and Impact of Hernando De Soto's Ideas on Underdevelopment, Production, and Reproduction*, 66 *ECONOMIC GEOGRAPHY* 328–348, 346 (1990).

<sup>949</sup> See Fontana, *supra* note 161 at 40.

<sup>950</sup> See Banik, *supra* note 161 at 422.

<sup>951</sup> See Institute for Liberty and Democracy (ILD), *supra* note 147.

built up from ground-level conditions. The CGR is one of the most famous chapters in United States history.<sup>952</sup> Not only did the gold rush reshape California's territory and its inhabitants forever, but it also changed the destiny of the United States in its conquest of the West frontier,<sup>953</sup> bringing about profound social, economic, and ecological transformation.<sup>954</sup>

Although I agree with de Soto that conventional property rights and legitimacy are important, in this chapter I show that they are not enough to tackle persistent informality. Indeed, close examination of the property rights structure in the informal ASM sector reveals that labor relations rather than property relations is the core problem.

This chapter begins describing de Soto's proposal to tackle ASM informality in Peru. Then, it unpacks de Soto's bottom-up property rights solution, including his portrayal of the CGR as a paradigmatic case of a frontier democracy and a how-to lesson for developing countries. I conclude stating that scholars must look elsewhere for solutions to the ASM sector.

#### A. *De Soto and the ASM Sector*

De Soto has devoted his career to showing how well-functioning property rights systems increase economic performance, promote investment, and reduce the transaction costs of credit.<sup>955</sup> In *MYSTERY*, he claims that the poor in developing countries hold their assets in defective ways (i.e. customary, unrecorded, and unrecognized) because of legal

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<sup>952</sup> See e.g. Karen Clay & Gavin Wright, *Order Without Law? Property Rights During the California Gold Rush*, 42 *EXPLORATIONS IN ECON. HIST.* 155-83 (2005).

<sup>953</sup> MALCOLM J. ROHRBOUGH, *DAYS OF GOLD : THE CALIFORNIA GOLD RUSH AND THE AMERICAN NATION* (c1997).

<sup>954</sup> See ANDREW C. ISENBERG, *THE CALIFORNIA GOLD RUSH : A BRIEF HISTORY WITH DOCUMENTS* 7-8 (2018).

<sup>955</sup> See Benito Arruñada & Nuno Garoupa, *The Choice of Titling System in Land*, 48 *J. LAW & ECON.* 709, 709-727 (2005).



closure.<sup>956</sup> To solve this problem, he recommends making property rights widely available to all by integrating the existing informal social or customary norms on the ground—what he calls the people’s law—into one unified legal system.<sup>957</sup>

The systematization of the laws that underpin modern property rights systems was possible only because authorities allowed preexisting extralegal relationships among groups on the ground sometimes to supersede official laws. [...] By rooting formal property law in social contracts to which people were already committed, the governments of the West achieved the widespread popular acceptance required to overcome any resistance. The result was one legal system for property.<sup>958</sup>

Over the past three decades, de Soto and his influential Institute of Liberty and Democracy (ILD)<sup>959</sup> have lobbied governments and politicians to extrapolate this property-rights approach to other social calamities, including the disempowerment of indigenous peoples in the Amazon,<sup>960</sup> the augmentation of coca leaves plantations in South America,<sup>961</sup> the increasing social unrest around large-scale mining projects,<sup>962</sup> the sparking of the Arab Spring,<sup>963</sup> the war on terror,<sup>964</sup> and even the COVID-19 pandemic in 2020!<sup>965</sup> Furthermore, in 2016 the University of Colorado Boulder Leeds Business School launched the *Hernando*

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<sup>956</sup> See DE SOTO, *supra* note 118.

<sup>957</sup> Hernando De Soto, *Law and Prosperity Outside the West: A Few New Ideas about Fighting Poverty*, 29 *F. DEV. STUD.* 355, 349–361.

<sup>958</sup> DE SOTO, *supra* note 118 at 173.

<sup>959</sup> See Fernandes, *supra* note 26, at 216 (claiming that in 2007 the ILD was considered the second most influential thinktank worldwide).

<sup>960</sup> See e.g., Hernando de Soto, *The Mystery of Capital among the Indigenous Peoples of the Amazon* (2009), <https://vimeo.com/6582274>.

<sup>961</sup> See Steven E. Hendrix, *Myths of Property Rights*, 12 *ARIZ. J. INT’L & COMP. L.* 199, 183–224 (1995).

<sup>962</sup> See Hernando de Soto, *De Soto Propone Referéndum Para Resolver Conflicto de Conga* (2012), <https://rpp.pe/economia/economia/de-soto-propone-referendum-para-resolver-conflicto-de-conga-noticia-521010>.

<sup>963</sup> See Hernando de Soto, *Opening Remarks: How Property Rights Even Stop Wars The Role of Property in Secure Societies: Panel 1: Land Tiling, Inclusion, and the Role of Property Rights in Secure Societies*, 6 *BRIGHAM-KANNER PROP. RTS. CONF. J.* 7, 1–8 (2017).

<sup>964</sup> See generally DE SOTO, *supra* note 156; HERNANDO DE SOTO, *Hernando de Soto: Gracias a la titulación se atrapó a Osama Bin Laden* (2011), <https://www.youtube.com/watch?v=cnsP-DP7DvE>; Hendrix, *supra* note 961 at 201, 206; DE SOTO, *supra* note 156; DE SOTO, *supra* note; Hendrix, *supra* note 961 at 201, 206.

<sup>965</sup> See Hernando De Soto, *Hernando de Soto: El potencial positivo del coronavirus*, *DIARIO GESTIÓN*, March 24, 2020, <https://gestion.pe/opinion/hernando-de-soto-el-potencial-positivo-del-coronavirus-noticia/>.

*de Soto Capital Markets Program*, an academic initiative to showcase de Soto’s ideas and train students in how to use property rights to “enact positive change through capitalist ideas.”<sup>966</sup>

More recently, de Soto has vociferously attacked the GP’s formalization program on the following grounds: first, according to his own calculations, compliance with the program takes informal miners up to 1,260 days and costs more than USD 87,000.<sup>967</sup> “The cost of accessing legality is too high... The program is leaving without jobs a good portion of Peruvians,” he claims.<sup>968</sup> Second, instead of promoting the creation of property rights, the program “refers to compliance with legal regulations regarding job quality.”<sup>969</sup> Third, the program does not enable informal miners to explore new mineral deposits, increase their production capacity, or place their products in international markets. Rather, “it intends that they shall remain small-scale or be absorbed as cheap labor force in LSM operations.”<sup>970</sup>

To showcase his ideas and promote a new, all-encompassing titling program, the ILD sided with different ASM organizations under a so-called First Civic Commission to

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<sup>966</sup> See University of Colorado Boulder, *Gifts establish new CU-Boulder capital markets program*, <https://www.colorado.edu/today/2016/05/17/gifts-establish-new-cu-boulder-capital-markets-program> (last visited Sep. 12, 2019).

<sup>967</sup> See Institute for Liberty and Democracy (ILD) and Federación Nacional de Mineros Artesanales del Perú (FENAMARPE), *supra* note 146.

<sup>968</sup> See Debate del Ministro del Ambiente, Manuel Pulgar-Vidal, con Hernando de Soto, Presidente del ILD, , ENFOQUE DE LOS SÁBADOS (2014), <https://www.youtube.com/watch?v=A-x8qX01i9o>.

<sup>969</sup> Institute for Liberty and Democracy (ILD), *supra* note 147; see also Institute for Liberty and Democracy (ILD) and Federación Nacional de Mineros Artesanales del Perú (FENAMARPE), *supra* note 146; Correo, *Hernando De Soto: Formalización de mineros es un fracaso* (2014), <https://diariocorreo.pe/economia/hernando-de-soto-formalizacion-de-mineros-es-un-fracaso-546631/>.

<sup>970</sup> Debate del Ministro del Ambiente, Manuel Pulgar-Vidal, con Hernando de Soto, Presidente del ILD, *supra* note 968; Diario Gestión, *Hernando de Soto: “Solo siete de 70,000 mineros reconocidos han logrado formalizarse”* 000 (2015), <https://gestion.pe/economia/hernando-soto-siete-70-000-mineros-reconocidos-han-logrado-formalizarse-75889>.

Formalize Informal Mining (“the Commission”).<sup>971</sup> Indeed, after “traveling throughout Peru to meet with hundreds of thousands of miners” (*see* Figure 14),<sup>972</sup> de Soto and the Commission published a manifesto, in which they demanded the following: (a) an immediate suspension of the 2012 formalization program, including raids and evictions to illegal miners,<sup>973</sup> and (b) the crafting of new legal tools—drawn from miners’ own traditions and customs—to empower them<sup>974</sup> (*see* Table 3).

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<sup>971</sup> See Institute for Liberty and Democracy (ILD), *The Property Rights Project: Peruvian Miners*, <https://www.ild.org.pe/our-work/ild-projects/the-blockchain-bitcoin-property-rights-project>.

<sup>972</sup> See *id.* (“At the request of thousands of Peruvian miners, in July 2014, we began traveling throughout Peru to meet with the hundreds of thousands of miners—who were fighting against what today is recognized as absurd government regulations by both informal and formal extractive industries”). According to one source in the ILD, “we reached an agreement with ASM organizations based on broad principles and prepared a broad diagnose; it was not a specific regulatory proposal.” Interview with Gustavo Marini, *supra* note 221.

<sup>973</sup> See Institute for Liberty and Democracy (ILD) and Federación Nacional de Mineros Artesanales del Perú (FENAMARPE), *supra* note 146 (“[Miners] need to have the persecutions stopped [there have already been 12 dead, 59 maimed and wounded, numerous facilities bombed, 56 leaders facing persecution] in order to have the time and peace to create more opportunities for all Peruvians”).

<sup>974</sup> See Institute for Liberty and Democracy (ILD), *supra* note 147. Further, de Soto claims that the formalization process should be carried out in direct consultation with citizens (archived version of ILD, on file with author). See also Debate del Ministro del Ambiente, Manuel Pulgar-Vidal, con Hernando de Soto, Presidente del ILD, *supra* note 968; Diario Gestión, *supra* note 970.

**Table 3.- The Commission’s Manifesto**<sup>975</sup>

✓	To put in place a new formalization process based on informal miners’ traditions and customs
✓	To suspend the application of the government’s formalization process
✓	To stop persecuting and harassing informal miners
✓	To make available widely recognized corporate structures
✓	To grant access to property rights to land. Property rights will grant informal miners access collateral-backed credit, contract securely, and reduce risks through limited-liability
✓	To allow them to participate in supply chains and market expansion
✓	To allow them to prospect other mineral deposits and compete in the market
✓	To reduce income tax withholding for small-scale miners from 4 to 1.5 percent <sup>976</sup>

According to the Commission, fulfillment of these steps will allow informal miners “to develop new projects, explore mineral deposits, and optimize and increase their production capacity, thereby creating more jobs.”<sup>977</sup> Although the manifesto was finally abandoned and never put in place,<sup>978</sup> de Soto still has a very active involvement in the ASM sector, participating as a speaker in different conferences<sup>979</sup> and giving interviews on the subject.<sup>980</sup>

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<sup>975</sup> In multiple interviews, de Soto promised to release an “800-page” exhaustive report that unpacked his diagnose and proposal. This has not been published to date. *See also* Debate del Ministro del Ambiente, Manuel Pulgar-Vidal, con Hernando de Soto, Presidente del ILD, *supra* note 968; Diario Gestión, *supra* note 970.

<sup>976</sup> In 2013, the Peruvian Tax Agency increased the amount income tax that gold buyers were obliged to withhold in gold trading transactions (from 1.5% to 4%) and eliminated the exemption for operations below USD 200. *See* Gestion, *La Sunat Aumenta de 1.5% a 4% Retención de Impuesto a la Renta a Venta de Oro* (2013), <https://gestion.pe/economia/mercados/sunat-aumenta-1-5-4-retencion-impuesto-renta-venta-oro-30332-noticia/>. These changes directly affected *acopiadores* in La Rinconada. But instead of promoting formality, as envisioned, they incentivized *acopiadores* to work off the books. Interview with anonymous *acopiador*, (June 26, 2019).

<sup>977</sup> Institute for Liberty and Democracy (ILD) and Federación Nacional de Mineros Artesanales del Perú (FENAMARPE), *supra* note 146.

<sup>978</sup> In 2016, de Soto joined Keiko Fujimori’s presidential campaign as technical advisor to lead the formalization strategy. However, in a 2019 interview de Soto admitted that his alliance with informal miners was abandoned upon Fujimori’s defeat in the presidential elections. Interview with Hernando De Soto, *El Nuevo Sendero*, REVISTA CARETAS, 2019, [https://caretas.pe/sociedad/86486-el\\_nuevo\\_sendero](https://caretas.pe/sociedad/86486-el_nuevo_sendero).

<sup>979</sup> For example, on June 6, 2019 de Soto spoke at the *Primera Convención Internacional y VIII Congreso de la Pequeña Minería y Minería Artesanal*, organized by a federation of informal miners in Arequipa (Peru).

<sup>980</sup> *See e.g.* Interview with Hernando De Soto, *supra* note 978 (suggesting undertaking blockchain tools to combat illegal gold trade).



**Figure 14. Hernando de Soto and a group of ASM miners in Nazca, Peru**

(Source: ILD 2014)<sup>981</sup>

Indeed, the COVID-19 pandemic in early 2020 brought back to life his ideas on ASM regularization. In a joint press release, different cooperatives of ASM miners across Peru publicly urged President Vizcarra to summon Hernando de Soto and implement his proposal for the formalization of ASM:

[De Soto's proposal] is compatible with the desires and wishes of all small-scale miners in Peru... [His] proposal is innovative, objective, and scientific... and it will help boost the Peruvian economy... duplicate the number of workers in the mining economy... and triple mining exports.<sup>982</sup>

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<sup>981</sup> Institute for Liberty and Democracy (ILD), *ILD in Nazca* (2014), <https://www.ild.org.pe/gallery/nazca>.

<sup>982</sup> Federaciones de Pequeños Productores Mineros y Mineros Artesanales del Perú, *supra* note 162 (translation by author).

To support his claim, de Soto resorts to the United States nineteenth century history. He uses the CGR as an archetypical example of a legal system built up from ground-level conditions. For de Soto the conquest of the Western frontier by the United States is a how-to lesson for developing nations on creating more legitimate and representative formalization frameworks rather than top-down approaches. Before exposing the conceptual assumptions and practical implications behind de Soto and the Commission's proposal,<sup>983</sup> I provide next the necessary background on the CGR.

### **B. The California Gold Rush**

*<<Never did cholera, yellow fever, or any other fell disease rage with half the fury with which gold fever is now sweeping over our land... [It has consumed] communities in one fell swoop, sparing neither age, sex nor condition. It is the rage>>.*  
Corpus Christi [Texas] Star, January 13, 1849<sup>984</sup>

Idealized as places of rich and endless endowments, frontiers have constantly been a cause of optimism, adventure, and mobility.<sup>985</sup> The accidental discovery of gold in Georgia (1829), California (1848), Colorado (1858) and Alaska (1896) sparked massive stampedes of gamblers and dreamers wishing to strike it rich overnight, traveling thousands of miles in brutal and expensive voyages.<sup>986</sup> A gold fever is

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<sup>983</sup> De Soto declined an invitation for an interview for this dissertation; yet I was able to interview one representative from the ILD, Mr. Gustavo Marini.

<sup>984</sup> Cited in Noy, *supra* note 841.

<sup>985</sup> See LEE J. ALSTON, TITLES, CONFLICT, AND LAND USE : THE DEVELOPMENT OF PROPERTY RIGHTS AND LAND REFORM ON THE BRAZILIAN AMAZON FRONTIER 1 (1999).

<sup>986</sup> See CHARLOTTE GRAY, GOLD DIGGERS : STRIKING IT RICH IN THE KLONDIKE xii (c2010); Karen Clay & Randall Jones, *Migrating to Riches? Evidence from the California Gold Rush*, 68 THE JOURNAL OF ECONOMIC HISTORY, 1000 (2008) (arguing that migrating to California from within the United States required cash outlays of USD 100–300, which represented more than six-months wages for an unskilled laborer).

a contagion affecting growing numbers of people who irrationally ignore the hardships, dangers, and possibility of failure, keen to try their luck at catapulting into a more remunerative livelihood and better life. In effect, gold rushes are high-risk journeys into the unknown, with a strong possibility of disconnection between ends and means; the mirage that the individual sees on the future horizon as opposed to miners' meagre means to realize their goals given their lack of mining skill and the unpredictability of conditions at the mining site.<sup>987</sup>

These gold rushes mythicized the figure of the individual prospector who, "... given the right mix of determination and luck, prevailed against the challenges of a harsh, untamed wilderness."<sup>988</sup> Frederick Jackson Turner's famous frontier thesis,<sup>989</sup> albeit contentious,<sup>990</sup> argues that the United States western conquest of nature was the key to its national development and the consolidation of individualism, self-government,<sup>991</sup> and the development of democratic ideals.<sup>992</sup>

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<sup>987</sup> Deborah Fahy Bryceson, *Artisanal gold-rush mining and frontier democracy: Juxtaposing experiences in America, Australia, Africa and Asia*, in *BETWEEN THE PLOUGH AND THE PICK* 31–62, 32 (Kuntala Lahiri-Dutt ed., 2018).

<sup>988</sup> DEB VANASSE, *WEALTH WOMAN: KATE CARMACK AND THE KLONDIKE RACE FOR GOLD* x (2016); see also Patricia Nelson Limerick, *The Gold Rush and the Shaping of the American West*, 77 *CAL. HIST.* 30, 41 (1998).

<sup>989</sup> FREDERICK JACKSON TURNER, *FRONTIER AND SECTION; SELECTED ESSAYS* 38–39 (1961) ("American social development has been continually beginning over again on the frontier. This perennial rebirth, this fluidity of American life, this expansion westward with its new opportunities, its continuous touch with the simplicity of primitive society, furnish the forces dominating American character... The existence of an area of free land, its continuous recession, and the advance of American settlement westward, explain American development").

<sup>990</sup> See e.g. Donald Worster et al., "The Legacy of Conquest", by Patricia Nelson Limerick: *A Panel of Appraisal*, 20 *THE WESTERN HISTORICAL QUARTERLY* 303–322, 307 (1989); David Weber, *Turner, the Boltonians, and the Borderlands*, 91 *THE AMERICAN HISTORICAL REVIEW* 66–81 (1986); Martin Ridge, *Frederick Jackson Turner, Ray Allen Billington, and American Frontier History*, 19 *WESTERN HISTORICAL QUARTERLY* 4–20 (1988).

<sup>991</sup> See Harold P. Simonson, *Frederick Jackson Turner: Frontier History as Art*, 24 *THE ANTIOCH REVIEW* 201–211, 207–08 (1964); Elizabeth Furniss, *Imagining the frontier: comparative perspectives from Canada and Australia*, in *DISLOCATING THE FRONTIER* 23–46, 23–25 (Deborah Bird Rose & Richard Davis eds., 2005); Verbrugge and Geenen, *supra* note 24 at 414.

<sup>992</sup> Cf. Simonson, *supra* note 991 at 207; Martin Ridge, *supra* note 990.

## 1. The Early Days

California gold was first discovered in John Sutter's mill in January 1848 towards the end of the Mexican American War. The resulting peace treaty turned California territory—then occupied by prominent Mexican families (the *Californios*) and Native Americans<sup>993</sup>—into United States federal land. However, the United States government did not immediately regulate access to federal lands. Consequently, the gold rush sparked at times of political vacuum,<sup>994</sup> when California territory was devoid of any basic public authority or property rights,<sup>995</sup> leaving the newcomers free to devise their own institutions.<sup>996</sup>

By March of 1848, prospectors from all overcrowded Sutter's land in the hope of finding gold.<sup>997</sup> Soldiers, sailors, shopkeepers, Californios, and Native Americans were the first to rush to the site of discovery. But the gold rush would soon bring together “the most diverse societies in the nation and probably in the world.”<sup>998</sup> By the end of 1849, more than 100,000 men established in California.<sup>999</sup>

The majority of the early Argonauts were young males in search of fortune, adrenaline, and adventure but with no previous experience in mining.<sup>1000</sup> Some brought

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<sup>993</sup> See Sucheng Chan, *A People of Exceptional Character: Ethnic Diversity, Nativism, and Racism in the California Gold Rush*, 79 CAL. HIST. 44, 50 (2000).

<sup>994</sup> See ROHRBOUGH, *supra* note 953 at 10.

<sup>995</sup> See Richard O. Zerbe & C. Leigh Anderson, *Culture and Fairness in the Development of Institutions in the California Gold Fields*, 61 J. ECON. HIST. 114, 115 (2001); RODMAN W. PAUL, CALIFORNIA GOLD: THE BEGINNING OF MINING IN THE FAR WEST, 210–211 (1947).

<sup>996</sup> See Terry L. Anderson & P. J. Hill, *The Evolution of Property Rights: A Study of the American West*, 18 J.L. & ECON. 163, 106 (1975).

<sup>997</sup> See LEONARD L. RICHARDS, THE CALIFORNIA GOLD RUSH AND THE COMING OF THE CIVIL WAR 50 (1st ed. 2007).

<sup>998</sup> See ROHRBOUGH, *supra* note 953 at 221.

<sup>999</sup> See ANDREW C. ISENBERG, THE CALIFORNIA GOLD RUSH : A BRIEF HISTORY WITH DOCUMENTS 1 (2018).

<sup>1000</sup> See generally GARY NOY, GOLD RUSH STORIES : 49 TALES OF SEEKERS, SCOUNDRELS, LOSS, AND LUCK 50 (2017); ROHRBOUGH, *supra* note 1000, at 11, 123; ANNIE KEELER WILLIAMS, EARLY CALIFORNIA GOLD



with them Native American and Mexican laborers at peon wages.<sup>1001</sup> Perceived by Anglo-Americans as obstacles to their prosperity<sup>1002</sup> and to the exploitation of wilderness,<sup>1003</sup> violence and animosity against Native Americans escalated and they were eventually ordered off the mines.<sup>1004</sup> African Americans, though fewer in number, also traveled westward to work in the mines both as slaves and free men.<sup>1005</sup>

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RUSH DAYS 10 AND (1948) (“Often I tried panning without any success but some of the men, who had been there before I came, had grown quite expert at it. They kindly showed me how to separate the gold from the gravel [...]”). Bryceson, *supra* note 987 at 31.

<sup>1001</sup> ROHRBOUGH, *supra* note 953; EDWARD DOLNICK, *THE RUSH : AMERICA’S FEVERED QUEST FOR FORTUNE, 1848-1853* / (2014).

<sup>1002</sup> See CLIFFORD E. TRAFZER & JOEL R. HYER, *EXTERMINATE THEM: WRITTEN ACCOUNTS OF THE MURDER, RAPE, AND ENSLAVEMENT OF NATIVE AMERICANS DURING THE CALIFORNIA GOLD RUSH* 17 (1999).

<sup>1003</sup> See Allan Lonngberg, *The Digger Indian Stereotype in California*, 3 *J. CAL. & GREAT BASIN ANTHROPOLOGY*, 215, 219 (1981).

<sup>1004</sup> See John Walton Caughey, *Gold is the cornerstone*; 97 (1948).

<sup>1005</sup> See e.g. RUDOLPH M. LAPP, *BLACKS IN GOLD RUSH CALIFORNIA* 3–4 (1977); Rudolph M. Lapp, *Negro Rights Activities in Gold Rush California*, 45 *CAL. HIST. SOC’Y Q.* 3, 81–82 (1966).



**Figure 15. California Gold Rush Drawing**

(Source: Darley)<sup>1006</sup>

During the early years of the rush, gold was found in placer deposits along rivers and was easily accessible (*see* Figure 15).<sup>1007</sup> Gold-seeking did not require capital expenditures because it relied on miners' time and labor.<sup>1008</sup> Miners used old and inefficient processing methods, such as panning<sup>1009</sup> and cradling,<sup>1010</sup> but in 1850 the introduction of

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<sup>1006</sup> See FELIX OCTAVIUS CARR DARLEY, GOLD RUSH DRAWING (THE BEINECKE RARE BOOK & MANUSCRIPT LIBRARY).

<sup>1007</sup> See Caughey, *supra* note 1004 at 27. ("Placer deposits" refers to the accumulation of gold particles (in the form of nuggets or flakes) eroded from the host rock and deposited in stream-bed gravel.); Malcolm J. Rohrbough, *The California Gold Rush as a National Experience*, 77 CALIFORNIA HISTORY 16–29, 16, 19 (1998).

<sup>1008</sup> See KENNETH N. OWENS, RICHES FOR ALL : THE CALIFORNIA GOLD RUSH AND THE WORLD 16 (2002).

<sup>1009</sup> See JOHN R. UMBECK, A THEORY OF PROPERTY RIGHTS : WITH APPLICATION TO THE CALIFORNIA GOLD RUSH / 74 (c1981.).(a tin pan was filled in with dirt and submerged in water. Circular movements would allow the lighter dirt to wash away leaving the gold flaked in the bottom.); *see* ANNIE KEELER WILLIAMS, EARLY CALIFORNIA GOLD RUSH DAYS. 10 (1948).(this process was inefficient considering part of the gold was washed down the river by careless or inexperienced men at panning).

<sup>1010</sup> UMBECK, *supra* note 1009 at 74 (a wooden box that allowed the processing of more dirt).

the sluice<sup>1011</sup> allowed working previously unprofitable deposits or reworking areas already processed.<sup>1012</sup> These were times of unmatched success and fortune.<sup>1013</sup>

Yet, prospecting soon involved deeper digging and harder work. As early as 1851 the easily accessible placer deposits gave out and generated only a fraction of what they used to.<sup>1014</sup> Consequently, mining shifted from a labor-intensive activity to a more industrial and capital-intensive one.<sup>1015</sup> Industrial hydraulic extraction methods, which involved the use of powerful jets of water (rockets) to wash hillsides away and into sluices, were introduced by the mid-1850s,<sup>1016</sup> sidelining artisanal mining.<sup>1017</sup>

All told, the CGR lasted roughly six years (1848-1854),<sup>1018</sup> transforming California from “a region dominated by preindustrial societies to a fully integrated segment of the modern world capitalist system.”<sup>1019</sup> While some miners did prosper, most did not.<sup>1020</sup> Rather, fortunes were amassed through entrepreneurship and commerce.<sup>1021</sup>

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<sup>1011</sup> *Id.* at 74. (a stationary trough large enough that could be used for days without cleaning up. The dirty caught was mixed with mercury, collecting very small gold flakes).

<sup>1012</sup> *See id.* at 76.

<sup>1013</sup> *See* Caughey, *supra* note 1004 at 28.(in the first half decade of the gold rush the Argonauts harvested a total of USD 300 million); *see also* DOLNICK, *supra* note 1001 at 28.(claiming that during the 1850s miners dug gold worth USD 12 billion, in today’s money).

<sup>1014</sup> *See generally* PAUL, *supra* note 995 at 117; ROHRBOUGH, *supra* note 953 at 187; McDowell, *supra* note 148 at 10; Carl J. Mayer, *The 1872 Mining Law: Historical Origins of the Discovery Rule*, 53 THE UNIVERSITY OF CHICAGO LAW REVIEW 624–653, 624, 639 (1986).

<sup>1015</sup> *See* Chan, *supra* note 993 at 50.

<sup>1016</sup> *See* Raymond F. Dasmann, *Environmental Changes before and after the Gold Rush*, 77 CALIFORNIA HISTORY 105–122, 117 (1998).

<sup>1017</sup> Bryceson, *supra* note 987.

<sup>1018</sup> *See id.* at 36.

<sup>1019</sup> Donald Hardesty, *Power and the industrial mining community in the American West*, in SOCIAL APPROACHES TO AN INDUSTRIAL PAST: THE ARCHAEOLOGY AND ANTHROPOLOGY OF MINING , 82 (1998), <http://ebookcentral.proquest.com/lib/yale-ebooks/detail.action?docID=169430> (last visited Mar 24, 2020).

<sup>1020</sup> *See* Lonnberg, *supra* note 1003 at 220; *see also* Karen Clay and Randall Jones, *supra* note 986 at 1022 (arguing that while migration to California increased earnings in absolute terms for almost all occupations, for miners migrating may well have lowered earnings in relative terms due to the high cost of food).

<sup>1021</sup> *See* Lonnberg, *supra* note 1003 at 220. *See also* John F. Burns, *Taming the Elephant: An Introduction to California’s Statehood and Constitutional Era*, 81 in TAMING THE ELEPHANT : POLITICS, GOVERNMENT, AND LAW IN PIONEER 1–26, 4 (2003) (“[S]carcity became the rule. Everything, including much food, had to be imported... Prices were bizarre; items could cost twenty or more times what they did in the East, such as a dollar for a mere egg”).

## 2. From Open Access to Private Property

Although the United States federal government was the official owner of California's mineral lands, it exercised no control over them.<sup>1022</sup> So when miners flocked to the goldfields, they believed that gold was free for the taking on a first-come, first-served basis.<sup>1023</sup> Despite the lack of a functioning authority, anarchy and violence did not prevail during the early days.<sup>1024</sup> While rich diggings lured other miners into the same spot, the discoverer was left with enough space to work his finding<sup>1025</sup> because there was a general belief that there was enough gold for everyone.<sup>1026</sup>

Nonetheless, as the immigration flow increased, miners understood that social controls were necessary.<sup>1027</sup> A *customary law of the diggings* emerged, by which each miner was allowed to *claim* a specific area for himself, provided that it was reasonable in size, he marked it (i.e. by leaving his tools on the ground), and developed it.<sup>1028</sup> If, however, the

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<sup>1022</sup> See Karen Clay & Gavin Wright, *Order without law? Property rights during the California gold rush*, 42 EXPLORATIONS IN ECONOMIC HISTORY 155–183, 160 (2005); see also McDowell, *supra* note 148 at 46 (claiming that miners were officially trespassers since the mineral lands were public property of the federal government, which could have well chosen to evict them at any time or chosen to sell the mining rights to others); ROHRBOUGH, *supra* note 953 at 12.

<sup>1023</sup> See generally McDowell, *supra* note 148 at 12; Andrew P. Morriss, Roger E. Meiners & Andrew Dorchak, *Homesteading Rock: A Defense of Free Access under the General Mining Law of 1872*, 34 ENVTL. L. 745–808, 761 (2004); DAVID SCHORR, THE COLORADO DOCTRINE : WATER RIGHTS, CORPORATIONS, AND DISTRIBUTIVE JUSTICE ON THE AMERICAN FRONTIER 5 (2012).

<sup>1024</sup> McDowell, *supra* note 148 at 20.

<sup>1025</sup> See *id.* at 15.

<sup>1026</sup> SHINN, *supra* note 152.

<sup>1027</sup> See James I. Stewart, *Cooperation when N is large: Evidence from the mining camps of the American West*, 69 JOURNAL OF ECONOMIC BEHAVIOR & ORGANIZATION 213–225, 215 (2009) (pointing out that when prospectors crowded the area and competition emerged, miners understood the need for a regulation system); DE SOTO, *supra* note 118 at 141 (postulating that “land-hungry settlers” and the absence of federal mining law created the need for extralegal arrangements); SHINN, *supra* note 152 at 114 (arguing that when the gold fields got crowded, miners were forced to organize themselves to safeguard their property and prevent disputes).

<sup>1028</sup> See generally McDowell, *supra* note 148 at 15; ROHRBOUGH, *supra* note 953 at 126 (“The presence of a pick or shovel retained rights while the owner went to the nearby camps for supplies and mail or had to be absent for other reasons, presumably for brief periods, but under the regulations generally accepted in most camps, claims had to be worked on a regular basis to maintain the right of ownership”).

claim went unworked, or if the miner quit his claim for a given time, other miners were allowed to *jump in* and seize it. In a nutshell, miners developed a claim system based on standardized claim sizes and an obligation to continuously work the claim.<sup>1029</sup>

These customary rules, however, were broad and did not tackle practical matters. Miners opted to organize themselves around mining districts or camps—around 500 of them—to convert these customary norms into more detailed and written codes. The mining codes were voted by majority rule in miners’ meetings that were open to United States citizens (but Native Americans were forbidden), including those who had just arrived or held no claim.<sup>1030</sup> Among other features, the mining codes specified the boundaries of each mining district, set limits to the claim size, and restricted the number of claims one miner could hold at the same time (i.e. the *one-claim* rule). In practice, the one-claim rule prevented the concentration of multiple claims in the hands of a few rich miners,<sup>1031</sup> preserving high levels of equality and anti-monopolism.<sup>1032</sup> It also meant, though, that a miner could only hold the area in which he was actively digging.<sup>1033</sup> According to David Schorr, this “... represented the best judgment of the miners as to the amount of the resource that could be worked by one person” and reflected an idea of *sufficiency*.<sup>1034</sup>

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<sup>1029</sup> See Deborah Fahy Bryceson, *supra* note 833 at 36; SCHORR, *supra* note 1023 at 16, 22 (claiming that the obligation to work was not an arbitrary rule but reflected the ‘producer ethic’).

<sup>1030</sup> See e.g. TRAFZER AND HYER, *supra* note 1002 at 39; McDowell, *supra* note 148 at 31 (arguing that miners believed foreigners should not be allowed to mine so several mining codes barred non-Americans from the camps). ROHRBOUGH, *supra* note 953 (providing a detailed account on xenophobia during the California Gold Rush).

<sup>1031</sup> See Lacy, *supra* note 149.

<sup>1032</sup> See SCHORR, *supra* note 1023 at 26; Richard White, *The Gold Rush: Consequences and Contingencies*, 77 CALIFORNIA HISTORY 42–55, 48 (1998) (arguing that the California Gold Rush exalted labor over property and capital).

<sup>1033</sup> See McDowell, *supra* note 148 at 35.

<sup>1034</sup> See SCHORR, *supra* note 1023 at 16.

The codes also established the type of notice required (i.e. leaving a pick or other tool in the hole, posting a notice containing the name of the claimant or stacking the center of the claim) and set up recording mechanisms for claims.<sup>1035</sup> Many codes contemplated the election of a law enforcement agent and other related adjudication rules. The codes were posted on each mining camp and were enforced rapidly and effectively.<sup>1036</sup> In actuality, these codes did not create completely new rules but adapted familiar legal institutions to the miners.<sup>1037</sup>

The idyllic early days of the gold rush would soon come to an end. During the winter of 1848-1849, the influx of miners arrived and the competition for a good mining location intensified, leaving newcomers with fewer spots to dig.<sup>1038</sup> Some miners chose to work as laborers on someone else's claim, while others moved to new areas, bought claims, or went home.<sup>1039</sup> Other miners resorted to violence. The harassment started against Native Americans, but soon turned into racism against Latin American, African American, and Chinese workers.<sup>1040</sup>

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<sup>1035</sup> See McDowell, *supra* note 148 at 33, 36.

<sup>1036</sup> See Terry Lee Anderson & Peter J. Hill, *THE NOT SO WILD, WILD WEST: PROPERTY RIGHTS ON THE FRONTIER* 111 (2004).

<sup>1037</sup> See e.g. Clay and Wright, *supra* note 1022 at 161–162 (pointing out that the miners were influenced by Spanish and Mexican laws, by which property to a mine depends both on discovery and development. Yet he admits that some features are not alien to U.S. values, such as the first-come, first-served rule, first possession, or adverse possession); PAUL, *supra* note 995 at 212 (“[T]he codes were the product of the common experience of miners in several parts of the world in dealing with the typical problems that were likely to arise wherever men sought mineral wealth”); see also Lacy, *supra* note 149 at 21.

<sup>1038</sup> See ROHRBOUGH, *supra* note 953 at 20; see also John Umbeck, *A Theory of Contract Choice and the California Gold Rush*, 20 *J.L. & ECON.* 421–438, 435 (1977) (“It was not unusual to read reports of hundreds or even thousands of newcomers converging on a riverbank where previously there had been only four or five members”).

<sup>1039</sup> See STEVE BOGGAN, *GOLD FEVER: ONE MAN'S ADVENTURE ON THE TRAIL OF THE GOLD RUSH* 191 (2015).

<sup>1040</sup> The enactment of the 1850 Foreign Miner's Tax by the California state legislature—which charged USD 20 a month to all foreign-born miners on the placer mines—echoed this sentiment. See Chan, *supra* note 993 at 67.

The California legislature recognized the mining codes existence in 1851.<sup>1041</sup> At the federal level, the United States Congress long debated the future of the federal mineral lands and whether they should be leased, sold, or awarded to the mining settlers.<sup>1042</sup> Finally, the 1866 Lode Law declared that all mineral lands of public domain were open to exploration by citizens of the United States (and aliens who had the intent to naturalize). Further, the Lode Law recognized that the rights that had been acquired subject to the regulations and local customs or rules of miners in the several mining districts would be respected.<sup>1043</sup> Moreover, the Lode Law allowed the filing of patents to the gold-bearing veins after any person had invested USD 1,000 in actual labor or improvements on a claim.<sup>1044</sup>

Although the Lode Law had significant flaws,<sup>1045</sup> it incorporated the core principles of the miner's customary laws and, more importantly, "... the right of the discoverer of a mine to purchase the title from the government at a reasonable price."<sup>1046</sup> The legislation of the mining codes was perceived at the time as a "... simple act of justice. Any other course of action would have involved a practical confiscation of property acquired and developed by the tacit consent of the government."<sup>1047</sup> The law's deficiencies were later

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<sup>1041</sup> See generally Lacy, *supra* note 149 at 27; CURTIS H. LINDLEY, TREATISE ON THE AMERICAN LAW RELATING TO MINES AND MINERAL LANDS WITHIN THE PUBLIC LAND STATES AND TERRITORIES AND GOVERNING THE ACQUISITION AND ENJOYMENT OF MINING RIGHTS IN LANDS OF THE PUBLIC DOMAIN 50 (3rd. ed. 1914).

<sup>1042</sup> See e.g. Clay and Wright, *supra* note 1022 at 160; CURTIS H. LINDLEY, *supra* note 1041 at 58.

<sup>1043</sup> See CURTIS H. LINDLEY, *supra* note 1041 at 61–62.

<sup>1044</sup> See *id.* at 61–62.

<sup>1045</sup> For example, the law only applied to lodes deposits (not placer deposits) and it did not establish a continuous working requirement (other than the USD 1,000). See Lacy, *supra* note 149 at 37–40; see also GORDON MORRIS BAKKEN, THE MINING LAW OF 1872 PAST, POLITICS, AND PROSPECTS 27 (2011); CURTIS H. LINDLEY, *supra* note 1041 at 61.

<sup>1046</sup> Lacy, *supra* note 149 at 37–38.

<sup>1047</sup> CURTIS H. LINDLEY, *supra* note 1041 at 92.

addressed by the passing of the 1870 Placer Act<sup>1048</sup> and the 1872 General Mining Law,<sup>1049</sup> but did not alter the basic principles of the Lode Law. All told, the California mining codes transformed American mining law forever<sup>1050</sup> and its essence is still part of the American mining law.<sup>1051</sup>

### 3. Contested Property

The transition from customary law to individual and exclusive claims is remarkable for several reasons. First, the mining codes emerged from the ground up and very quickly.<sup>1052</sup> Classic property rights scholars have long used the CGR as a seminal example to describe how secure property rights can emerge from the bottom-up.<sup>1053</sup> Indeed, what began as an open access resource soon evolved into a rigid grid of private claims<sup>1054</sup> as the resource became more valuable and the creation of property rights was worthwhile.<sup>1055</sup>

Second, the codes were respected by both miners and newcomers alike. Surprisingly, newcomers did not fight the codes but rather showed some deference to them.<sup>1056</sup> Third, the precise choice of rules is intriguing for another reason: miners sacrificed stronger property rights to mineral lands (i.e. fee-simple rights that would allow

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<sup>1048</sup> Act of July 9, 1870, ch. 235, 16 Stat. 217.

<sup>1049</sup> General Mining Act of 1872, ch. 152, 17 Stat. 91 *amended* at 30 U.S.C. §§ 22-24, 26-30, 33-35, 37, 39-43, 47 (2000).

<sup>1050</sup> See Morriss, Meiners, and Dorchak, *supra* note 1023 at 748.

<sup>1051</sup> See also David Gerard, *The Mining Law of 1872: Digging a Little Deeper* (1997), <https://www.perc.org/1997/12/01/the-mining-law-of-1872-digging-a-little-deeper/>; SHINN, *supra* note 152 at 6.

<sup>1052</sup> See e.g. UMBECK, *supra* note 1009 at 132 (“The length of time in which this took place was not centuries, but days”); Zerbe and Anderson, *supra* note 915 at 115 (“It is curious how soon a set of crude regulations sprung into existence, which everybody seemed to abide by”).

<sup>1053</sup> See e.g. Clay and Wright, *supra* note 1022 at 56; Anderson and Hill, *supra* note 996; UMBECK, *supra* note 1009.

<sup>1054</sup> See McDowell, *supra* note 148 at 17; see also Morriss, Meiners, and Dorchak, *supra* note 1023 at 762.

<sup>1055</sup> David A. Dana and Hannah Jacobs Wiseman, *Fracking as a Test of the Demsetz Property Rights*, Unpublished Thesis (March 19, 2019). Available at SSRN: <https://ssrn.com/abstract=3356079> or <http://dx.doi.org/10.2139/ssrn.3356079>].

<sup>1056</sup> See McDowell, *supra* note 148 at 22.



market transactions in claims) and voted instead for a series of restrictions to their own exclusive rights.<sup>1057</sup> The reason for this is the mining industry's hit-and-run character: miners valued mobility and aspired to obtain rights to their current claim as much as to their next claim, when gold had ran out.<sup>1058</sup> Scholars do not agree, though, on why property rights emerged this way.<sup>1059</sup>

### C. *Demystifying de Soto*

In the following pages, I demystify de Soto's plan to tackle ASM's informality using bottom-up property rights, a proposal rooted in a romanticized depiction of the CGR.

#### 1. **The CGR is not how-to blueprint**

Often regarded as the incarnation of pioneer individualism<sup>1060</sup> and strong property rights,<sup>1061</sup> the CGR is indisputably the most glorified example of a frontier democracy. By frontier democracy I refer to remote and unruly places prone to the emergence of new democratic societies,<sup>1062</sup> under the principles of equality, self-governance, and laissez-faire individualism.<sup>1063</sup> In this section, I argue that the master narrative of the CGR is inconsistent with the realities at the time.

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<sup>1057</sup> See Umbeck, *supra* note 1038 at 435.

<sup>1058</sup> See Geenen, *supra* note 941 at 323.

<sup>1059</sup> See generally UMBECK, *supra* note 1009; Zerbe and Anderson, *supra* note 915; McDowell, *supra* note 148; Clay and Wright, *supra* note 1022.

<sup>1060</sup> Cf. M. R. REDCLIFT, *FRONTIERS HISTORIES OF CIVIL SOCIETY AND NATURE* 206 (c2006); SCHORR, *supra* note 1023 at 5.

<sup>1061</sup> See e.g. UMBECK, *supra* note 1009.

<sup>1062</sup> See Verbrugge and Geenen, *supra* note 24 at 414; Deborah Epstein Popper, Robert E. Lang & Frank J. Popper, *From maps to myth: The Census, Turner, and the idea of the frontier*, 23 *JOURNAL OF AMERICAN AND COMPARATIVE CULTURES; BOWLING GREEN* 91–102, 97 (2000); Simonson, *supra* note 991 at 202, 208; Bryceson and Geenen, *supra* note 589 at 302; SCHORR, *supra* note 1023 at 25.

<sup>1063</sup> See DAVID GOODMAN, *GOLD SEEKING : VICTORIA AND CALIFORNIA IN THE 1850S* 49 (1994).

First, the frontier democracy narrative associated with the CGR is flawed. While the rules of open access, the right of miners to enjoy the fruits of their own labor (*producerism*), and social mobility represent the American dream of economic democracy—in actuality the mining codes were not open to everyone but linked to United States citizenship (it excluded Native Americans and international immigrants alike). What had started as an egalitarian society in the early years of the gold rush, where miners of any descent worked shoulder to shoulder, soon gave way to exclusion and the replication of traditional hierarchical class relations reinforced by violence.<sup>1064</sup> As Patricia Limerick illustrates,

[...] mining, throughout the West as in California, rested on the white American talent for claiming legitimacy: that is, white Americans in mining rushes were clearly, unmistakably, newcomers themselves, and yet, even the recentness of their own arrival did not cause them a moment's hesitation when it came to claiming status as the legitimate occupants, the people who had the right to claim and use the local resources, and to exclude, and to brand as illegitimate and undeserving, people of other nationalities, particularly Mexican or Chinese.<sup>1065</sup>

In consequence, by contrast to the mythic portrait of frontier democracy, the way in which an unequal society emerged in California “is one of the darker legacies of the Gold Rush.”<sup>1066</sup>

Second, although the CGR is associated with the iconic figure of the individual prospector—alone, using simple tools, living away from his family—this image corresponds exclusively to the first years of the gold rush (1848 and 1849) when operations

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<sup>1064</sup> See Chan, *supra* note 993 at 67; ISENBERG, *supra* note 954 at 8.

<sup>1065</sup> See Limerick, *supra* note 886 at 32.

<sup>1066</sup> See Chan, *supra* note 993 at 79. See also Deborah Fahy Bryceson, *supra* note 833 at 41–42, 55 (“[T]he democracy narrative of artisanal mining can only be recounted with the proviso that it was deeply flawed, not unlike Greek democracy’s indifference to the rights of women and slaves... at best, the values in the mining camps qualify as a ‘highly delimited’ democracy”).

were still artisanal and individual.<sup>1067</sup> In the 1850s, however, politically influential lode miners in California favored the removal of the one-claim rule and changes in the allowable size of claims, allowing speculators and mining corporations to hold larger claims.<sup>1068</sup> Thus, by the time the Lode Law was enacted, mining corporations had already replaced the artisanal miners in the mining operations, and the miners who remained on the fields were waged laborers rather than self-employed.<sup>1069</sup> In sum, and contrary to de Soto's account, Carl Mayer convincingly contends that the Lode Law was not passed to benefit individual prospectors but mining corporations.<sup>1070</sup> Consequently, the predominant image of the lone miner in the CGR is fictional given prevalent corporate mining operations.<sup>1071</sup>

Third, according to de Soto, the fact that the United States Congress did not aim to destroy informal mining codes but strengthened them by regulating the way miners held and worked their claims, was remarkable.<sup>1072</sup> He claims that the mining codes served as temporary rest stops on the road to legal recognition,<sup>1073</sup> which came about when Congress converted "what seemingly were disruptions of [the law] into a social contract that brought property rights to everybody."<sup>1074</sup>

Yet, although de Soto and others portray the CGR as the seminal example of the evolution of property rights towards stronger legal rights, in actuality miners discarded full

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<sup>1067</sup> See ISENBERG, *supra* note 954 at 20.

<sup>1068</sup> See Mayer, *supra* note 1014 at 638, 645–646.

<sup>1069</sup> See e.g. Deborah Fahy Bryceson, *supra* note 833 at 36 ("As surface gold deposits became depleted, environmentally destructive industrial hydraulic extraction methods were introduced to achieve large-scale hard-rock underground excavation, which required heavy investment in technology and technical training. Artisanal mining was increasingly sidelined. Having begun with placer mining open to large numbers of unskilled men seeking their fortune as individuals, larger scale capitalist mining operations took over").

<sup>1070</sup> See Mayer, *supra* note 1014 at 638, 645–646.

<sup>1071</sup> See *id.* at 638.

<sup>1072</sup> See DE SOTO, *supra* note 118 at 146.

<sup>1073</sup> See *id.* at 140.

<sup>1074</sup> De Soto, *supra* note 155 at 12.

ownership schemes (i.e. fee-simple rights) since the very inception of the codes. For example, when patents were made available upon the enactment of the Lode Law, almost none applied for them.<sup>1075</sup> In addition, contrary to the principle that private property enhances the value of the resource,<sup>1076</sup> and against what the drafters of the Lode Law had anticipated would happen, gold production was not boosted upon the legal recognition of the mining codes by Congress.<sup>1077</sup>

Fourth, the Native American historical narrative during the CGR has generally been left out,<sup>1078</sup> even though they were displaced, removed, and relocated.<sup>1079</sup> Out of all other actors, Native Americans were the most marginalized<sup>1080</sup> as a consequence of disease, starvation, and murder.<sup>1081</sup> Although the early gold rush miners relied on Native American's skills, knowledge, and work labor to be necessary for their quest,<sup>1082</sup> this understanding ended as a result of competition for mining claims and the mechanization of work.<sup>1083</sup>

Finally, Californian miners externalized the cost of their activities, as shown by the environmental devastation that the CGR prompted.<sup>1084</sup> Although some environmental changes had started decades earlier,<sup>1085</sup> the Forty-Niners leveled roads, built bridges, and

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<sup>1075</sup> See UMBECK, *supra* note 1009 at 97 (four claims were patented by 1867 and six in 1869 and 1870).

<sup>1076</sup> See DE SOTO, *supra* note 118 at 140 (for example, de Soto argues that the miner's regulations added value to the land miners claimed).

<sup>1077</sup> See UMBECK, *supra* note 1009 at 97.

<sup>1078</sup> See GOODMAN, *supra* note 1063 at 14.

<sup>1079</sup> See Limerick, *supra* note 886 at 31.

<sup>1080</sup> See Deborah Fahy Bryceson, *supra* note 833 at 41.

<sup>1081</sup> The Native American population of California decreased from 150,000 when the CGR started to 30,000 when it ended. See BOGGAN, *supra* note 1039 at 5; see also BENJAMIN LOGAN MADLEY, AMERICAN GENOCIDE THE CALIFORNIA INDIAN CATASTROPHE, 1846-1873 (c2009). In fact, the massacre of Native Americans amounted to genocide or holocaust. See ENCYCLOPEDIA OF AMERICAN INDIAN HISTORY 229 (Bruce E. Johansen & Barry M. Pritzker eds., 2008).

<sup>1082</sup> See Lonngberg, *supra* note 1003 at 218.

<sup>1083</sup> See *id.* at 217.

<sup>1084</sup> See ISENBERG, *supra* note 954 at 15.

<sup>1085</sup> See Dasmann, *supra* note 1016.

cut timber to improve accessibility and provide food, housing, and fuel to the growing mining population.<sup>1086</sup> The population of grizzly bears, elk, pronghorn, and other animals abundant at the time plummeted as a result of the growing demand for meat or the destruction of natural habitats.<sup>1087</sup> On the other hand, hydraulic mining polluted streams, produced silt, and changed the course of rivers,<sup>1088</sup> affecting downstream communities. In short, in only two years the Argonauts made profound changes to California’s landscape and environment.<sup>1089</sup>

All told, the narrative de Soto and other ASM scholars have relied on—a romanticized image of the small, artisanal, plucky, and creative miner to expand on their theories—is an over-simplification. More importantly, these theories are created at the expense of untold stories of social marginalization and exclusion, as well as environmental degradation. Accordingly, the CGR does not represent a how-to blueprint for developing nations on creating more legitimate and representative formalization frameworks, or strong property rights.

## **2. Political Transaction Costs**

Although neither de Soto nor the Commission’s manifesto address what type of property rights would be distributed as part of its purported titling program (i.e. land rights, mining concessions, or operation permits),<sup>1090</sup> it is likely they envisage both land and

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<sup>1086</sup> See ISENBERG, *supra* note 954 at 18.

<sup>1087</sup> See Dasmann, *supra* note 1016 at 109–111.

<sup>1088</sup> See Rohrbough, *supra* note 1007 at 123 (claiming that people describe the Sierra Nevada Mountains “as looking like it had been dug up by giant moles”).

<sup>1089</sup> See ROHRBOUGH, *supra* note 953 at 123.

<sup>1090</sup> An ILD representative commented that their “proposal with ASM miners did not enter into the small details. One option is to group all miners into a big area and grant them a mining concession, though internally they can distribute smaller rights among them.” Interview with Gustavo Marini, *supra* note 221.

mining rights because they are both indispensable to conduct mining operations under the public ownership model of natural resources in Peru. Nonetheless, the political transaction costs associated with this distribution of property rights are problematic to implementation.

First, the Commission's plan would legalize the squatting on valuable resources, not wastelands.<sup>1091</sup> Unlike the perception of the Western United States during the nineteenth century, squatted mineral lands in Peru have a true owner, which can be either formal (e.g. a mining concession held by an LSM company or a tract of land held by a private or public landowner) or informal (e.g. farmers, herders, or fishermen that hold customary rights to a resource).<sup>1092</sup> The Commission does not address how to consider the redistribution from customary informal owners to the miners. Also, the Commission's proposal would entail the redistribution of property rights from formal users (e.g. LSM company) to informal users (e.g. ASM miner), which would be tantamount to a government's takings of private property without compensation.<sup>1093</sup> The Commission, however, does not say how many companies or landowners need to be compensated or how much would it cost.<sup>1094</sup> When asked about the externalities produced by squatting, de Soto suggests compensating the affected parties or relocating miners, but does not provide an effective solution.

Second, the Commission also assumes that formal LSM companies will surrender their mining rights peacefully, ignoring that powerful true owners hold political and

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<sup>1091</sup> See e.g. Rose, *supra* note 948; James C. W. Ahikpor, *Mystifying the Concept of Capital: Hernando de Soto's Misdiagnosis of the Hindrance to Economic Development in the Third World*, 13 THE INDEPENDENT REVIEW 57–79, 66 (2008).

<sup>1092</sup> See e.g. Otto, *supra* note 161 at 193; Christopher Woodruff, *Review of de Soto's "The Mystery of Capital"*, 39 JOURNAL OF ECONOMIC LITERATURE 1215–1223, 1218 (2001).

<sup>1093</sup> See Gary D. Libecap, *Review of The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, 61 J. ECON. HISTORY 1168, 1166–1168 (2001).

<sup>1094</sup> See e.g. *id.* at 1168.; Woodruff, *supra* note 1092 at 1218.

economic power to resist such invasions.<sup>1095</sup> In actuality, many LSM companies have already refused sitting down at the negotiating table with the trespassers of their own property.<sup>1096</sup> Peru's largest LSM guild has publicly and repeatedly supported the GP's use of force to evict illegal miners.<sup>1097</sup> For all the above, granting property rights to squatters would encourage waves of population to resettle.<sup>1098</sup>

### **3. Granting Rigid Property Rights is Impractical**

I argue that tackling informality using rigid, formal property right (i.e. fee-simple) would prove impractical. First, as evidenced by the two gold rushes studied in this dissertation, mining is a transient activity and has a hit and run character.<sup>1099</sup> Therefore, when a claim runs out or contains low-grades of ore, miners aspire to move quickly into a new area. The Commission's proposal of rigid property rights seems disconnected with ASM and alters miners' capacity to exit.<sup>1100</sup>

Second, if each miner is granted title to a piece of the mineral deposit or a tract of land, the Commission fails to explain how 50,000 miners will work together, shoulder to shoulder, in dynamic and fluctuating tunnels. In this case, it seems that too many private

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<sup>1095</sup> See generally Otto, *supra* note 161 at 193; Rashmi Dyal-Chand, *Exporting the Ownership Society: A Case Study on the Economic Impact of Property Rights*, 39 RUTGERS L.J. 59–110, 69 (2007); GARY D. LIBECAP, CONTRACTING FOR PROPERTY RIGHTS 18.

<sup>1096</sup> As mentioned before, one of the reasons why informal miners have not formalized is because they have not been able to sign a mining lease agreement with LSM companies, which evidences that LSM will not surrender their mining concessions that easily.

<sup>1097</sup> See Sociedad Nacional de Minería, Petróleo y Energía (SNMPE), *Minería Ilegal en el Perú Mueve Mas US\$900 Millones que no Pagan Impuestos ni Regalías* (2011), <http://www.snmpe.org.pe/prensa/notas-de-prensa/notas-de-prensa-de-la-snmpe/1276-snmpe-mineria-ilegal-en-peru-mueve-mas-de-us-900-millones-que-no-pagan-impuestos-y-regalias.html> (last visited Feb 13, 2019).

<sup>1098</sup> See e.g. Rose, *supra* note 948; Winter King, *Illegal Settlements and the Impact of Titling Programs*, 44 HARV. INT'L L.J. 433–472, 445 (2003).

<sup>1099</sup> See Lahiri-Dutt, *supra* note 22 at 9.; Verbrugge, *supra* note 183, at 1032.

<sup>1100</sup> See e.g. Verbrugge, *supra* note 20 at 1029 and 1032; Verbrugge and Besmanos, *supra* note 13 at 135; Marcello M. Veiga and Christian Beinhoff, *supra* note 62 at 51; see also Hilson et al., *supra* note 20 at 83 (claiming that mining titling should be a flexible and empowering process).

property rights to the same resource have the potential to create a tragedy of the *anti-commons*.<sup>1101</sup> Unlike placer mining, where it may well be possible to allot plots of land to specific miners, underground mining requires an *ad hoc* approach. On the contrary, the proposal ignores the social consequences that may arise if a particular piece of the mineral deposit or a tract of land awarded to a miner does not yield the expected gold as there might not be enough gold for all to assure a livelihood.

Third, the Commission assumes that informal miners would benefit from strong property rights. In actuality, as the La Rinconada case-study demonstrates, ASM miners already benefit from their *own* informal arrangements, which are deemed fair, legitimate, and secure,<sup>1102</sup> and are more deeply rooted in local structures.<sup>1103</sup> “ASM operators may not necessarily be interested in acquiring a formal license, and may well be satisfied with access that is negotiated informally... [O]perating without a license offers many gold miners greater mobility and flexibility.”<sup>1104</sup>

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<sup>1101</sup> This refers to cases when “too many private owners can block access to a resource.” See generally Michael Heller, *The Tragedy of the Anticommons: A Concise Introduction and Lexicon*, 76 MOD. L. REV. 6–25, 10 (2013).

<sup>1102</sup> See e.g. Geenen, *supra* note 941 at 323. See also Fisher, *supra* note 63; Jonathan Manders, *Sequencing Property Rights in the Context of Development: A Critique of the Writings of Hernando de Soto Note*, 37 CORNELL INT’L L.J. 177–198, 198 (2004) (“[De soto is] missing a crucial point; namely that it is far cheaper [figuring in transaction costs, the extent of political, legal, and economic change required] for the people to remain informal in some instances”); Otto, *supra* note 161 at 169 (arguing that the poor people may prefer informality due to social, economic and political reasons”); Putzel et al., *supra* note 52 at 463 (“Informal collective institutions and social cohesion are often more important than formal documentation in maintaining possession and regulating use”).

<sup>1103</sup> See Verbrugge and Geenen, *supra* note 24 at 419.

<sup>1104</sup> Verbrugge, *supra* note 20 at 1029; see also Nancy Lee Peluso, *Entangled Territories in Small-Scale Gold Mining Frontiers: Labor Practices, Property, and Secrets in Indonesian Gold Country*, 101 WORLD DEVELOPMENT 400–416, 401 (2018); THOMAS KENYON, *supra* note 52 at 6 (“[T]he formalization decision is strategic – it depends on the decisions of others. It probably does not make sense for an entrepreneur to incur the costs of compliance with government regulation unless he or she can be sure that his or her competitors do the same. The underlying problem is a lack of coordination: Why pay taxes, register or comply with costly health and safety standards when nobody else does? Not only are you unlikely to receive any public services in return, you also place yourself at a severe competitive disadvantage. The result is that informal firms have little incentive to formalize and formal ones are deterred from investing and expanding – with potentially serious consequences for growth in output and productivity”).



All things considered, the Commission fails to explain what incentives miners have to apply for a mining title, especially if legality would bring about taxes, reduce their household income, and ban children from the mining operations,<sup>1105</sup> as well as it would reduce miners' flexibility and margin of maneuver.

#### 4. Asymmetries of Power

De Soto's work offers a romantic and idealized version of the informal sector,<sup>1106</sup> in what has been considered an "apologia of the little man in slums."<sup>1107</sup> The poor squatter, he argues, is an ingenious and plucky entrepreneur struggling against the state bureaucracy and the indifference of local elites. As shown earlier, de Soto has now transplanted his famous apologia into the ASM arena, arguing that informal miners are starving and unemployed due to state's exclusionary policies,<sup>1108</sup> in what I characterize as an apologia of the *little man in the shafts*. In his view, "the problem is not that Peruvian [miners] are bad [people]; the problem is bad regulation."<sup>1109</sup>

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<sup>1105</sup> See e.g. Alan Gilbert, *On the mystery of capital and the myths of Hernando de Soto: What difference does legal title make?*, 24 INTERNATIONAL DEVELOPMENT PLANNING REVIEW 1–19, 9 (2002); Libecap, *supra* note 1093 at 1166–67; Bentley, *supra* note 45 at 1249.

<sup>1106</sup> See generally Gilbert, *supra* note 1105 at 2; Carmen G. Gonzalez, *Squatters, Pirates, and Entrepreneurs: Is Informality the Solution to the Urban Housing Crisis?*, 40 THE UNIVERSITY OF MIAMI INTER-AMERICAN LAW REVIEW 239–259, 244 (2009); Bromley, *supra* note 948 at 339 ("[De Soto] has idealized his informal sector, creating an image of plucky entrepreneurs desperately struggling to make a living in the face of stifling governmental regulation and the horrific mismanagement of public enterprises, and he has depicted the informal sector as the real heart and human resource of the Nation").

<sup>1107</sup> Francisco Panizza, *Neopopulism and Its Limits in Collor's Brazil*, 19 BULL. LAT. AM. RES. 188, 177–192 (2000).

<sup>1108</sup> Debate del Ministro del Ambiente, Manuel Pulgar-Vidal, con Hernando de Soto, Presidente del ILD, *supra* note 968.

<sup>1109</sup> Hernando De Soto, *¿Cuál es la Propuesta de Hernando De Soto Para Formalizar la Minería?* (*Free Translation*) (2016), <https://gestion.pe/peru/politica/propuesta-hernando-soto-formalizar-mineria-120192>; See also HERNANDO DE SOTO, *THE OTHER PATH: THE INVISIBLE REVOLUTION IN THE THIRD WORLD* 11 (c1989) ("[The migrants'] illegality was not antisocial in intent, like trafficking in drugs, theft, or abduction, but was designed to achieve such essentially legal objectives as building a house, providing a service, or developing a business.").

Yet, as the La Rinconada case illustrates, not all informal miners conform to the MYSTERY profile of the poor, ingenious, and plucky entrepreneur. In fact, the “poverty argument” is fallacy: while informal actors may choose to portray themselves as poor, some scholars have documented stories of an informal bourgeoisie.<sup>1110</sup> The gold rush years and the resource windfall associated with it have reconfigured power relations in ASM. Consequently, the Commission’s envisaged property rights system overlooks that titling programs can produce security for some, but insecurity for others.<sup>1111</sup> The ASM literature further evidences how better-positioned miners have influenced or captured government officials,<sup>1112</sup> whereas vulnerable and marginalized miners may not even afford to pay the fees to access title.<sup>1113</sup> In this vein, the Commission does not phrase out how the distribution of property rights will prevent the exclusion of the mass workforce or neutralize the political muscle of the entrepreneurial miner.<sup>1114</sup>

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<sup>1110</sup> See DURAND, *supra* note 116.

<sup>1111</sup> See Celestine Nyamu Musembi, *De Soto and Land Relations in Rural Africa: Breathing Life into Dead Theories about Property Rights*, 28 THIRD WORLD Q. 1470, 1457–1478 (2007); see also Lan Cao, *Informal Institutions and Property Rights Comparative Property Rights: Panel 4: Culture and Property*, 1 BRIGHAM-KANNER PROP. RTS. CONF. J. 264, 263–279 (2012).

<sup>1112</sup> See e.g. Salo et al., *supra* note 52 at 1064; Verbrugge and Besmanos, *supra* note 13 at 135; Putzel et al., *supra* note 52 at 464; Salman, *supra* note 75 at 1130 (claiming that in Peru and Bolivia, well organized miners have lobbied in favor of their own agenda before politicians); Hilson, Goumandakoye, and Diallo, *supra* note 19 at 266 (arguing that in Niger miners admit to bribe local officials to use explosives and mercury); Boris Verbrugge, Jeroen Cuvelier & Steven Van Bockstael, *Min(d)ing the land: The relationship between artisanal and small-scale mining and surface land arrangements in the southern Philippines, eastern DRC and Liberia*, 37 JOURNAL OF RURAL STUDIES 50–60, 52 (2015); Verbrugge and Geenen, *supra* note 24 at 419.

<sup>1113</sup> See e.g. Verbrugge, *supra* note 20 at 1030; Putzel et al., *supra* note 52 at 464; THE INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, *supra* note 16 at 27; Hilson, Goumandakoye, and Diallo, *supra* note 19 at 265 (pointing out that in Ghana, Uganda and Zambia informal miners remain barred from the legal sector because of the costs associated with the permitting process); Hilson et al., *supra* note 20 at 87 (arguing that in Niger formalization costs up to nine times a miner’s yearly income); Barney, *supra* note 61 at 340 (noting formalization’s unintended exclusionary consequences).

<sup>1114</sup> See Samuel J. Spiegel, *Shifting Formalization Policies and Recentralizing Power: The Case of Zimbabwe’s Artisanal Gold Mining Sector*, 28 SOC’Y & NAT. RESOURCES 544, 543–558 (2015).

In turn, women engaged in ASM-activities are especially vulnerable,<sup>1115</sup> as they do not hold decision-making positions and rarely work underground.<sup>1116</sup> Women are under-represented in mining communities because women do not have access to mineral deposits themselves.<sup>1117</sup> The sexualization of work relations due to cultural and social taboos leads to sex-segregation and gender-typing of mine jobs.<sup>1118</sup> The Commission's manifesto makes women engaged in ASM completely invisible.

All told, by overlooking existing power asymmetries in the ASM sector, the Commission's program would legalize potentially exploitative (labor) arrangements to the detriment of vulnerable groups.

## 5. Discovering and Codifying the *People's Law* is Unrealistic

De Soto is concerned with legitimacy and representativeness. His book's recipe is to turn dead capital into living capital demands, on the one hand, by discovering the *real* social contract underlying in the informal world, and, on the other, by designing bridges that "connect, harmonize and integrate [informal] rules with the formal legal system."<sup>1119</sup> However, the extrapolation of this recommendation is problematic.

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<sup>1115</sup> See generally Bernadette Atuahene, *Legal Title to Land as an Intervention against Urban Poverty in Developing Nations*, 36 GEO. WASH. INT'L L. REV. 1109–1180, 1127 (2004) ("Non-gender-sensitive titling procedures can especially marginalize female-headed households and unmarried women in consensual unions"); Hendrix, *supra* note 961 at 214; Fernandes, *supra* note 161 at 231; Cao, *supra* note 1111 at 273; Musembi, *supra* note 1111 at 1470.

<sup>1116</sup> See Yakovleva, *supra* note 17 at 30.

<sup>1117</sup> See Fisher, *supra* note 63 at 741; Contra Cortés-McPherson, *supra* note 21 (describing the story of Gregoria, or the "Queen of Gold", in Madre de Dios, Peru, who in decades has appropriated more than 42,000 hectares of mining land and machinery worth millions); Also contra ARRIARÁN, *supra* note 30 at 62 (telling the story of Madame Lucero or Sonia Ayala Cabello in Madre de Dios).

<sup>1118</sup> See Gavin Bridge, *Contested Terrain: Mining and the Environment*, 29 ANN. REV. OF ENV. & RESOURCES 205–259 (2004).

<sup>1119</sup> Janine Ubink, *Legalising Land Rights in Africa, Asia and Latin America: An Introduction* LEGALISING LAND RIGHTS. LOCAL PRACTICES, STATE RESPONSES AND TENURE SECURITY IN AFRICA, ASIA AND LATIN AMERICA 10, 7–32 (Janine M. Ubink, André J. Hoekema, and Willem J. Assies Ed. 2009).

First, discovering the *people's law* is expensive, time-consuming, risks falling short,<sup>1120</sup> and faces enormous difficulties on the ground.<sup>1121</sup> Additionally, the Commission does not flesh out how the new titling program will surmount the existing dysfunction in governance that characterizes developing countries (i.e. remote, underfunded agencies, lacking inter-agency coordination and personnel).<sup>1122</sup>

Second, even if we accept that codifying informal or customary rules in a written canon accepted by the state was possible, it may alter preexisting social order and leadership structures.<sup>1123</sup> “Formalization of property rights is [] not neutral with respect to existing rights; it does and will transform and alter both the nature of the rights and the social relations and identities that underlie them.”<sup>1124</sup> In this line, the Commission fails to address how his program differentiates from assimilation policies of the past.<sup>1125</sup>

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<sup>1120</sup> For example, de Soto assumes that the Lode Law was attuned with the Californian mining traditions, but the fact that few miners applied for fee-simple proves him wrong. On the other hand, mining traditions in La Rinconada are quite different from that of Madre de Dios, which is only 70 miles away. What is more, the original 2012 formalization program ignored *cachorro* and *pallaqueo* activities and an amendment was necessary after protests in La Rinconada.

<sup>1121</sup> See e.g. Janine Ubink, *supra* note 1119 at 10.

<sup>1122</sup> See e.g. Siegel and Veiga, *supra* note 12 at 97 (arguing that in many ASM nations there is just one public servant managing thousands of square miles of land containing thousands of people to formalize); See e.g. DEFENSORÍA DEL PUEBLO, *supra* note 377 at 255 (claiming that subnational governments in Peru destined less than one percent of their total budget to the formalization of ASM); Zvarivadza and Nhleko, *supra* note 89 at 82; O’Faircheallaigh and Corbett, *supra* note 32 at 966; Fisher, *supra* note 63 at 753 (claiming that in Tanzania, few miner officers have no capacity to handle miners’ demands); Hilson et al., *supra* note 20 at 86 (claiming that in Niger the authorities lack the capacity to manage the 450,000 people engaged in ASM); Agatha Siwale & Twivwe Siwale, *Has the promise of formalizing artisanal and small-scale mining (ASM) failed? The case of Zambia*, 4 THE EXTRACTIVE INDUSTRIES AND SOCIETY 191–201, 198 (2017) (describing that in Zambia government officials do not have the resources to travel to the mining sites) .

<sup>1123</sup> Informal miners in Niger share a strong sense of belonging and collective identity that the state does not take into account. See Hilson, Goumandakoye, and Diallo, *supra* note 19 at 263. In Ghana, ASM operators are comfortable with simple customary rules and are reluctant to collaborate with state bureaucracy. See O’Faircheallaigh and Corbett, *supra* note 32 at 964. In Bolivia, miners’ *cooperativas* have developed a discourse around the concept of “being able to work undisturbed from government control.” See Salman, *supra* note 75 at 1134–1135. See also Hendrix, *supra* note 961 at 190; Tamanaha, *supra* note 910 at 11.

<sup>1124</sup> Cao, *supra* note 1111 at 274.

<sup>1125</sup> See generally Otto, *supra* note 161 at 183 (“In essence, this perspective is not very different from the late colonial policies of ‘integration’ and the post-colonial legislative policies informed by the principles of unification, modernization and liberalization”); Musembi, *supra* note 1111 at 1462.

Third, the codification of informal laws would result in hundreds of idiosyncratic mining codes across Peru's 25 regions. Ironically, this possibility contradicts one of MYSTERY's foremost points: that the fragmentation of property in customary systems renders assets rigid, non-standard, and non-fungible.<sup>1126</sup> The purported codification of the people's law into multiple legal systems would bring about anarchy<sup>1127</sup> because, in de Soto's eyes, the coexistence of multiple legal forms (i.e. legal pluralism) is simply not efficient.<sup>1128</sup> From a human rights perspective, codifying traditions and customs that overtly contradict Peru's international human rights obligations concerning children's rights and exploitative employment agreements is particularly troublesome.<sup>1129</sup>

Fourth, property rights are inadequate in circumstances when the state is too weak to enforce them either by prevailing conflict, corruption, or poor infrastructure.<sup>1130</sup> So as important as issuing property titles is to consider the state, which is in charge of enforcing them.<sup>1131</sup> As Murtazashvili & Murtazashvili note, "The preoccupation with legal titling to an extent reflects the ideology of possessive individualism in that it presumes that

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<sup>1126</sup> See DE SOTO, *supra* note 118 at 47.

<sup>1127</sup> See Musembi, *supra* note 1111 at 1460 ("According to [de Soto], the absence of formal legality means anarchy. The existence of plural informal legal orders [legal pluralism] is equated with extra-legality, meaning being outside the law. De Soto therefore uses 'legality', when he really means formal legality"); Hernando De Soto, *Robin Hood y los liliputienses. Por qué tanta cortesía con el Movadef*, DIARIO EL COMERCIO, November 11, 2012, at A-24.

<sup>1128</sup> See generally Musembi, *supra* note 1111 at 1462; David Lea, *Tully and de Soto on Uniformity and Diversity*, 19 JOURNAL OF APPLIED PHILOSOPHY 55–68, 60 (2002); Tamanaha, *supra* note 910 at 11; Patrick Wieland & Thomas F. Thornton, *Listening to (Some) Barking Dogs: Assessing Hernando de Soto's Recipe for the Development of the Amazon Natives of Peru*, 30 HARV. J. RACIAL & ETHNIC JUST. 131–150 (2014).

<sup>1129</sup> For children, the cost of working in the mines is too high: absent from school, poor school performance, and exposure to accidents and health problems. Thus, working in the mines is far from "a standard of living adequate for the child's physical, mental, spiritual, moral and social development." UN General Assembly, *Convention on the Rights of the Child*, 20 November 1989, United Nations, Treaty Series, vol. 1577, p. 3, <https://www.refworld.org/docid/3ae6b38f0.html> [last visited 4 November 2019]. See also INTERNATIONAL LABOUR ORGANIZATION (ILO), *supra* note 922; UNITED NATIONS GENERAL ASSEMBLY, *International Covenant on Civil and Political Rights, 16 December 1966, United Nations, Treaty Series, vol. 999, p. 171, available at:*, 999 171 (1966), <https://www.refworld.org/docid/3ae6b3aa0.html> [accessed 11 February 2019].

<sup>1130</sup> See Murtazashvili and Murtazashvili, *supra* note 156 at 252, 257; see also PIETH, *supra* note 31 at 217.

<sup>1131</sup> See Murtazashvili and Murtazashvili, *supra* note 156 at 252.

recognition of the rights of individuals, rather than the features of the state, are what governs prospects for capitalist development.”<sup>1132</sup>

Finally, the Commission ignores that once formal property rights are in place, they are hard to maintain and enforce.<sup>1133</sup> Indeed, they require expensive and technical public administrative systems, which are sometimes prohibitive for developing countries.<sup>1134</sup> Many governments have already failed to implement proper policing and follow-up strategies of newly formalized actors.<sup>1135</sup>

## 6. Property Does Not Secure Access to Credit

The idea that better property rights improves access to collateral—what Timothy J. Besley et al. refer to as the *de Soto effect*<sup>1136</sup>—is perhaps one of the seminal arguments of MYSTERY.<sup>1137</sup> Yet, critics have long pointed out that, in the land context, the *de Soto effect* is narrow.<sup>1138</sup> Although the correlation between title and credit in the ASM sector requires

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<sup>1132</sup> *Id.* at 264.

<sup>1133</sup> See ALSTON, *supra* note 985 at 4.

<sup>1134</sup> See Fitzpatrick, *supra* note 908 at 1039. See also Hendrix, *supra* note 961 at 210; GEOFFREY PAYNE, ALAIN DURAND-LASSERVE & CAROLE RAKODI, *The limits of land titling and home ownership* - 443–462 457 (2009); Murtazashvili and Murtazashvili, *supra* note 156 (“The government should also have at least some capacity to monitor its land reform projects. In developing countries, such feedback mechanisms influence the success of development projects. These include monitoring and evaluating legal titling, which depends on state capacity, although such capacity can also be provided by the international community”).

<sup>1135</sup> See Putzel et al., *supra* note 52 at 463; Siwale and Siwale, *supra* note 1122 at 194.

<sup>1136</sup> See Timothy J. Besley, Konrad B. Burchardi & Maitreesh Ghatak, *Incentives and the de Soto Effect*, 127 Q. J. ECON. 238, 237–282 (2012).

<sup>1137</sup> See e.g. Thomas W. Merrill, *Formalization, Possession, and Ownership The Role of Property in Secure Societies: Panel 1: Land Titling, Inclusion, and the Role of Property Rights in Secure Societies*, 6 BRIGHAM-KANNER PROP. RTS. CONF. J. 113–128, 114 (2017).

<sup>1138</sup> See generally Gilbert, *supra* note 1105 (arguing that legal title makes little difference or no difference at all in the poor accessing private bank loans); Sebastian Galiani & Ernesto Schargrodsky, *Property rights for the poor: Effects of land titling*, 94 JOURNAL OF PUBLIC ECONOMICS 700–729, 711 (2010) (“We only find a modest but positive effect of land titling on access to mortgage credit, and no impact on access to other forms of credit”); Fernandes, *supra* note 161 at 224 (arguing that banks rarely give credit to the poor); Besley, Burchardi, and Ghatak, *supra* note 1136 at 238; Woodruff, *supra* note 1092 at 1219; Timothy Mitchell, *The work of economics: how a discipline makes its world*, 46 EUROPEAN JOURNAL OF SOCIOLOGY / ARCHIVES EUROPÉENNES DE SOCIOLOGIE / EUROPÄISCHES ARCHIV FÜR SOZIOLOGIE 297–320, 300 (2005); Ahiakpor, *supra* note 1091 at 63; Ezra Rosser, *Immigrant Remittances*, 41 CONN. L. REV. 1–62, 47 (2008); GEOFFREY

more empirical evidence and is beyond the scope of this investigation, Hilson et. al. comment that in Ghana, banks have decided not to provide loans to ASM miners because “they do not have the geological and technical expertise in-house.”<sup>1139</sup> As far as Peru goes, I consulted two leading banks in Lima whether they provided loans to ASM miners—the response was negative.<sup>1140</sup>

## 7. Formalization is Only One Dimension of the Problem

De Soto’s scholarship maintains that the absence of property rights favors the plundering and depletion of natural resources.<sup>1141</sup> Without property rights, informal owners tend to *strip-mine* the land by maximizing its short-term production over its long-term value.<sup>1142</sup> This is why, he contends, formalization would create the right incentives for informal miners to invest in their land and preserve the environment.<sup>1143</sup>

In light of the above, it is clear that de Soto regards formalization as an end-result, rather than the initial step in a long transition process from the extralegal to the legal.<sup>1144</sup> He wrongly assumes that the title itself will internalize miners’ externalities, including the

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PAYNE, ALAIN DURAND-LASSERVE, AND CAROLE RAKODI, *supra* note 1134 at 455; Musembi, *supra* note 1111 at 1465; Merrill, *supra* note 1137 at 114.

<sup>1139</sup> Hilson et al., *supra* note 20 at 88.

<sup>1140</sup> Correspondence with representatives of Banco de Crédito del Peru and Interbank (on file with author) (May, 2019).

<sup>1141</sup> See Hernando de Soto, *The Amazon is Not Avatar*, in OECD DEVELOPMENT CO-OPERATION REPORT 2011, 86, 79-90, (2011).

<sup>1142</sup> See Hernando de Soto, *Dead Capital and the Poor*, 21 SAIS REVIEW 33, 13–43 (2001).

<sup>1143</sup> See HERNANDO DE SOTO, *supra* note 1141 at 86.

<sup>1144</sup> See e.g. Daniel W. Bromley, *Formalising property relations in the developing world: The wrong prescription for the wrong malady*, 26 LAND USE POLICY 20–27, 21 (2009); THE INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, *supra* note 16 at 49; Siegel and Veiga, *supra* note 12 at 53; see also Chen, *supra* note 110 at 169 (“There is no single overarching policy intervention to address the concerns associated with the informal economy—a range of interventions need to be considered and implemented”); Titus Sauerwein, *Formalizing Artisanal and Small-scale Gold Mining A Case Study of Cote d’Ivoire*, 2017 (“[De Soto] assumes that even unaided formalization can lead to economic growth and poverty reduction, because an expansion of the legal framework enables people to transfer their possession into assets. Because formalization is treated as a product, rather than a process, implementation of the policy framework is always ad hoc”); Murtazashvili and Murtazashvili, *supra* note 156 at 252 (“[L]egal titling is not a magic bullet”).

environmental cost of pouring mining tailings into rivers and invading national parks, rainforests, indigenous lands, or archaeological sites. Worse still, many of the informal settlements he purports to regularize are located in dangerous locations (floodplains or steep slopes) or environmentally sensitive areas, rendering the formalization process much more complex, risky, and perhaps impracticable.<sup>1145</sup>

Scholars agree that, “formalization is a multidimensional and multi-actor process that requires the integration of policies, and strong coordination between institutions and other stakeholders.”<sup>1146</sup> Titling is thus just one dimension of a problem that requires other enabling conditions<sup>1147</sup> or complementary reforms.<sup>1148</sup> The success of the formalization program should thus not be solely defined “by numbers of miners legalized, but rather by the establishment of a long-term process leading to ASM working under legal titles, and progressively complying with technical, legal, environmental, labor and trading requirements.”<sup>1149</sup> In the absence of such enabling conditions and reforms, formalization titles “are but a hollow gift that cynical governments can hand out as it happens to suit their urgent political needs.”<sup>1150</sup>

As argued earlier, one of the main challenges in addressing informality in ASM is the fact that it provides economic support to significant numbers of people in otherwise economically depressed areas. A formalization wave could result in fewer entrants to ASM, which in turn could spark social turmoil and instability in light of massive layoffs. As the La Rinconada case study shows, the mining rents that the mining settlement produces

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<sup>1145</sup> See generally Rose, *supra* note 948; King, *supra* note 1098 at 440–441.

<sup>1146</sup> SAMUEL J. SPIEGEL, *supra* note 33 at 13.

<sup>1147</sup> See Hilson et al., *supra* note 49 at 260 (citing the United Nations Environmental Program); Siwale and Siwale, *supra* note 1122 at 193.

<sup>1148</sup> See Woodruff, *supra* note 1092 at 1223.

<sup>1149</sup> JONG, *supra* note 67 (citing Echevarria).

<sup>1150</sup> Bromley, *supra* note 1144 at 22.



continue to attract new entrants, but there are simply too many people exploiting a limited resource and no rules limiting new entrants.<sup>1151</sup> Unlike the CGR, miners in La Rinconada have not devised a *sufficiency* principle that would limit access to new entrants when it becomes impractical to exploit the deposit.<sup>1152</sup>

Another important policy concern is environmental protection. Concerning mercury exposure, in particular, ASM miners do not have technical or financial assistance to access better technology and upgrade their operational standards. Ironically, simple, and non-expensive technological adjustments, such as using a retort during the burning of a mercury-gold amalgam, can positively impact not only the environment, but also human health. Women and children in particular are the main victims of the lack of information concerning mercury use,<sup>1153</sup> which further reflects the asymmetries of power in the sector.<sup>1154</sup> Yet, when interviewers confront de Soto with the environmental impacts of informal mining and the risks of his formalization program, he responds ambiguously that “formalization is a *political* act, not a *technical* one.”<sup>1155</sup>

In sum, following De Jong, policymakers should surmount the legalist bias that takes formalization as an end-result, and rather embrace ASM *professionalization*

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<sup>1151</sup> Cf. H. Scott Gordon, *The Economic Theory of a Common-Property Resource: The Fishery*, 53 *BLTN MATHCAL BIO.* 132 (1991) (“This is why fishermen are not wealthy, despite the fact that the fishery resources of the sea are the richest and most indestructible available to man. By and large, the only fisherman who becomes rich is one who makes a lucky catch or one who participates in a fishery that is put under a form of social control that turns the open resource into property rights”).

<sup>1152</sup> Cf. SCHORR, *supra* note 1023 at 18.

<sup>1153</sup> See Marcello M. Veiga and Christian Beinhoff, *supra* note 62 at 49.

<sup>1154</sup> See Verbrugge, *supra* note 20 at 1026.

<sup>1155</sup> Debate del Ministro del Ambiente, Manuel Pulgar-Vidal, con Hernando de Soto, Presidente del ILD, *supra* note 1082; In a recent interview, de Soto claimed that “informal miners do not pollute”. COMBUTTERS, *supra* note 220.

strategies that “seek to build in policies and programs that improve the way the activity is practiced but also its impacts at all levels.”<sup>1156</sup>

## **8. ASM Is Not LSM**

Perhaps one of the Commission’s most conspicuous proposal is its call for the expansion of ASM-activities from local to global markets.<sup>1157</sup> Since only 1.2 percent of Peru’s territory is currently used for mining activities, the Commission argues that informal miners should be entitled to compete with LSM companies in the remaining 98.8 percent.<sup>1158</sup> Even if we wrongly assume that 98.8 percent of Peruvian territory is available for mining prospecting (e.g. mining is not allowed in national parks, archaeological sites, urban peripheries, or in areas with preexisting mining concessions), to consider that the ASM sector can compete with LSM companies is irresponsible.

On the one hand, without technical support, environmental stewardship, and finance, the possibility of converting informal miners into LSM prospectors overnight is a populist move that could aggravate Peru’s delicate environment. On the other hand, LSM companies comply with stringent licensing and environmental standards, taxes, royalties, and employment obligations that go far beyond the existing requirements for ASM. For example, LSM companies must file an exhaustive EIA, which includes public participation engagement, and a mining closure plan that must back up all remediation activities with

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<sup>1156</sup> JONG, *supra* note 67 at 5.

<sup>1157</sup> Debate del Ministro del Ambiente, Manuel Pulgar-Vidal, con Hernando de Soto, Presidente del ILD, *supra* note 968.; Institute for Liberty and Democracy (ILD) and Federación Nacional de Mineros Artesanales del Perú (FENAMARPE), *supra* note 146 (“[For miners the] aim is to shorten the distance between Peru and North America, where they drill a thousand wells to Latin America’s one, and therefore their wealth is real and not a distant potential”).

<sup>1158</sup> See Institute for Liberty and Democracy (ILD) and Federación Nacional de Mineros Artesanales del Perú (FENAMARPE), *supra* note 146.

finance throughout the lifetime of the mine, among other obligations. By contrast, the ASM sector is exempted from said requirements precisely in light of its alleged low impact and rudimentary processes.

To be clear, ASM is not barred from upgrading into LSM operations for cultural reasons, racial backlash, or discriminatory laws, as the Commission and de Soto imply. What stops ASM from becoming LSM is the fulfillment of minimum legal requisites and standards, which require *inter alia*: filing a mining claim, obtaining surface rights, securing environmental permits, implementing environmental, health and safety obligations, and respecting employment laws.<sup>1159</sup> In this line of reasoning, it seems contradictory that while de Soto advocates for more economic opportunities for the ASM sector, at the same time he demands tax benefits for informal miners.

Finally, transforming small-scale activities into dynamic economic poles might be desirable “but it will not occur through simple removal of state controls without sustained programs in support of this aim.”<sup>1160</sup> In consequence, transforming ASM into a thriving sector requires more than formalization titles.

## **9. The ASM Sector is Unlike Any Other Informal Sector**

Since the 1980s, de Soto’s ideas on land titling have been implemented by both developing countries and multilateral banks to foster the formalization of rural and urban lands.<sup>1161</sup> His titling recipe has also been considered in other sectors, such as public

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<sup>1159</sup> See generally SOCIEDAD NACIONAL DE MINERÍA, PETRÓLEO Y ENERGÍA (SNMPE), *Peru Mining Investment Handbook* (2017), <http://www.snmpe.org.pe/informes-y-publicaciones/manuales-de-inversion/manuales-de-inversion-del-sector-minero/2935-manual-de-inversion-en-ingles.html>.

<sup>1160</sup> Portes and Schauffler, *supra* note 97 at 56.

<sup>1161</sup> See Eduardo M. Peñalver, *The Cost of Regulation or the Consequences of Poverty? Progressive lessons from de Soto*, D. Benjamin Barros (Ed) Hernando de Soto and Property in the Market Economy, *Ashgate*,

transportation and street vending.<sup>1162</sup> Nonetheless, the ASM sector is much less manageable than any other of those informal settings. What makes it so unique? Unlike other sectors, ASM: is conducted in the margins of the state (that is, rural and remote areas with little or no state presence); is highly mobile and transient (miners tend to reject fee-simple rights and opt for more flexible arrangements according to mining's hit and run character); involves highly risky and uncertain livelihoods (miners can make fortunes or go broke overnight); encompasses the discovery of finite resources such as gold (wealth is not produced but extracted); and poses serious environmental and public health externalities.

As the World Bank notes, "Few other sectors have so many diverse points of entry— income generation, health, governance, corruption and transparency, institution building, natural resources management, displacement and migration, and conflict mitigation—into the policy spectrum."<sup>1163</sup> This is why the ASM sector entails an "exceptionally unique and arguably more complex brand of informality."<sup>1164</sup>

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Classic property rights scholarship resorts to storytelling to explain the origins of property.<sup>1165</sup> Professor Carol M. Rose has long pointed out that these stories are, in fact, modern fables or noble lies rather than exhaustive historical accounts.<sup>1166</sup> Hernando de Soto's account on the California Gold Rush and his depiction of the *little man in the shafts*

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2010 at 7; On de Soto and multilateral organizations *see e.g.* Edesio Fernandes, *Una lectura crítica a Hernando de Soto*, in IRREGULAR 216 (Clara Eugenia Salazar ed., 2012).

<sup>1162</sup> *See* Dyal-Chand, *supra* note 1095.

<sup>1163</sup> WORLD BANK, *The Millennium Development Goals and Small-Scale Mining: A Conference for Forging Partnerships for Action. Workshop Report 10* (2015).

<sup>1164</sup> Hilson et al., *supra* note 20 at 82.

<sup>1165</sup> *See* Carol M. Rose, *Property as Storytelling: Perspectives from Game Theory, Narrative Theory, Feminist Theory*, 2 YALE J.L. & HUMAN. 37-39, 37-58 (1990).

<sup>1166</sup> *See id.* at 52-53.

in the ASM sector can be framed as another smooth tale. To paraphrase Nobel laureate Mario Vargas Llosa, de Soto is a better storyteller than many novelists.<sup>1167</sup> Yet, he has cherry-picked the passing of the United States federal mining laws that followed the CGR to advocate for a bottom-up formal property reform in Peru. Nonetheless, the legalization of California’s mining codes responded to a specific time and space and does not provide a template for the expanding ASM sector.

Formal property rights are key for economic development, but are not enough to bring informal miners from the extralegal to the legal sector.<sup>1168</sup> Formalization strategies that use property rights to tackle ASM represent a false panacea because they will not automatically alleviate the perils associated with this sector nor provide miners with capital, technology, and environmental stewardship to upgrade their operations and internalize externalities. By overlooking the existing socio-economic divergences and power asymmetries in ASM, as well as indispensable ancillary reforms, titling programs risk becoming cynical government gifts<sup>1169</sup> or end up legalizing an informal right to pollute.

Worse still, the application of blanket, all-encompassing solutions can aggravate existing inequalities or create additional entry barriers.<sup>1170</sup> In a context where miners benefit from their own informal arrangements, which are considered fair, legitimate, and secure,

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<sup>1167</sup> See HERNANDO DE SOTO, *supra* note 1109. Foreword by Mario Vargas Llosa. See also Otto, *supra* note 161 at 390.

<sup>1168</sup> See e.g. Hendrix, *supra* note 961 at 185 (“[T]itling may have positive economic benefits contingent upon other conditions also being met”); Woodruff, *supra* note 1092 at 1222–23 (“[L]and titling by itself is not likely to have much effect. Titling must be followed by a series of politically challenging steps”); Manders, *supra* note 1102 at 180; The Economist, *Of property and poverty. Land titling is a good thing, but it does not in itself create capitalism* (2006), <https://www.economist.com/leaders/2006/08/24/of-property-and-poverty>; Hendrix, *supra* note 961 at 223 (“Land titling is not a panacea. It is likely to impact each country differently, depending upon custom, geography, resources, law, and history”); Dyal-Chand, *supra* note 1095 at 99.

<sup>1169</sup> See Bromley, *supra* note 1144 at 22.

<sup>1170</sup> See e.g. Putzel et al., *supra* note 52 at 464; Clausen, Barreto, and Attaran, *supra* note 71 at 21; Natalia Ryzhova & Elena Lee, *Gold, the State and Market Actors: Legal vs. Illegal Practices of Interaction*, 15 INNER ASIA 5–32, 15 (2013).

operating outside legal frameworks is the natural way of conducting their businesses. In my view, governments need to reconsider the incentives their formalization programs offer in light of miner's demand for mobility and flexibility. Considering labor relations rather than property relations constitute the most pressing challenge in contemporary ASM, I contend that scholars must look elsewhere for solutions.

## CHAPTER 7. LA RINCONADA AND THE FRONTIER NARRATIVE

*<<When we took office, we found a state that had historically suffered from soroche (altitude disease). A state that only remained in the coastal area and refused to climb the Andes or the Amazon>>.*  
Former President Ollanta Humala, 2014<sup>1171</sup>

Since Turner's frontier thesis was published in the late nineteenth century, an extensive literature on frontiers has developed, comprising many disciplines and approaches.<sup>1172</sup> In its spatial dimension, frontiers are generally remote, isolated, unoccupied, rural spaces away from the political and economic centers of the country, where communication and access are generally difficult.<sup>1173</sup> Located in the *margins of the state*,<sup>1174</sup> frontiers are territories that lie outside government control<sup>1175</sup> or where its authority is weak or fragmented.<sup>1176</sup>

Frontiers in the twentieth century are still important for economic and social reasons, particularly for disadvantaged populations and risk-takers.<sup>1177</sup> Like many other ASM camps in the Global South,<sup>1178</sup> La Rinconada is usually conceptualized as a gold-

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<sup>1171</sup> Diario Peru21, Ollanta Humala: "Cuando llegamos encontramos un Estado con soroche, October 4, 2014, <https://peru21.pe/politica/ollanta-humala-llegamos-encontramos-soroche-188916-noticia/>.

<sup>1172</sup> See Michael Eilenberg, *Frontier constellations: agrarian expansion and sovereignty on the Indonesian-Malaysian border*, 41 THE JOURNAL OF PEASANT STUDIES, 41; MICHAEL EILENBERG, AT THE EDGES OF STATES : DYNAMICS OF STATE FORMATION IN THE INDONESIAN BORDERLANDS 43 (2012).

<sup>1173</sup> See Marjo de Theije and Ton Salman, *Conflicts in marginal locations: Small-scale gold-mining in the Amazon*, in BETWEEN THE PLOUGH AND THE PICK: INFORMAL ARTISANAL AND SMALL-SCALE MINING IN THE CONTEMPORARY WORLD 261–274, 263–64 (2018); O'Faircheallaigh and Corbett, *supra* note 32.

<sup>1174</sup> See generally VEENA DAS & DEBORAH POOLE, ANTHROPOLOGY IN THE MARGINS: COMPARATIVE ETHNOGRAPHIES (2004).

<sup>1175</sup> See Peluso, *supra* note 1104 at 14.

<sup>1176</sup> See Verbrugge, *supra* note 20 at 51.

<sup>1177</sup> See ALSTON, *supra* note 123, at 2.

<sup>1178</sup> ASM gold-seeking has long associations with frontier landscapes. See Peluso, *supra* note 1104 at 400. Yakovleva, *supra* note 17 at 32; Fisher, *supra* note 63 at 736; Siegel and Veiga, *supra* note 12 at 52; Theije et al., *supra* note 60 at 130–31; O'Faircheallaigh and Corbett, *supra* note 32.

mining frontier,<sup>1179</sup> considering its inhospitable and extremely high location, its extreme weather conditions, and alleged growing violence and lawlessness.

In this section, I use different frontier lenses to shed light on La Rinconada's mining settlement. First, challenging the prevalent narrative that theorizes La Rinconada as a remote, inaccessible, and dangerous gold-mining frontier, I argue that it is rather an *imagined* frontier landscape. Second, far from constituting an unruly geography, I show that La Rinconada represents a patchworked frontier landscape where the formal, informal, and illegal worlds intermingle. Finally, discarding idealized versions of the nineteenth-century gold rushes, I posit that La Rinconada lacks the basic conditions to favor the development of an artisanal mining frontier democracy.

#### A. *An (Imagined) Frontier Landscape*

In the late nineteenth century, in a context of economic reconstruction due to the Pacific War, Lima's urban elites turned to the Amazon as a source of exuberant bounty ready to be taken.<sup>1180</sup> The domestication of the Amazonian land and the expansion of Peru's internal frontier through roads, railways, and the establishment of colonies and industries became a national priority,<sup>1181</sup> and a way of unifying and modernizing the country.<sup>1182</sup> Yet, portrayed by the media as a wild, archaic, and pre-modern, the Amazonian natives elicited both terror and fascination.<sup>1183</sup> This process of exoticization—which encompassed stories

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<sup>1179</sup> See Larmer, *supra* note 595; El Mundo, *supra* note 10.

<sup>1180</sup> See Juan Carlos La Serna, *Visiones del progreso, otredad y fronteras internas en la construcción de la Amazonía peruana. Una aproximación a los discursos visuales sobre la montaña a fines del siglo XIX*, in *IMAGINACIÓN VISUAL Y CULTURA EN EL PERÚ* 221–246, 232 (2011); see also CONTRERAS AND CUETO, *supra* note 529 at 204–08.

<sup>1181</sup> See Juan Carlos La Serna, *supra* note 1180 at 223, 232.

<sup>1182</sup> See *id.* at 232.

<sup>1183</sup> See *id.* at 241.



of natives' cannibalism and merciless violence<sup>1184</sup>—was used politically to justify assimilation policies and military incursions in the name of progress and civilization.<sup>1185</sup>

Though a hundred years apart, I argue that Peru's contemporary urban elites have resorted to similar exoticization processes to serve a different purpose: keep the state off the mines. In the media and urban circles, La Rinconada is usually framed as a gold-mining frontier. It is located in an inhospitable, barren, and extremely high and remote area of the Altiplano. In addition, the state is barely present through decaying infrastructure, and it is considered as a perilous and unruly geography. Despite this frontier narrative, I treat La Rinconada as an *imagined* frontier landscape. I claim that the spatialization of this mining settlement as a remote, inaccessible, and dangerous geography is subjective and has no factual support. In my view, this settlement is *perceived* as frontier due to prevalent legends—emanating from the mining center outwards—designed to keep the government off the mines and work undisturbed.<sup>1186</sup> I expand this argument next.

First, La Rinconada is not inaccessible (at least not anymore). Driving from Juliaca takes two and a half hours (*see* Figure 1). Over the last decade, the town has been serviced with electricity, paved roads, and even 4G coverage. It has the minimum infrastructure and connectivity to keep the mine running 24/7. Of course, as described earlier, the state has failed to equip and maintain the police station, health post, and public school, as well as to deploy water and sewage connections. My interpretation is that, given that the latter facilities are not related to gold mining and processing itself, they have not been prioritized. Mining is what keeps the village running.

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<sup>1184</sup> See Oscar Espinosa, *¿Guerreros o salvajes? Los usos políticos de la imagen de los indígenas amazónicos en el espacio público mediático*, in *IMAGINACIÓN VISUAL Y CULTURA EN EL PERÚ* 247–262, 256–57 (2011).

<sup>1185</sup> See Juan Carlos La Serna, *supra* note 1180 at 226; Oscar Espinosa, *supra* note 1184 at 255.

<sup>1186</sup> Cf. Salman, *supra* note 75.

Second, the mining center is far from invisible (it can be seen on Google maps!). Unlike itinerant ASM camps in Amazonia, La Rinconada has been operating for more than six decades, in the same area, without government overview. “The national government knows exactly where informal miners are! The problem is corruption,” claims Alegre.<sup>1187</sup> Similarly, for Pedro Solano, the national government has a double standard because “while informal gold-mining creates income, employment, and expands consumption, at the same, the government is well aware that all this wealth is illegally produced.”<sup>1188</sup> Yet, it is sometimes easier to turn a blind eye. Rendering informal activities *invisible* to the eye of the law enforcement agent is a strategy that publics choose to use and has been reported elsewhere.<sup>1189</sup>

Third, an extensive network of actors has profited from the enormous and diverse demand of commodities stemming from this mushrooming mining center, including machinery, equipment, mercury, beer, and food. One can find anything in La Rinconada’s street-vending posts. From mining tools, gear, and uniforms, to smart television sets and smart cellphones, to birthday cakes. Getting back and forth from Juliaca costs USD 5 on board of modern Mercedes Benz minibuses operated by informal transportation companies.<sup>1190</sup> Wiring money to Juliaca costs USD 7. Business networks—which are hardly invisible or undetected at the local and regional levels—have thus created and entrenched economic interests.

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<sup>1187</sup> Interview with Ada Alegre, *supra* note 309; *see also* Interview with Pedro Solano, *supra* note 265 (“The State is well aware of ASM, even at its margin”).

<sup>1188</sup> Interview with Pedro Solano, *supra* note 265.

<sup>1189</sup> DURAND, *supra* note 116.

<sup>1190</sup> *Cf.* Martin Enserink, *supra* note 593 at 1101.

The implications are twofold. At the subnational level, La Rinconada is a place of intensive interaction through commerce, business, and employment opportunities. Mining and non-mining rents have lured politicians<sup>1191</sup> and businessmen into the village, who have developed their own interests and agenda, sometimes in the shadow,<sup>1192</sup> and coopted the regional and local officials.<sup>1193</sup> Additionally, powerful contractors from La Rinconada have managed to find their way into politics and at least two of them were elected as congressmen in the early 2000s, Tommy Cenzano (2006-2011) and Francisco Ccama (2011-2016).

Consequently, La Rinconada's informal bourgeoisie composed of powerful contractors and a local elite, have managed to influence the destiny of this mining settlement,<sup>1194</sup> sometimes by coopting subnational government agents to maintain the *status quo*. They have lobbied for public investment in connectivity (hence the deployment of electricity, roads, or cellphone towers) and managed to keep the law enforcement agencies off the mines. Powerful contractors and local elites want no taxes, no regulations, and no government interference with their employment norms.<sup>1195</sup> In my view, legends about the mining center's perils, viciousness, and ruthlessness, which include human sacrifices and miners carrying guns on their waists, serve this purpose.

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<sup>1191</sup> Presidential candidates regularly visit the village during their political campaigns. See Rumbominero, *Keiko Fujimori pacta con mineros informales en visita a región Puno* (2016), <https://www.rumbominero.com/noticias/mineria/keiko-fujimori-pacta-con-mineros-informales-en-visita-region-puno/> (last visited Mar 10, 2019).

<sup>1192</sup> Though it would require a more in-depth assessment, there are latent indicia of a shadow state in La Rinconada. On shadow economies, see e.g. Rosaleen Duffy, *Global Environmental Governance and the Challenge of Shadow States: The Impact of Illicit Sapphire Mining in Madagascar*, 36 DEVELOPMENT AND CHANGE 825–843 (2005); Peluso, *supra* note 1104 at 401; FRIEDRICH SCHNEIDER, THE SHADOW ECONOMY : AN INTERNATIONAL SURVEY (2013).

<sup>1193</sup> See Damonte, *supra* note 84 at 957.

<sup>1194</sup> See Melissa Cordova, *Estrategias de comunicación en la formalización de la pequeña minería y minería artesanal en el departamento de Puno*, 2018.

<sup>1195</sup> Cf. Salman, *supra* note 75 at 1135.

At the national level, though, La Rinconada is a place of *imagined* remoteness, inaccessibility, and danger. While the national government has deployed different initiatives to integrate this mining center into legality, all of them have failed. Although the formalization team of MINEM regularly visits the area,<sup>1196</sup> labor inspections have gone wrong;<sup>1197</sup> capacity building programs have been intermittent and insufficient;<sup>1198</sup> the social conflicts experts from MINEM or the Ministry of Environment have not visited the area in the past five years;<sup>1199</sup> and MINEM’s roster designed to register lottery miners (*Padrón de Terceras Personas Naturales y Seleccionadores Manuales de Oro*) has been ill-suited, evidencing no results to date.<sup>1200</sup> In summary, the actions and strategies from the national government to regulate the mining center have been unarticulated, inconsistent, and “based on unrealistic goals”.<sup>1201</sup>

Although I acknowledge that the presence of the Peruvian government throughout its territory is unequal as it has always privileged the development of Lima,<sup>1202</sup> it appears that the national government—including MINEM, the Ministry of Environment, the

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<sup>1196</sup> According to the Ministry of Energy and Mines, the Direction of ASM Formalization conducted 1 visit in 2015, 0 in 2016, 20 in 2017, 11 in 2018, and 9 in 2019. See *Respuesta a la Solicitud de Acceso a la Información Pública No. 2979312* (2019).

<sup>1197</sup> In December 2015, SUNAFIL, conducted inspections in La Rinconada. However, the activities were suspended for safety reasons. See *Ministry of Labor of Peru, Informe Técnico 17-2016-MTPE/2/15* (2016) (on file with author). Nonetheless, SUNAFIL reports having three open cases of labor law infringements in La Rinconada in 2019, though access to the dossier is restricted considering that the cases are under investigation. See *Informe 258-2019-SUNAFIL/INII* dated 10/17/2019 (on file with author).

<sup>1198</sup> When asked for their activities conducted in La Rinconada between 2014-2019, the Ministry of Labor reported conducting four sensitization workshops on child labor and forced labor in La Rinconada during 2014; but has not conducted another since. See *also id.* See *Respuesta a la Solicitud de Acceso a la Información Pública No. 149921* (2019). When asked the same question, the Ombudsman Office reported conducting one sensitization activity in La Rinconada in June 2019. See *Respuesta a la Solicitud de Acceso a la Información Pública No. 023791* (2019).

<sup>1199</sup> See *Respuesta a la Solicitud de Acceso a la Información Pública No. 2979313* (MINEM) and *No. 2019-052694* (MINAM) (2019).

<sup>1200</sup> What is more, MINEM commissioned one environmental baseline study and explored a relocation alternative for the urban sector of the village (see Appendix 13), but all plans are halted. See MIGUEL EGO-AGUIRRE, *supra* note 717; GREEN BUILDING COMPANY AND URBES, *supra* note 645.

<sup>1201</sup> Interview with Pedro Solano, *supra* note 265; Interview with Alicia Abanto, *supra* note 88.

<sup>1202</sup> Cf. PODER Y CAMBIO EN LAS REGIONES, *supra* note 7 at 117; DEWIND, *supra* note 541 at 1.

Ministry of Labor, and the labor enforcement agency, SUNAFIL—has forsaken its obligation to control and enforce the law in La Rinconada.<sup>1203</sup> “The government has decided to treat La Rinconada as the Far West, resigning to exercise its powers in a particular territory,” adds Barrantes.<sup>1204</sup> In turn, the government justifies its inaction because “Wherever you find ASM activities, the state does not arrive. It is not a priority, it is far, it is expensive.”<sup>1205</sup> What is more, to quote the former Minister of the Environment, “La Rinconada is socially inaccessible. A law-enforcement intervention would be much more complex than the one we currently have in La Pampa [Madre de Dios]. The government cannot simply open multiple flanks at the same time.”<sup>1206</sup>

In conclusion, the spatialization of La Rinconada as a remote, inaccessible, and dangerous geography is subjective and helps to justify passivity and indifference. In the frontier, government agents are unwilling “to scale the heights, brave the cold, take control.”<sup>1207</sup> Simply put, in the eyes of Lima-based bureaucrats, La Rinconada is too high, too cold, too large, too conflictive to tame.

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<sup>1203</sup> To be honest, though, in my conversation with OEFA, its Executive Director mentioned that this law enforcement agency was preparing itself to intervene in La Rinconada should it fall under its purview (i.e. if CMA loses its PPM registry and falls under the LSM category). This was my first interview with a high-level government official in which s/he seemed willing to tackle the problem and do something about La Rinconada. Telephone interview with Tessa Torres, *supra* note 665.

<sup>1204</sup> Telephone interview with Roxana Barrantes, *supra* note 296.

<sup>1205</sup> Telephone interview with Gonzalo Tamayo, *supra* note 221.

<sup>1206</sup> Telephone interview with Lucía Ruiz, *supra* note 268. Interview with Iris Olivera and Ciro Salazar, *supra* note 49 (“The Ministry of Labor has thrown in the towel in La Rinconada”).

<sup>1207</sup> Arana and Nemirofsky, *supra* note 4 at 31.

## B. A Patchworked Frontier Landscape

Long perceived as lawless or anarchic places,<sup>1208</sup> ASM landscapes are not actually completely devoid of rules.<sup>1209</sup> Rather, governance relies on rulemaking by non-state actors and develops at multiple levels.<sup>1210</sup> In this section, I claim that La Rinconada embodies a symbiosis of the formal, informal, and illegal worlds, where legal systems engage and dialogue with each other.<sup>1211</sup> This *engaging* can be framed as a *patchworked* frontier, that is to say, a “fragmented and overlapping mosaic[] of resource governance and territorial control,”<sup>1212</sup> where “different systems exist and are meaningful for different groups of people, have authority for different groups of people, stand in relation to one another, and interact.”<sup>1213</sup> Figure 16 depicts this *engaging* in La Rinconada.

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<sup>1208</sup> Cf. Steven Van Bockstael, *The persistence of informality: Perspectives on the future of artisanal mining in Liberia*, 62 FUTURES 10–20, 11 (2014) (“Contrary to what is sometimes suggested in policy analyses, these mining areas do not represent ‘ungoverned’ territories per se but are rather spaces of constant interaction and competition between local government officials, miners, traders and financiers, and non-mining community members”); Marjo de Theije and Ton Salman, *supra* note 1173 at 263; THOMAS RISSE (ED.), GOVERNANCE WITHOUT A STATE?: POLICIES AND POLITICS IN AREAS OF LIMITED STATEHOOD 9 (c2011).

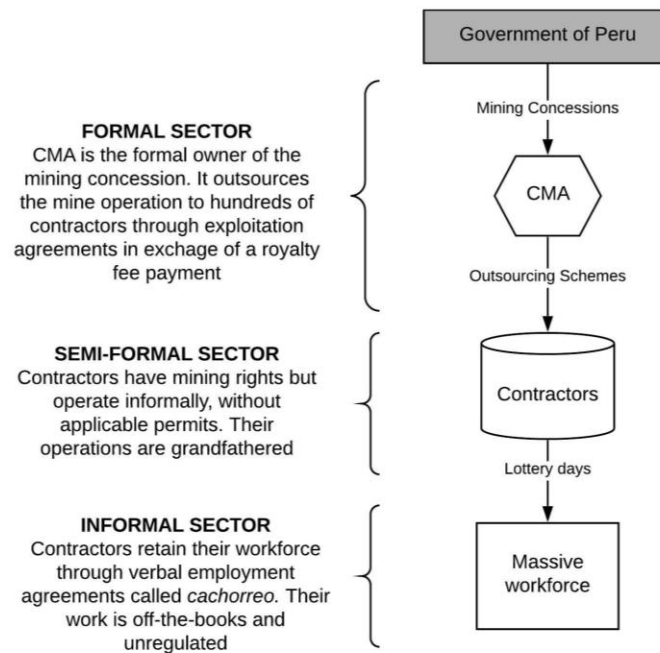
<sup>1209</sup> Cf. Verbrugge, *supra* note 20 (“Images of an exclusively informal ASM segment do not always correspond to realities on the ground. Instead [...] the sector has evolved into a highly intertwined group of semi-formal sectors operating with various degrees of legal registrations”); *Id.* at 1029.; Muriel Côte & Benedikt Korf, *Making Concessions: Extractive Enclaves, Entangled Capitalism and Regulative Pluralism at the Gold Mining Frontier in Burkina Faso*, 101 WORLD DEVELOPMENT 466–476, 475 (2018) (“The resource extraction regimes of local sites at the global mining frontier are characterized by regulative pluralism”); Theije et al., *supra* note 60 at 131.

<sup>1210</sup> See THOMAS RISSE (ED.), *supra* note 1208 at 2–3.

<sup>1211</sup> See Theije et al., *supra* note 60 at 131.

<sup>1212</sup> See Barney, *supra* note 61 at 147; *see also* Theije et al., *supra* note 60 at 131 (“In the legal anthropological literature, the mixing and mutual influencing of different legal orders, changing behaviour and thinking is called interlegality”).

<sup>1213</sup> Theije et al., *supra* note 60 at 131; *see also* Cortés-McPherson, *supra* note 21 at 4; EILENBERG, *supra* note 1172 at 292 (“[In the frontier] the division between formal and informal, legal and illegal, state and society [has largely blurred]”).



**Figure 16. La Rinconada’s patchworked frontier**

(Source: By author)

## 1. Formal Law

La Rinconada is not devoid of formal (centralized) law. The formal law is latent in different bureaucratic procedures. For example, CMA holds legal title to the mining deposit as the sole owner of the mining concessions, for which it has to pay annual good standing fees to the government (i.e. INGEMMET). CMA is also officially registered as a small-scale mining company (PPM) before MINEM—a registration that it must renovate every three years—and holds a valid EIA to operate the mine. As regards the contractors, 478 of them have entered into legally binding mining lease agreements with CMA, which are notarized and registered before the public record. All these state-recognized administrative interactions—what Aradhana Sharma & Akhil Gupta call the *cultural constitution of*

*states*<sup>1214</sup>—prove that (at least some) mining and environmental regulations are somehow in force in La Rinconada.

The sphere of everyday practices is the primary arena in which people learn something about the State... *Proceduralism*, the banal repetition of everyday actions, and the mundane realities of following precedent, reproduce *the State* as an institution across time and space [...] It is through such mundane activities that the primacy of the State is reproduced and its superiority over other social institutions is established. And it is through the daily routines of proceduralism and precedent setting that social inequalities, such as those of class and gender, are reproduced and maintained.<sup>1215</sup>

In the absence of a functioning government in La Rinconada or its vicinities, *proceduralism* is performed in urban centers such as the city of Puno (where the offices of the regional government, notaries, and the public registry are located) or Lima (where the offices of INGEMMET, MINEM and the Ministry of Environment are located). I claim that local elites have monopolized or captured these state interactions,<sup>1216</sup> including the application to GP's ASM formalization program, showing how formality and power go hand in hand.<sup>1217</sup> As Durand puts it, “[access to] formality provides power and privilege, especially for those who hold it, such as economic elites and government officials”.<sup>1218</sup> In fact, “only the happy few who command the financial capital and political connections necessary to surmount these various barriers to entry into the formal mining economy.”<sup>1219</sup>

Figure 17 depicts the complex power and formal/informal relations between the main actors in La Rinconada, showing the heterogeneity of its protagonists. The further to

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<sup>1214</sup> See ARADHANA SHARMA & AKHIL GUPTA, *THE ANTHROPOLOGY OF THE STATE: A READER* 11 (2009).

<sup>1215</sup> *Id.* at 11, 13.

<sup>1216</sup> *Cf.* Verbrugge, *supra* note 20 at 1028–29; Putzel et al., *supra* note 52 at 464.

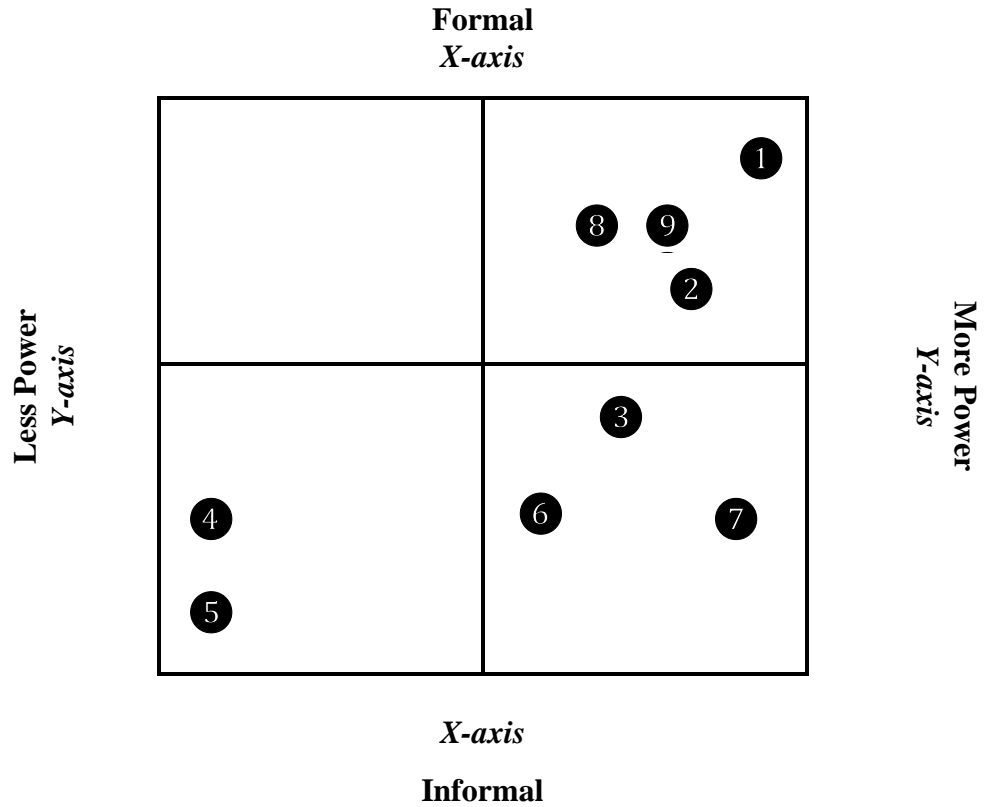
<sup>1217</sup> *Cf.* Fisher, *supra* note 63 at 755 (“For the majority, a lack of property ownership and entitlement to mineral resources intersects with forms of deprivation that are enhanced by labour divisions and power relations within artisanal mining”).

<sup>1218</sup> DURAND, *supra* note 116. (translation by author).

<sup>1219</sup> *Cf.* Verbrugge and Besmanos, *supra* note 13 at 135.



the top one moves along the X-axis, the more *formal* the actor is; the further to the right one moves along the Y-axis, the more *power* the actor has. Evidently, the more powerful the actor is, the more access to formal law it has.



<b>Legend</b>	
①	CMA—the owner of the mining concessions
②	Contractors—the 478 operators of outsourced sections of the mining concession
③	Foreman or <i>capataz</i> appointed by each contractors
④	Workers under the <i>cachorreo</i> oral employment agreement
⑤	<i>Pallaqueras</i> —women that gather discarded ore rocks from steep mountains
⑥	<i>Quimbalete</i> , <i>trapiche</i> or <i>molinos</i> owners (processing mills)
⑦	<i>Acopiadores</i> —smelter shop owners
⑧	<i>Cooperativas</i> —associations of contractors
⑨	CECOMIRL —association of cooperatives

**Figure 17. Power and Formality in La Rinconada**

(Source: By author)<sup>1220</sup>

<sup>1220</sup> In constructing this figure, I was inspired from O’Faircheallaigh and Corbett, *supra* note 32 at 962.

On the other hand, in light of the GP's formalization program, CMA operations are deemed *formal* since it holds mining title and necessary permits to operate. However, instead of complying with expensive and burdensome mining, tax, employment, and environmental, health and safety regulations, CMA has managed to use the formal law and its agency to bypass and scape its legal liability over the contractors and workforce by outsourcing sections of the deposit to migrant workers.<sup>1221</sup> While CMA is jointly liable for employment rights, accidents, and pollution produced from its mineral property, even if they are outsourced, in practice it has no accountability.

## **2. Informal Law**

By contrast, the contractors' situation fits into a gray area, which I label as semi-formality. They can be deemed formal as they do hold (formal) title to exploit the mine tunnels in light of their (individual) mining lease agreements with CMA. At the same time, though, they are informal because they lack the government permits to operate individually. Their activities are grandfathered but have not completed the formalization process yet.

Similarly, contractors operate informally in terms of tax and labor law. They retain their workforce informally, circumventing applicable labor and environmental, health and safety regulations. Keeping these agreements off-the-books is advantageous because contractors allegedly lack the capital to invest in prospecting the tunnels, to plan on their

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<sup>1221</sup> Cf. Theije et al., *supra* note 60 at 133 ("In Suriname most gold is mined in irregular situations. That is, without mining titles. Although the law does not permit it, national entrepreneurs sublet part of their concessions to migrant miners. A whole set of informal rules and regulations then takes effect to organise this subletting of mining plots. These informal arrangements exist outside of the national formal law, but not outside of local rules and laws. It shows that formal law is not the only regulatory system in mining regions and that parallel legal systems co-exist and can be effective").

mining operations<sup>1222</sup> or to grant miners full employee status. “Everyone has to bear the risk,” claims one contractor.<sup>1223</sup> Yet, “the contractor does not face the same risks (rock collapses, accidents due to explosion, etc.) as miners do on a daily basis, and do not take any sort of responsibility in case a miner [...] suffers from an accident or ultimately dies.”<sup>1224</sup>

Finally, the lottery miners’ situation is more delicate: they are neither mine owners (i.e. mining concessionaires) nor contractors (i.e. they do not hold mining lease agreements) nor SER workers (i.e. they do not have a formal or written employment agreement). Officially, then, they fall outside the legal framework. Note that while almost 12,000 *cachorreros* have registered in MINEM’s roster (*Padrón de Terceras Personas Naturales y Seleccionadores Manuales de Oro*), such registration does not amount to the formalization of miners’ employment relationships.

### 3. A patchworked frontier

To conclude, far from a lawlessness gold-mining frontier, La Rinconada has become a *hybrid periphery*<sup>1225</sup> where the formal law (i.e. mining, property and employment rules) is continuously questioned and reinterpreted.<sup>1226</sup> Formal, informal, and illegal rules

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<sup>1222</sup> See GAMARRA, *supra* note 8.

<sup>1223</sup> See *id.*; VERITÉ, *supra* note 595 at 58.

<sup>1224</sup> Robles, *supra* note 696.

<sup>1225</sup> This is consistent with other informal mining settlements. See e.g. Benjamin A. Teschner, *Small-scale mining in Ghana: The government and the galamsey*, 37 RESOURCES POLICY 308–314, 308 (2012) (“[Ghana has] evolved into a highly intertwined group of semi-formal sectors operated with varying degrees of legal registration”); Damonte, *supra* note 331 at 1332 (claiming that state presence in Madre de Dios [Peru] reproduces the hybrid institutions that characterize the margins of the state. These hybrid institutions emerge from socially and culturally accepted beliefs and practices which define the material and moral relations that occur in everyday practices). Van Bockstael, *supra* note 1208 at 11 (“[In Liberia] we find that many miners operate in the gray zone between legal and illegal status”).

<sup>1226</sup> See Damonte, *supra* note 331 at 1316–1325.

overlap and intermingle, creating a *diverse world*<sup>1227</sup> in a “constant negotiation, contestation, and compromise.”<sup>1228</sup> Sometimes, this *engaging* sparks conflict, but other times it helps avoid it.<sup>1229</sup> Therefore, far from a hermetic site, this mining center is permeable to influences and processes from the outside,<sup>1230</sup> especially in connection to mineral supply chains and related services.<sup>1231</sup> La Rinconada is thus a *patchworked* frontier geography, where actors operate within and outside the formal law according to the power they hold.<sup>1232</sup>

### C. *The Artisanal Mining Frontier Democracy*

Contemporary gold rushes around the globe sometimes elicit the development of democratic values to the sites of discovery and the construction of new societies. According to Bryceson, this democratic tendency or ethos related to gold rushes can have a transformative power for societies, making them more socially and ethnically inclusive.<sup>1233</sup>

Bryceson defines *artisanal mining frontier democracy* as

the realization of economic opportunity, class leveling, trust and cooperative interaction amongst manual laborers, arising from their occupational solidarity as migrant artisanal miners and, in some cases, their engagement in collective political protest against external agents seen to be standing in the way of the manifest destiny of their search for gold.<sup>1234</sup>

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<sup>1227</sup> Cf. Lahiri-Dutt, *supra* note 22 at 4.

<sup>1228</sup> Cf. Fitzpatrick, *supra* note 908 at 1008.

<sup>1229</sup> See Theije et al., *supra* note 60 at 143.

<sup>1230</sup> Cf. Niels Fold & Philip Hirsch, *Re-Thinking Frontiers in Southeast Asia: Editorial*, 175 THE GEOGRAPHICAL JOURNAL 95–97, 95 (2009).

<sup>1231</sup> See e.g. Lahiri-Dutt, *supra* note 22 at 5; Cortés-McPherson, *supra* note 21 at 4.

<sup>1232</sup> Cf. Fisher, *supra* note 63 at 755 (“[The frontier is an] ambiguous space in which artisanal miners can operate both within and outside of the law: a space that, on the one hand, enables people to gain employment and income from artisanal mining [particularly gold mining], but on the other hand, perpetuates exploitative labour relations, insecurity and deprivation related to social identity and wider socio-economic inequalities”).

<sup>1233</sup> See Deborah Fahy Bryceson, *supra* note 833 at 55.

<sup>1234</sup> *Id.* at 54.

Three conditions define the existence of an artisanal mining frontier democracy. First, miners voluntarily enter and exit the mining site on a relatively egalitarian manner.<sup>1235</sup> ASM is thus an open-entry activity that welcomes men, experienced and amateur, from all social classes and educational backgrounds.<sup>1236</sup> Second, miners share a strong collective identity based on a “can-do determination and camaraderie.”<sup>1237</sup> These cooperative relations are evidenced in the process of acquiring skills (*learning while doing*), cooperating, and devising their professional norms.<sup>1238</sup> Third, and finally, miners are self-employed and not subject to “waged, bonded, or enslaved labor arrangements imposed by preexisting property ownership and power structures.”<sup>1239</sup>

Next, I compare the CGR to La Rinconada, and I then apply Bryceson’s artisanal mining frontier democracy thesis.

## **1. California Versus La Rinconada Gold Rushes**

Both the California and La Rinconada gold rushes CGR entailed frantic human migration into hazardous and remote areas where gold deposits were located, adopting a lifestyle of hard work and hard play. Early settlers faced long and dangerous expeditions to the site of discovery. In California, travelers risked cholera and starvation,<sup>1240</sup> whereas in Peru, extreme altitude and weather conditions pushed human health to its limits. Miners

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<sup>1235</sup> See *id.* at 33.

<sup>1236</sup> See Bryceson and Geenen, *supra* note 826 at 302, 310 (“All miners need is physical energy and willingness to work under difficult conditions”); MINING AND SOCIAL TRANSFORMATION IN AFRICA, 9 (Deborah Fahy Bryceson et al. eds., 2014).

<sup>1237</sup> Deborah Fahy Bryceson, *supra* note 833 at 51.

<sup>1238</sup> See *id.* at 33.; Bryceson and Geenen, *supra* note 826 at 300.

<sup>1239</sup> Deborah Fahy Bryceson, *supra* note 833 at 33.

<sup>1240</sup> See DOLNICK, *supra* note 1001 at 47; PAUL, *supra* note 995 at 34–35 (describing that the journey to California was so severe that miners never forgot it, if they managed to survive it).

in both episodes shared an analogous risk-taking mindset, inexperience in mining, and a fascination with gold.

In both mining landscapes migrants underwent similar shortcomings in terms of camp life: physical isolation, dispersed settlement system, and economic predominance of mining.<sup>1241</sup> Miners resorted to similar communal leisure activities, evidencing high rates of alcoholism, though work remained the main interest and topic of conversation.<sup>1242</sup> In sum, they endured the worst imaginable living and working conditions, while widespread stories of random fortunes fed their imagination and reinforced their confidence.

In addition, in both gold rushes miners were unattached to their new settlement because they did not perceive it a permanent destiny. In truth, gold rush miners tend to profess loyalty “not to any nation but to gold, wherever it might be found.”<sup>1243</sup> As miners never remained long in one place, gold rush villages represented “communities without a locus.”<sup>1244</sup> In California, miners referred to home as “making their pile,”<sup>1245</sup> whereas in La Rinconada, miners refer to their shacks as “mining camps” (not home).<sup>1246</sup>

Moreover, as masses of workers come in and out of the village, La Rinconada inhabitants are generally disconnected from public or civic affairs.<sup>1247</sup> Pollution is now normalized and tolerated. Considering the mining settlement is erected in squatted land, the adjoining local government (“*municipalidad distrital de Ananea*”) does not receive property taxes and cannot afford to finance basic services, including solid waste

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<sup>1241</sup> Adapted from HERBERT ET AL., *supra* note 834 at 5.

<sup>1242</sup> Adapted from *Id.* at 5.

<sup>1243</sup> ISENBERG, *supra* note 954 at 20.

<sup>1244</sup> William Douglas, *The mining camp as community*, in SOCIAL APPROACHES TO AN INDUSTRIAL PAST: THE ARCHAEOLOGY AND ANTHROPOLOGY OF MINING, 101, 107 (1998).

<sup>1245</sup> See Burns, *supra* note 1021 at 5.

<sup>1246</sup> Interview with Jacinto Flores, *supra* note 278; Pachas, *supra* note 85 at 178 (arguing that in ASM, miners do not regard the exploitation sites as places to live but as places of work).

<sup>1247</sup> See Burns, *supra* note 1021 at 5. See e.g. Giraldo, *supra* note 643 at 138.

management. Therefore, as Bentley explains, “Although informal market participants receive the benefit of not having to pay the tax in the first place, these participants also have to face the cost of receiving less public services and having to contend with slower economic development in the community.”<sup>1248</sup>

Similarly, gold recovery relied on intensive labor force and demanded long hours of physical activity under extreme conditions, exposing miners to injury and death.<sup>1249</sup> In California, as much as in La Rinconada, the absence of modern prospecting technology or geological data meant that miners could not know *ex ante* if a claim or vein was worth exploiting until they had already started mining it, leading to inefficient and wasteful outcomes (i.e. poor yields or excessive effort).<sup>1250</sup> What is more, both scenarios involved the use of rudimentary methods, even though some improvements were introduced over time.

On the other hand, both gold rushes were characterized by the absence of a functioning government, either due to the lack of state bureaucracy (California) or the lack of political will or capability to enforce the law (Peru). As a result, miners had to improvise their own informal rules to allocate access to gold. Though different in many ways, such rules tended to reward hard work and reject waged labor relations.<sup>1251</sup> Despite miners’ hope,

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<sup>1248</sup> Cf. Bentley, *supra* note 45 at 1262.

<sup>1249</sup> See generally Noy, *supra* note 841 at 329 (arguing that twenty percent of all Forty-Niners died within six months after arriving in California); ROHRBOUGH, *supra* note 953 at 191 (arguing that miners suffered constant injuries, from blistered hands to crushed fingers, sprained ankles, and back aches).

<sup>1250</sup> In La Rinconada, as miners dig in the tunnels, they select mineralized veins in the walls and discard scrap rock (which is then selected by women engaged in *pallaqueo*).

<sup>1251</sup> See e.g. Caughey, *supra* note 1004 at 168 (“The idea that any miner would strike it rich anytime was a powerful influence against the application of big-business methods in the diggings”); Chan, *supra* note 993 at 60 (arguing that capitalists and their cheap labor were perceived by the miners as enemies of ‘American working men’).



though, fortunes were generally made through the servicing of miner's needs rather than gold mining itself.<sup>1252</sup>

In terms of ecological and landscape impact, both gold rushes triggered significant environmental change. Hydraulic mining and mercury use in California affected downstream agricultural activities and sparked conflicts. The CGR resulted in the pollution of lakes, mismanagement of wastes, and soil alteration. Similarly, the uncontrolled use of mercury, mismanagement of wastes, and lack of mitigation measures stemming from ASM-activities in La Rinconada not only poses a significant challenge to Peru's sustainable development, but also configures a case of transboundary pollution between Peru and Bolivia.

Despite multiple similarities sketched out above, there are distinguishable features between both gold rushes. First, miners' profiles do not match. Like most nineteenth-century gold rushes, the CGR was an almost all-male enterprise,<sup>1253</sup> especially conducted by youngsters who escaped poor-paying jobs in search for adventure, adrenaline, fortune, better social status, and self-respect.<sup>1254</sup> Gold-digging was thus a paradigmatic masculine activity, which relied on men abandoning their families to pursue wealth.<sup>1255</sup> These men

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<sup>1252</sup> Cf. Deborah Fahy Bryceson, *supra* note 833 at 36 (“The average earnings of non-mining service sector providers, in fact, superseded those of miners”).

<sup>1253</sup> See ISENBERG, *supra* note 954 at 13. Yet, women would increase their participation in the Gold Rush as towns and cities grew. They undertook household work, ran boardinghouses, took care of children, cooked and washed clothes, worked in dancehalls, gambling tables, or bar tending. There were also women who worked mining along with their husbands and children. But in general men would “resist” their wife's calls to accompany them to California. See generally ROHRBOUGH, *supra* note 953 at 176–182.

<sup>1254</sup> Eighty percent of the migrants were young males. See e.g. Burns, *supra* note 1021 at 4; Donald Hardesty, *supra* note 1019 at 999 (“The hundreds of surviving diaries suggest that those who made the overland journey were young men, typically traveling in the company of brothers, cousins, in-laws, and friends from their town or village”). The miner's motivations were diverse and deeply rooted in personal and familial responsibilities. See also GRAY, *supra* note 986 at xii (arguing that gold rushes represented an opportunity to reinvent oneself, to escape social rank, and “to share the adrenaline rush of mother lode fantasies and frontier adventure”). For a description of what motivated the Forty-Niners, see e.g. Noy, *supra* note 841 at 5–10; DOLNICK, *supra* note 1001 at 50–60.

<sup>1255</sup> See GOODMAN, *supra* note 1063 at 151, 154.

constituted a close-knit group made up of higher-than-average educated Americans,<sup>1256</sup> often sharing democratic and individualistic ideals.

Conversely, ASM in Peru is a family business.<sup>1257</sup> In La Rinconada, in particular, the family is the engine behind its migration forces, as most settlers travel with their spouses and children. Their main motivation is not adventure or social status, but economic need.<sup>1258</sup> Unlike the CGR, in La Rinconada the household income is not produced exclusively by men, but by women and children. Most settlers are young but only half of them attended high school,<sup>1259</sup> evidencing a significant difference from the Argonauts. Furthermore, instead of an individualistic and democratic mindset, in La Rinconada miners share a culture based on communal property and reciprocity principles. Because La Rinconada is a family enterprise, we can speculate about the role women play in the decision-making process to move into the village (and to move out),<sup>1260</sup> unlike the CGR where the decision to flee to the goldfields was self-propelled.<sup>1261</sup>

Second, the possibility to work in the mineral deposits differs. Whereas in California gold deposits were open exclusively to United States citizens, locking natives and foreigners out, in La Rinconada all newcomers had access to gold through lottery pay-

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<sup>1256</sup> Yet, as noted earlier, some years later the stampede of immigrants turned the mining camps into a kaleidoscope of cultures. See Zerbe and Anderson, *supra* note 915 at 114.

<sup>1257</sup> See e.g. PACHAS, *supra* note 176 at 15; Pachas, *supra* note 85 at 135.

<sup>1258</sup> See MINISTRY OF LABOR OF PERU, *supra* note 600 at 52 (reporting that 85% of miners are motivated to migrate into La Rinconada because of economic need).

<sup>1259</sup> See MINISTRY OF LABOR OF PERU, *supra* note 600 (reporting that 60% of La Rinconada's population is 30 years old or younger, and that 52% went to high school, whether or not they completed it); CORPORACIÓN MINERA ANANEA S.A., *supra* note 615 at 38; GAMARRA, *supra* note 8 at 13; INTERNATIONAL LABOR ORGANIZATION, *supra* note 593.

<sup>1260</sup> Jacinto fled to the mine in 1989 alone and his wife would only follow him a few years later when he had secured a place to live. Interview with Jacinto Flores, *supra* note 278. Other source claimed that he would never bring his wife and kids to the village since it is not a safe place for them. Interview with anonymous contractor #2, *supra* note 676.

<sup>1261</sup> See Deborah Fahy Bryceson, *supra* note 833 at 32.

days. While there was no apparent impediment for foreigners to enter into the *cachorro* system, there is no record of international workers in the village.<sup>1262</sup>

Third, the stories of success and failure are also divergent. Historians have well-documented stories of Forty-Eighters and Forty-Niners that made fortunes overnight,<sup>1263</sup> which eventually lured mining corporations into the goldfields.<sup>1264</sup> Conversely, LSM companies in Peru have shown little interest in taking over La Rinconada, especially due to social instability.<sup>1265</sup> More importantly, in Peru strokes of luck are exceptional—if not imaginary—and usually involve contractors, not the massive workforce.<sup>1266</sup> Perhaps the nostalgia for the early days of gold abundance is a shared trait between both gold rushes.<sup>1267</sup>

Fourth, the CGR lasted six years,<sup>1268</sup> when gold deposits ran out or became unprofitable to exploit, and had worldwide implications.<sup>1269</sup> By contrast, La Rinconada Gold Rush started in the early 2000s and there is no indication that it will come to an end anytime soon,<sup>1270</sup> especially as gold prices keep rising. Here, it is worth noting the difference between today's price of gold (approximately USD 1,500 per ounce) and that of 1850 (USD 20 per ounce) when the CGR took place (*see* Figure 18). Weighting for

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<sup>1262</sup> Note, though, that it is unlikely that ASM nations today would encourage immigration when they can absorb the demand for jobs internally. *See id.* at 160.; *but see* Cortés-McPherson, *supra* note 21 at 4 (claiming that South Koreans, Chinese and Russians invest in Madre de Dios mining camps).

<sup>1263</sup> *See generally* ROHRBOUGH, *supra* note 953 at 16–18; Jønsson and Fold, *supra* note 220 at 250 (“The rags to riches stories that emanated from this migration reinforced America’s frontier ethos of prosperity for those who headed West”).

<sup>1264</sup> *See* McDowell, *supra* note 148 at 10; *but see* ROHRBOUGH, *supra* note 953 at 27 (claiming that many stories and editorials published bordered with fantasy and exaggeration).

<sup>1265</sup> Telephone interview with Lucía Ruiz, *supra* note 268 (arguing that La Rinconada is “socially inaccessible” for the State to regulate and control).

<sup>1266</sup> Besides the Cenzano family, other names of contractors that ‘stroke it rich’ are Francisco Cardenas or Percy Torres.

<sup>1267</sup> *Cf.* Cf GOODMAN, *supra* note 1063 at 2–3.

<sup>1268</sup> *See* Deborah Fahy Bryceson, *supra* note 833 at 36.

<sup>1269</sup> *See* Noy, *supra* note 841 at 18 (claiming that the discovery in Coloma revolutionized California and the course of world history).

<sup>1270</sup> *Contra* Deborah Fahy Bryceson, *supra* note 833 at 53 (arguing that the duration of contemporary gold rushes tends to be short-lived).

inflation, USD 20 (in 1850) is equivalent in purchasing power to about USD 658 (in 2019). An ounce of gold's purchasing power has thus increased from USD 658 to approximately USD 1,500. This difference gives us a rough idea of the transformative power that contemporary ASM can have for millions of people.



**Figure 18. Gold price 1800-2012**

(Source: Gold Silver Worlds)<sup>1271</sup>

On the other hand, while ASM in La Rinconada employs thousands and is key for the region's economy, the profits remain off-the-books, so their impact on the national (or even international) economy is unaccounted for.<sup>1272</sup> To be sure, even if gold smuggling

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<sup>1271</sup> See Gold Silver Worlds, *Gold and silver prices over 200 years: long term gold and silver charts*, <http://goldsilverworlds.com/gold-and-silver-prices-over-200-years-long-term-gold-and-silver-charts/> (last visited Sep 12, 2019).

<sup>1272</sup> See GAMARRA, *supra* note 8 (arguing that La Rinconada represents 55% of Puno's total mining production); Interview with Roberto Zegarra, *supra* note 614.

across Bolivian and Brazilian borders has an important economic effect in these countries, this remains understudied.

Fifth, during the CGR the press and public opinion were favorable to the gold-seekers, often portraying miners as role models.<sup>1273</sup> As some suggest, the California gold-seekers became a “hall of masculine national heroes.”<sup>1274</sup> By contrast, contemporary ASM miners are ignored or vilified by mainstream media. The LSM-*bias* perhaps best mimics the capitalist miners of California who lobbied for *ad hoc* mining laws and aspired to take over the artisanal operations.<sup>1275</sup>

Finally, and perhaps the most important difference between both gold rushes, is how miners organized themselves around the resource. As explained before, while miners in California designed mining districts and voted for exclusive and enforceable rights over individual claims, in La Rinconada workers’ access to gold was mediated by powerful actors.

## **2. A Frontier Democracy?**

Having studied the similarities and differences between CGR and the La Rinconada Gold Rush, in this section I argue that La Rinconada cannot be framed as an artisanal mining frontier democracy. First, while ASM-activities tend to have low barriers of entry, miners’ freedom of movement is limited in La Rinconada. Miners appear to enter and exit the mining site voluntarily and shift from one contractor to another, but as mentioned before, they are actually trapped in a vicious circle and have no alternative job

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<sup>1273</sup> See Deborah Fahy Bryceson, *supra* note 833 at 51–52.

<sup>1274</sup> GOODMAN, *supra* note 1063 at 3.

<sup>1275</sup> See Bryceson, *supra* note 987 at 62.

opportunities. “I cannot leave. Being a miner is all I can do. I prefer staying here than going somewhere else,” admits one *cachorro* worker.<sup>1276</sup>

On the other hand, even though changing to a different contractor is theoretically possible, in actuality, it is impractical as it would mean losing all the lottery time accrued. “Once you start working for a contractor, you can always abandon him and leave your job, but you would lose the days of work you have accrued. If you go somewhere else, you start from zero.”<sup>1277</sup> Thus, in La Rinconada, miners’ mobility is illusory.

Second, although it is true that in La Rinconada seasoned miners teach novice miners and miners are promoted to better jobs as they become more experienced, evidencing some sense of cooperation and solidarity among miners, *cachorro* is typically an individual endeavor. In other words, comradeship and mutual support are important during the subordination period, but *cachorro* work relies on *individual* expertise, hard work, and good luck. Simply put, during the lottery time, miners are competitors, not cooperators.

What is more, mining jobs are very segmented. As Jacinto explains: “To escalate you have to behave obsequiously with the contractor or foreman.”<sup>1278</sup> Additionally, even though *cachorrero* workers have organized themselves around a guild and have won some political battles—in 2012 they pushed for *Decreto Supremo 27*<sup>1279</sup>—the guild does not work as a monolithic force. Working as individual units, miner’s cooperative and collective identity is imperfect at best.

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<sup>1276</sup> Interview with anonymous *cachorro* worker #6, (June 26, 2019).

<sup>1277</sup> Interview with Jacinto Flores, *supra* note 278.

<sup>1278</sup> *Id.*

<sup>1279</sup> See Andina, *supra* note 271.

Third, and most importantly, lottery miners are not self-employed individuals. Instead, they are subject to exploitative labor arrangements imposed by preexisting mining property and power structures. Contractors have “successfully evaded [] state regulations by actively creating and taking strategic advantage of a *new* type of labor: the unprotected informal worker.”<sup>1280</sup> Unlike idealized versions of the CGR, informal miners do not have equal opportunities to discover and seize gold. The foreman can determine arbitrarily and erratically where, when, and for how long can workers extract ore during their lottery pay-days.

Still, the worker’s income is not the result of his hard work or good luck solely, but of a complex chain of production and trading intermediaries, which include the owners of stone or electric mortars, smelters, or gold buyers. Miners hold little or no information and bargaining power in these transactions, reducing their final profit. According to Verbrugge, unequal sharing agreements tend to aggravate as ASM becomes more capital-intensive<sup>1281</sup>. Yet, in the La Rinconada case, the opposite seems to be the case: what has reinforced inegalitarian risk-sharing agreements was the enormous influx of workers competing for a limited resource.

Hence, in La Rinconada artisanal workers are not “untied, independent artisanal laborers [...] inclined to cooperate with one another for mutual benefit,” as Bryceson’s artisanal mining frontier democracy narrative postulates.<sup>1282</sup> As Lahiri-Dutt notes, while “contemporary gold rushes for minerals remind us of those of the past, examining the finer

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<sup>1280</sup> Cf. Olabisi Sherifat Yussuf, *A Theoretical Analysis of the Concept of Informal Economy and Informality in Developing Countries*, 20 EUR. J. SOC. SCI., 634 (2011).

<sup>1281</sup> Verbrugge, *supra* note 20.

<sup>1282</sup> See Deborah Fahy Bryceson, *supra* note 833 at 33.

details reveals them as somewhat different.”<sup>1283</sup> Precisely, La Rinconada gold rush demonstrates that not all ASM geographies are inherently democratic or egalitarian.

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Peru’s national government has been unable to enforce the official law in some ASM geographies. Worse still, it has simply renounced to its duty to regulate and enforce the law. Today, there are territories around Peru where the government does not and cannot exert its administrative and police powers. These ASM camps have devised and maintained their own parochial rules of access to precious minerals. These informal and oral arrangements defy and reinterpret the official (centralized) mining, property, and labor laws. Yet, unlike romantic depictions of the sector, these parallel and diverse worlds are not necessarily egalitarian, democratic, or meritocratic. Rather, opportunistic entrepreneurs concentrate the economic and political power to monopolize the *proceduralization* of the official law and maintain the *status quo*. Poverty-driven miners are excluded from the legal realm, subdued to play a lottery game in which the odds of striking it rich are rather imagined.

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<sup>1283</sup> Lahiri-Dutt, *supra* note 30 at 371.



## CHAPTER 8. WHAT THE GOVERNMENT OF PERU CAN DO ABOUT LOTTERY MINERS? A POLICY SOLUTION

Most scholars and practitioners interviewed for this investigation were skeptical about the possibility of enhancing the precarious working conditions in ASM and, in particular, those prevalent in La Rinconada.<sup>1284</sup> They agree, however, that tackling idiosyncratic schemes such as lottery mining demands thinking beyond legalist solutions<sup>1285</sup> and adopting multidimensional strategies.<sup>1286</sup> Of course, solving informal labor practices is not an easy endeavor. They are not only deeply rooted among multiple generations of miners but also Andean society at large.

De Soto is right about legitimacy: formalization programs should be constructed from the bottom-up, consistent with local and customary practices. Similarly, Marjo de Theije et. al argues that “legal systems and related policies that incorporate customary rules, local law, and miners’ law have greater chances of conflict solution.”<sup>1287</sup> Consequently, ASM formalization programs ought to be flexible, decentralized, adaptable, and gradual in the way they treat informal practices, “so that more people can take shelter

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<sup>1284</sup> Interview with Alicia Abanto, *supra* note 88 (“Peru will amend or pass new regulations on ASM, but the gold prices will still lure people into the sector. Rivers will still be polluted and forests chopped down until the favorable cycle of gold prices ends”).

<sup>1285</sup> Interview with Máximo Gallo, *supra* note 303.

<sup>1286</sup> Telephone interview with Gonzalo Tamayo, *supra* note 221.

<sup>1287</sup> Theije et al., *supra* note 60 at 143.

under the rule of law.”<sup>1288</sup> In other words, formalization of informal activities must reconcile legality with legitimacy.<sup>1289</sup>

Yet, legitimacy cannot be attained at any cost, as de Soto’s scholarship implies. While the Peruvian Constitution embraces legal pluralism, the accommodation of customary practices into the formal law is subject to the respect of human rights.<sup>1290</sup> In my view, any regularization model to bring *cachorro* to legality use must take in, at the very least, the respect of core labor, safety and health, and social security rights,<sup>1291</sup> complemented by a strong component of sensitization.<sup>1292</sup>

In this final chapter, I discuss an alternative approach to formalize lottery miners from the bottom-up by adopting the legal category of Economically dependent self-employed worker (“EDSW”) in the European tradition. This mechanism would allow miners to maintain their traditional lottery pay-days, but also guarantee a minimum core of labor, health and safety, and social security rights for lottery miners. Though imperfect, I contend that EDSW can work as a first step in a gradual transition towards decent work.

Here, it is important to note that the study of female miners (*pallaqueras*) in La Rinconada falls beyond the scope of this dissertation. The policy solution proposed in the following pages is thus circumscribed to male lottery miners, thus excluding *pallaqueras*.

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<sup>1288</sup> KEITH HART, *Informality: problem or solution?* 13 (2014), <http://thememorybank.co.uk/2014/12/03/informality-problem-or-solution/>; Portes and Schauffler, *supra* note 97 at 56 (“To work seriously as an entrepreneurial incubator, a program targeted on informal producers should be as flexible as the new firms that it is trying to promote. It should be fully decentralized and adapted to the needs and skills present in local communities. Most importantly, it should pay attention to the social ties and community bonds already present among informal artisans and merchants, a resource commonly neglected by individual-centered programs”).

<sup>1289</sup> See JONG, *supra* note 67 at 6.

<sup>1290</sup> Article 149 recognizes legal pluralism. CONSTITUCIÓN, art. 149 (Peru).

<sup>1291</sup> Telephone interview with Jaime Cuzquén, *supra* note 297.

<sup>1292</sup> Cf. Maconachie and Hilson, *supra* note 31 at 302 (“A more ‘bottom up’ approach to ASM policymaking, and implementation which stresses sensitization and education as a prerequisite to formalization, would be a logical first step towards safeguarding livelihoods”).

## A. Context

Overcoming the well-engrained culture of informality that defines Peruvian society today, including its precarious labor relationships, should be a government priority and cannot be overlooked in the design of any government-backed solution to informality.<sup>1293</sup> Having discarded a property rights solution to tackle lottery mining, a labor law approach must take into account two key factors.

First, workers engaged in informal employment agreements are easy prey for abusive contracts. In contemporary Peru, labor relationships are infused with a colonial legacy of racism and authoritarianism. After the wars of independence, the emerging Peruvian society was incapable of creating citizens, “rather, it created men differentiated by skin color, noble title, income, and place of birth... [In fact,] some men were more equal than others.”<sup>1294</sup> In reference to this colonial legacy, Abanto notes,

We can find the roots of today’s exploitative labor practices in our history. Our generation has inherited a lack of awareness about minimum labor rights and dignified work. There is an authoritarian tradition of abusing the labor force. It is not a matter of race anymore [i.e. people from Western origin abusing indigenous peoples] but of power abuse at any level.<sup>1295</sup>

Similarly, Solano posits that

There is a problem with our societal values. Exploiting other human beings is not bad for many Peruvians. I was exploited in the past, so now it is my turn to exploit you because I now have the power to do so. We need a revolution *from within* in which a minimum core of human rights, environmental and health standards included, are understood as non-negotiable. Simply extrapolating labor and constitutional rules to ASM does not work.<sup>1296</sup>

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<sup>1293</sup> Telephone interview with Gonzalo Tamayo, *supra* note 221; Juana Kuramoto & Grupo de Análisis para el Desarrollo, *La minería artesanal e informal en el Perú*, LIMA: GRUPO DE ANÁLISIS PARA EL DESARROLLO (GRADE) (2001); Interview with Luis Carlos Rodrigo, *supra* note 218.

<sup>1294</sup> Flores-Galindo, *supra* note 787 at 31.

<sup>1295</sup> Interview with Alicia Abanto, *supra* note 88.

<sup>1296</sup> Interview with Pedro Solano, *supra* note 265.

What is more, in relation to this colonial legacy, for many Peruvian public servants, intellectuals, and academicians, there seems to be a lack of awareness or even confusion in the assessment of labor relations that could potentially amount to forced or slavery-type labor relations.<sup>1297</sup>

Second, Peruvians do not value making pension fund contributions. “Full employment status presupposes a 12 percent salary deduction for social security and Peruvians do not want less cash at the end of the month,” explains Jorge Toyama.<sup>1298</sup> In light of the above, he contends that the government should: (a) foster a new ethos in favor of labor formality and sensitize citizens in labor and social security standards; (b) reinforce law enforcement of labor rules; and (c) correct the incentives to attract informal agents into formality.<sup>1299</sup>

As regards lottery-like employment arrangements, during my interview with Toyama, he suggested importing the EDSW legal concept as a flexible way to provide some labor rights to miners, assimilating miners to Uber or Lyft drivers.<sup>1300</sup> Gustavo Marini from the ILD proposes a similar solution:

Let us take the main features of *cachorro* and transplant them into our labor system but respecting basic human rights. This can be done from the bottom up and in a progressive manner. The government can grandfather miners for three years, for instance, and then start enforcing the laws, increasing the standard progressively. Formalization is a cocktail: you lower the standard to attract informal actors and, only then, you can increase the standard. It is a matter of using carrots and sticks. You cannot penalize an economic activity [i.e. *cachorro*] that works for the people.<sup>1301</sup>

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<sup>1297</sup> See EDUARDO BEDOYA AND ALVARO BEDOYA, *supra* note 549 at 34.

<sup>1298</sup> Interview with Jorge Toyama, *supra* note 347.

<sup>1299</sup> *Id.*

<sup>1300</sup> *Id.*

<sup>1301</sup> Telephone interview with Jaime Cuzquén, *supra* note 297; Interview with Jorge Toyama, *supra* note 347; Interview with Gustavo Marini, *supra* note 221.

Building on Toyama’s and Marini’s proposals, I contend that adopting the legal category of EDSW in the European tradition would allow tens of thousands of lottery miners to benefit from a minimum core of labor rights, while maintaining—to some extent—their customary lottery pay-days. As I explain next, legal recognition of lottery miners may bring about the gradual imposition of additional environmental, labor and human rights standards, and thus work as a first step in a gradual transition towards decent work.

## **B. EDSW**

Standard employment relations (“SER”)—a continuous, on-going, and indefinite full employment contract—provide workers with security, social benefits, and rights.<sup>1302</sup> Historically, social protection systems have been primarily developed to protect people in SER.<sup>1303</sup> Nonetheless, over the past decades, the SER model has been eroded.<sup>1304</sup> Economic changes, the vertical disintegration of large economic entities, the digitization of the labor environment, and the booming of online platforms now challenge “the protective standards developed over the twentieth century,”<sup>1305</sup> bringing about employment hybridization.<sup>1306</sup>

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<sup>1302</sup> See COLIN C. WILLIAMS, *supra* note 144 at 21; Colin C. Williams & Ioana Alexandra Horodnic, *Evaluating the prevalence and distribution of dependent self-employment: some lessons from the European Working Conditions Survey*, 49 INDUSTRIAL RELATIONS JOURNAL 109–127, 109 (2018).

<sup>1303</sup> See Karin Schulze Buschoff, *The ‘new’ self-employed and hybrid forms of employment: challenges for social policies in Europe*, in SELF-EMPLOYMENT AS PRECARIOUS WORK : A EUROPEAN PERSPECTIVE 238–259, 239 (2019).

<sup>1304</sup> See Felicia Rosioru, *Legal Acknowledgement of the Category of Economically Dependent Workers*, 5 EUROPEAN LABOUR LAW JOURNAL 279–305, 280 (2014); Alberto Valdes, *La regulación del trabajo autónomo económicamente dependiente en la Ley 20/2007: Apuntes para un debate*, 96 REVISTA DE ESTUDIOS COOPERATIVOS 133–173, 136 (2008); JAN BUELENS & JOHN PEARSON, STANDARD WORK : AN ANACHRONISM? 1 (2013).

<sup>1305</sup> See e.g. COLIN C. WILLIAMS, *supra* note 144 at 41; Felicia Rosioru, *supra* note 1304 at 281; Borja Suárez, *The sharing economy: the emerging debate in Spain*, 6 SPANISH LABOUR LAW AND EMPLOYMENT RELATIONS JOURNAL 30–41, 30 (2017).

<sup>1306</sup> See Karin Schulze Buschoff, *supra* note 1303 at 238; see also Torres, *supra* note 170 at 231; Felicia Rosioru, *supra* note 1304 at 281; Antonio Baylos, *The Employment Relationship, Atypical Forms of*

“Europe is currently witnessing a rise in the heterogeneity and multiplicity of models for utilizing the productive capacity of the population,” claims Alberto Riesco-Sanz.<sup>1307</sup> In short, SER is becoming ever less the norm, giving way to non-standard employment relations.<sup>1308</sup>

But non-standard employment relations recognize fewer rights and benefit, posing significant risks for workers and society at large.<sup>1309</sup> “[L]abor law is facing a major challenge: how to preserve the traditional guarantees which have historically balanced the relationship between labor and capital in Western Welfare States.”<sup>1310</sup> European countries have therefore taken steps to transplant some of the rights allocated to SER workers to non-standard employment workers.<sup>1311</sup> Precisely, EDSW is one of the emerging legal categories to accommodate and protect self-employed workers.<sup>1312</sup>

EDSW is an intermediate category that bridges the gap between employed workers under an employment relationship (SER) and those who are self-employed.<sup>1313</sup> It refers to self-employed persons whose income (or a major proportion thereof) is derived from one source.<sup>1314</sup> While flexibility is one of its defining features—allowing workers to control

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*Employment and Protection Standards in the European Union*, in THE DECONSTRUCTION OF EMPLOYMENT AS A POLITICAL QUESTION. EMPLOYMENT AS A FLOATING SIGNIFIER 131–148, 143 (2019).

<sup>1307</sup> Alberto Riesco-Sanz, *Self-employment and the transformation of Employment Relationships in Europe*, in THE DECONSTRUCTION OF EMPLOYMENT AS A POLITICAL QUESTION. EMPLOYMENT AS A FLOATING SIGNIFIER 149–178, 150 (2019).

<sup>1308</sup> See e.g. EUROPEAN UNION, *Social protection rights of economically dependent self-employed workers* 8 (2013), <http://www.europarl.europa.eu/studies>; COLIN C. WILLIAMS, *supra* note 144 at 2.

<sup>1309</sup> See COLIN C. WILLIAMS, *supra* note 144 at 21; Alberto Riesco-Sanz, *supra* note 1307 at 151.

<sup>1310</sup> Borja Suárez, *supra* note 1305 at 29–30.

<sup>1311</sup> See Torres, *supra* note 170 at 232; Williams and Horodnic, *supra* note 1302 at 109.

<sup>1312</sup> See Torres, *supra* note 170 at 232; see Navajas-Romero, Díaz-Carrión, and Ariza-Montes, *supra* note 172 at 9 (arguing that Austria, Italy and Germany have created hybrid legal categories to guarantee some labor rights to dependent self-employed).

<sup>1313</sup> See Agata Ludera-Ruszel, *Dependent Self-Employment in the Light of the Constitutional Principle of Work Protection*, 27 ROCZNIKI NAUK PRAWNYCH 41–57, 41 (2017); Felicia Rosioru, *supra* note 1304 at 285.

<sup>1314</sup> See Ludera-Ruszel, *supra* note 1313 at 44.

their own time<sup>1315</sup>—it imposes on the client a set of minimum obligations that aim to offer a degree of employment quality and protection.

Spain has pioneered the regulation of self-employment.<sup>1316</sup> Its regulation of EDSW (“*trabajador autónomo económicamente dependiente*”) is considered the most complete among European countries.<sup>1317</sup> According to Spanish law, the EDSW applies to individuals who habitually and personally conduct for-profit economic or professional activity, directly and predominantly for a client, on whom they depend economically for at least 75 percent of their income.<sup>1318</sup> Accordingly, individuals retained as EDSW

benefit from three different types of rights: (1) non-specific fundamental rights (such as equality and non-discrimination, healthcare, physical and psychological wellbeing, freedom of religion, or effective legal protection); (2) public professional rights (right to a job, freedom to choose one’s career, right of economic initiative and free competition, intellectual property rights regarding their own work, or protected services); and, (3) professional rights regarding the services rendered (contractual security, valuable consideration, reconciliation between professional and personal life, or professional training and retraining).<sup>1319</sup>

Additionally, the law mandates a written agreement between the self-employed worker and the company contracting his services, protecting workers.<sup>1320</sup>

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<sup>1315</sup> See Borja Suárez, *supra* note 1305 at 33.

<sup>1316</sup> See Torres, *supra* note 170 at 247.

<sup>1317</sup> See Felicia Rosioru, *supra* note 1304 at 290.

<sup>1318</sup> See Torres, *supra* note 170 at 236; Felicia Rosioru, *supra* note 1304 at 290; Adalberto Perulli, *Subordinate, Autonomous and Economically Dependent Work: A Comparative Analysis of Selected European Countries*, in *THE EMPLOYMENT RELATIONSHIP: A COMPARATIVE OVERVIEW*, 174 (2011).

<sup>1319</sup> See Torres, *supra* note 170 at 240.

<sup>1320</sup> See Alberto Riesco-Sanz, *supra* note 1307 at 166.

Of course, EDSW has been controversial.<sup>1321</sup> Some companies have misused it to disguise or mask full employment status.<sup>1322</sup> Despite this criticism, next I explore the possibility of transplanting the EDSW scheme to Peru's lottery miners.

### C. *EDSW in Lottery-Like Arrangements*

Assimilating lottery miners to SER is not a feasible solution, considering the number of miners involved (e.g. there are between 50,000 and 70,000 *cachorro* workers in La Rinconada alone). What is more, SER is not attractive as miners value their independence, flexibility, and mobility. Thus, the expansion of SER to include additional work relations is simply not the right approach. Rather than an expansion strategy, I recommend an *experimental displacement*. This technique is useful when the existing institution is failing.<sup>1323</sup> Working as an institutional by-pass, the new institution provides the same functions, but in a different way.<sup>1324</sup> As Marshall puts it,

Experimental displacements are useful when problems in an existing institution seem intractable, despite attempts at reform. It helps to overcome extreme institutional inertia and path dependency. The idea is that if the experiment is successful, it will demonstrate that it is possible to break with existing detrimental and non-virtuous patterns of behavior within the existing institution that are hampering its effective conduct.<sup>1325</sup>

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<sup>1321</sup> See e.g. COLIN C. WILLIAMS, *supra* note 144 at 56,62 (identifying some of the problems with EDSW in comparison to SER, including worse working conditions; increased levels of risk, insecurity, long hours and atypical working times; diminished social security entitlement; low investment in training; higher risk of poverty; antisocial working time; social and professional isolation; and short deadlines and high work intensity, leading to stress).

<sup>1322</sup> See Ana Millán, José María Millán & Leonel Caçador-Rodrigues, *Disclosing 'masked employees' in Europe: job control, job demands and job outcomes of 'dependent self-employed workers'*, SMALL BUS ECON (2019), <https://doi.org/10.1007/s11187-019-00245-7> (last visited Apr 13, 2020); Williams and Horodnic, *supra* note 1302 at 110.

<sup>1323</sup> See MARSHALL, *supra* note 41 at 148–49.

<sup>1324</sup> See *id.* at 148–49.

<sup>1325</sup> *Id.* at 149.



Though imperfect, transplanting the EDSW scheme to lottery miners can prove beneficial as an experimental displacement towards decent work. In practice, lottery miners are economically dependent on a particular contractor, who in theory should be liable for the fulfillment of basic labor, health and safety, and social security rights. In my view, EDSW provides the necessary flexibility and political buy-in as a first step towards the gradual recognition of lottery miners as workers in SER. Table 4 below compares *cachorro* with SER and EDSW, showing the advantages of the latter system.

**Table 4. Comparison between alternative labor regimes**

<b>Labor rights and social benefits</b>	<b>Lottery-like system</b>	<b>SER</b>	<b>Proposed EDSW</b>
Formal, written agreement	No	Yes	Yes
Minimum wage	No	Yes	Yes
13 and 14th month bonus	No	Yes	No
Paid vacation	No	Yes	No
Unpaid vacation	No	Yes	Yes
Severance pay	No	Yes	No
Unemployment insurance	No	Yes	No
Profit-sharing	No	Yes	No
Health insurance	No	Yes	Yes
Pension fund	No	Yes	Yes
Environmental, health and safety work conditions	No	Yes	Progressively
Flexibility to leave work	Yes	No	Yes

(Source: By author)

First, unlike the current state of affairs, EDSW would allow lottery miners to access core labor, health and safety, and social security rights, especially minimum wage, pension fund, or health insurance, which are essential and non-negotiable labor rights.<sup>1326</sup> What

<sup>1326</sup> Telephone interview with Jaime Cuzquén, *supra* note 297; Telephone interview with Marlene Molero, *Labor and Gender Law expert* (2020).

other rights exactly should be covered or not by the contractor (or CMA) requires ample discussion, but the idea is to somehow regularize the precarious and perilous working conditions associated with the *cachorro* system.<sup>1327</sup> To provide additional flexibility and accommodate contractors' own financial needs, the minimum wage could be a combination of current money and ore—even current money and lottery pay-days, if overall the contractors assure coverage of the minimum wage standard.

Second, one of the most important benefits of EDSW is that it would allow lottery miners to maintain their mobility. Unlike SER workers, lottery miners under EDSW could decide to work at the mine for a few months, take some time off, or change from one contractor to another in pursuit of better gold-bearing veins.<sup>1328</sup> Preserving miner's independence and mobility, which is associated with cultural principles, can prove critical in whatever regularization scheme the government decides to implement as it grants “higher levels of job control than wage workers.”<sup>1329</sup>

Third, EDSW has the potential to gradually attain decent work standards, an internationally accepted reference point.<sup>1330</sup> Following ILO, promoting decent work demands

a comprehensive and integrated strategy cutting across a range of policy areas that eliminates the negative aspects of informality while preserving the significant job creation and income-generation potential, and that

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<sup>1327</sup> See Ludera-Ruszel, *supra* note 1313 at 48.

<sup>1328</sup> See COLIN C. WILLIAMS, *supra* note 144 at 62 (arguing that flexibility and autonomy attract people into self-employment contracts).

<sup>1329</sup> Millán, Millán, and Caçador-Rodrigues, *supra* note 1322.

<sup>1330</sup> See ILO, SOCIAL AND LABOUR ISSUES IN SMALL-SCALE MINES. REPORT TMSSM/1999 11 (1999), [http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS\\_PUBL\\_9221114805\\_EN/lang--en/index.htm](http://www.ilo.org/global/publications/ilo-bookstore/order-online/books/WCMS_PUBL_9221114805_EN/lang--en/index.htm) (last visited Jan 30, 2019); see also Navajas-Romero, Díaz-Carrión, and Ariza-Montes, *supra* note 172 at 2511 (“Currently, decent work is a priority for policy-makers and for society as a whole as a result of globalization processes and the economic recession of the last decade, which have produced dramatic changes in the labor market structure in Europe, generating an increase in unemployment, underemployment, precarious work, and labor inequality”).

promotes the protection and incorporation of workers and economic units in the informal economy into the mainstream economy.<sup>1331</sup>

Moreover, regularizing *cachorro* may create the opportunity and momentum for the GP to burden contractors with additional standards or safeguards, which go beyond labor or social rights.<sup>1332</sup> For example, environmental, health and safety obligations, administrative reporting, taxing, EIA, among others. All of this would allow the government to build a database to help decision- and policymaking in the future.

Lastly, thanks to EDSW the workforce could keep their customary right to lottery pay-days, though with some caveats. For example, it could work as a salary bonus, allowing workers to benefit from lottery pay-days in a more institutionalized and safe fashion. Of course, the EDSW scheme should be complemented with a sensitization program for lottery miners, who must understand that despite of their expectation to remain unwaged, autonomous, and be paid in lottery pay-days, the GP needs to assure the validity of basic human rights.<sup>1333</sup> Today, such human rights are non-existent in the Peruvian ASM sector.

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For more than six decades, tens of thousands of lottery miners in La Rinconada have suffered from exploitative employment agreements. The solution relies not on property rights law but rather on labor law. But assimilating lottery miners to SER is not a practicable solution, given the number of miners involved and the unattractiveness of SER

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<sup>1331</sup> ILO, *supra* note 49 at 12.

<sup>1332</sup> Cf. Siegel and Veiga, *supra* note 12 at 52.

<sup>1333</sup> See generally UNITED NATIONS GENERAL ASSEMBLY, *supra* note 1129; ORGANIZATION OF AMERICAN STATES (OAS), *Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights* (“Protocol of San Salvador”), A-52 (1999), <https://www.refworld.org/docid/3ae6b3b90.html>.

for mining workers. In my view, far from a legalist proposal that privileges form over substance, the EDSW scheme provides a middle-ground and pragmatic approach to a long-lasting problem in the Peruvian Altiplano. Consequently, providing some sort of legal recognition and protection to lottery miners, the weakest link in Peru's ASM sector, represents "a better solution than being unemployed or in irregular employment [... and perhaps represents] a form of entry point into the labor market."<sup>1334</sup> While it provides the flexibility to accommodate to miners' parochial needs, EDSW also ensures the respect of a minimum catalog of rights. To quote Colin C. Williams, "This is not a discussion about making all work standard [i.e. SER] but rather about making all work *decent*."<sup>1335</sup> And this is exactly what the *cachorro* employment agreement is lacking: a dose of dignified work. In the words of Jacinto himself, "My job has no dignity."<sup>1336</sup>

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<sup>1334</sup> See Navajas-Romero, Díaz-Carrión, and Ariza-Montes, *supra* note 172 at 10. While EDSW has had varying results across Europe, in France the introduction of self-employed categories in 2008 appears to have improved social protection of workers. See COLIN C. WILLIAMS, *supra* note 144 at 165.

<sup>1335</sup> See COLIN C. WILLIAMS, *supra* note 144 at 41.

<sup>1336</sup> Interview with Jacinto Flores, *supra* note 278.

## CONCLUSIONS

For almost 300 years of colonial rule, the indigenous peoples of Peru-Bolivia questioned and resisted the Spanish monopoly over the mines and the forced labor system they implanted. More importantly, they expressed a feeling of entitlement to mineral resources via direct appropriation strategies, such as taking a share of the ore, lottery pay-days, or pilfering good-looking rocks. While the wars of independence in the nineteenth century put an end to the Spanish oppression in the mines, direct appropriation strategies did not fully disappear. Rather, undercapitalized and risk-averse mining entrepreneurs promoted or tolerated these practices among their workers in light of labor force shortages and low yielding mineral deposits.

Lottery-like employment arrangements persist in contemporary ASM. The *cachorro* or *chichiqueo* systems discussed in this dissertation synthesize this resistance to both waged labor relations and the public ownership system of natural resources among the indigenous peoples of the Andes. Working independently and off-the-books grants miners a source of immediate cash and the opportunity, real or imaginary, to obtain a higher cut. What is more, lottery mining is deeply ingrained in cultural principles, which makes it representative and legitimate. Indeed, mining workers consider themselves entitled to try their luck in the mine shafts—a sentiment personified in the phrase “*es mi suerte*” that resonates in ASM camps. This feeling is not only miners’ *raison d’être*, but also has avoided chaos and land grabbing between the heterogeneous parties involved in ASM, prompting an uneasy balance. In many ASM camps, the opportunity of finding a gold nugget simply outweighs the lack of basic labor or social rights, working as a cruel, large-scale, collective lottery, in which payment is uncertain and at times non-existent.

The Government of Peru has attempted to regularize this ever-growing sector but has been incapable of discovering and codifying the people's law to bring thousands of lottery miners into legality. Rather, the government has opted for a top-down, legalist approach, which is anchored in the granting of operating licenses and grandfathering existing operations, regardless of the destruction of the environment. Worse still, the formalization process has been captured by an informal bourgeoisie of ASM entrepreneurs, the strongest player in the sector, excluding a massive and vulnerable workforce composed mostly of poor workers. Paradoxically, ASM entrepreneurs that have completed the government's formalization program are still capable of retaining their workforce under informal, exploitative, and unconscionable employment agreements. All of this with the connivance of Peruvian bureaucrats.

As the La Rinconada, Secocha, and Upina case studies demonstrate, contemporary forms of ASM hide vicious cycles of poverty, exclusion, disinformation, and environmental injustice. While the massive working force withstands the harshness and perils of a mining livelihood in the hope to strike it rich, the strongest players use their power and agency to bypass their legal obligations, capturing most of the mineral rents. Consequently, unlike the normative image of artisanal mining frontier democracies, which highlight the iconic figure of the individual prospector—alone, using simple tools, living away from his family—contemporary gold rushes in the Peruvian Andes are seldom egalitarian, democratic, or meritocratic. Rather, the mining workers' hard work and good luck are mediated and by pre-existing property and power relations.

Mainstream solutions to tackle ASM informality based on conventional property rights, even if designed from the bottom-up, as proposed by Hernando de Soto, represent a

false panacea. Property rights will not automatically alleviate the perils associated with this sector nor provide miners with the capital, technology, and environmental stewardship needed to upgrade their operations and internalize externalities. By overlooking the existing socio-economic divergences and power asymmetries in ASM, as well as indispensable ancillary reforms necessary to overcome persistent informality, government-backed titling programs risk becoming cynical government gifts for ASM entrepreneurs.

Conversely, in my view, the solution to persistent informality in ASM-activities relies on an institutional by-pass to overcome “extreme institutional inertia and path dependency”,<sup>1337</sup> which characterizes the Peruvian response to informality in ASM, both in terms of the legal and governance solutions. In a context where miners benefit from their informal arrangements, which are considered fair, legitimate, and secure, operating outside legal frameworks is the natural way of conducting business. In light of miners’ demand for mobility and flexibility, governments must reconsider the incentives their formalization programs offer. As an alternative solution, in this dissertation, I discussed the legal transplant of the EDSW category as a more inclusive, malleable, and pragmatic way of labor formalization. While it encompasses the existing labor arrangements on the ground—embodying a bottom-up solution—at the same time, EDSW can safeguard minimum labor and social security rights for lottery miners, representing a first step in a gradual but long transition towards decent work in ASM.

As evidenced in the historical and contemporary examples used throughout this dissertation, ASM-activities are paradoxical.<sup>1338</sup> They represent employment magnets, but are also home to colonial-like employment relations; they are sites of religiosity and

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<sup>1337</sup> MARSHALL, *supra* note 41 at 149.

<sup>1338</sup> *Cf.* LANE, *supra* note 175 at 183.

eneration, but also vice and sexual exploitation; the land of economic opportunity and social class leveling, but also occupational hazards and death; places of ingenuity and spontaneity, but also environmental degradation and technological backwardness; vibrant places of trade and wealth, but also shortfall and misery; geographies of cultural reciprocity, but also disconnection with public and civic affairs. Bearing in mind Peru's vast and unique mineral wealth, and its transformative potential for the whole nation, the government must find more effective, inclusive, and creative ways of bringing ASM-activities from the informal to the formal realm, becoming a more diligent guardian or steward of the country's Patrimony of the Nation. It is time to revert ASM's contradictory track-record.



## APPENDIX 1: DEFINITION OF NON-ENGLISH WORDS

<i>Acopiador</i>	[La Rinconada] Gold smelting shops
<i>Altiplano</i>	Andean plateau or high plains
<i>Apu</i>	[Andes] Mountain spirit
<i>Ayllu</i>	[Inca] Basic building block of the Inca social structure
<i>Busconeo</i>	[La Rinconada] Erratic drilling and tunneling system in search for gold bearing veins
<i>Cachetada</i>	[La Rinconada] Payment of 12 hours of extraction for every 15 days of work
<i>Cachito</i>	[La Rinconada] Payment of 12 hours of extraction for every 15 days of work
<i>Cachorro</i>	[La Rinconada] Oral employment agreement without salary
<i>Cachorrero(s)</i>	[La Rinconada] <i>Cachorro</i> worker(s)
<i>Capacho</i>	[La Libertad] Lottery pay-days
<i>Capataz</i>	[La Rinconada] Foreman or supervisor
<i>Chichiqueo</i>	[Upina, Peru] Oral employment agreement without salary
<i>Chichiquero(s)</i>	[Upina, Peru] <i>Chichiqueo</i> worker(s)
<i>Chispa</i>	[La Rinconada] Small gold particles found in ore
<i>Corpa</i>	[Potosí] Worker's customary right to keep the best pieces of ore for himself
<i>Cuñaqueo</i>	[La Rinconada] Worker's customary right to keep to himself good-looking rocks on a non- <i>cachorro</i> day
<i>Doblas</i>	[Chile] Worker's customary right to extract ore for 24 hours for his own benefit
<i>Enganchador</i>	Labor recruiter
<i>Enganchado(s)</i>	Peon worker under <i>enganche</i>
<i>Enganche</i>	Debt peonage
<i>Faena</i>	Unpaid chores conducted by peasants in favor of the landlord
<i>Fiador</i>	The guarantor of peon's obligations before the <i>enganchador</i>

<i>Gananciero(s)</i>	[Upina] Miners that use ancestral technology to capture gold using hand-made carpets made of common reed grass
<i>Guayra</i>	[Potosí] Wind-activated ovens
<i>Hacienda</i>	[Peru] Farm
<i>Habilitaciones</i>	[Peru] Loans that miners received from merchants
<i>Huanchaca</i>	[Cerro de Pasco, Peru] Worker's customary right to pocket rocks on the way out a tunnel
<i>Huelga</i>	[Potosí] Two-week <i>rest</i> period in the <i>mita</i> system
<i>Ingenio</i>	[Potosí] Hydraulic-activated mill
<i>K'ajcha(s)</i>	[Potosí] Weekend thieves
<i>K'ajcheo</i>	[Potosí] Activities conducted by <i>k'ajchas</i>
<i>Minga</i>	[Potosí] Free workers system
<i>Minga(s)</i>	[Potosí] <i>Minga</i> worker
<i>Minka</i>	[Andes] Agricultural wage laborer or a person who works for payment in kind rather than money
<i>Mita</i>	[Potosí] Forced labor system
<i>Mitayo(s)</i>	[Potosí] <i>Mita</i> worker
<i>Molino</i>	[La Rinconada] Electric mill to grind ore
<i>Pachamama</i>	[Andes] Mother Earth
<i>Pallaco</i>	[Huantajaya, Chile] Mineralized rocks used as a way to pay the workforce
<i>Pallaquera(s)</i>	[Andes] Women who scavenge through the waste rock that men dispose of
<i>Partido</i>	[Mexico] Worker's customary right to take a share of the ore
<i>Pepena</i>	[Mexico] Worker's customary right to take a share of the ore
<i>Playero(s)</i>	[Upina] Miners that use ancestral technology to capture gold using hand-made carpets made of common reed grass
<i>Polleo</i>	[Cajamarca, Peru] Worker's customary right to take a share of the ore
<i>Puna</i>	Altiplano
<i>Quimbalete</i>	[La Rinconada] Artisanal leg driven rock grinder

<i>Ratoneo</i>	[La Rinconada] Pocketing of rocks by workers on the way out of the tunnels
<i>Saquero</i>	[La Rinconada] Miners that take away discarded rock from the mine tunnels, generally on their backs or wheel barrels
<i>Tambo</i>	[Andes] Rural small shop
<i>Trapiche</i>	[Potosí] [La Rinconada] Rudimentary mill to grind ore
<i>Yanacona</i>	[Inca] Personal servitors to nobles, military leaders, or the head of the <i>ayllus</i>

## APPENDIX 2: BASIC CHRONOLOGY OF PERUVIAN HISTORY

1521	Spaniards defeat the Inca Empire
1545	Potosí discovered
1574	Toledo Ordinances approved
1821	Peruvian Independence Day Year
1823	First Peruvian Constitution approved
1825	<i>Mita</i> abolished
1845-1866	Guano era
1854	Indigenous tribute and slavery abolished
1879-1884	Pacific War (Bolivia-Peru v Chile)
1882-1912	Amazon rubber boom
1963-1979	Military coup and dictatorship
1969	Agrarian and land reform
1980-1990	Domestic terrorism and economic collapse
1990-2000	Alberto Fujimori's government
1993	Peruvian Constitution approved (current)
2000-2001	Valentin Paniagua's government
2001-2006	Alejandro Toledo's government
2006-2011	Alan García's government
2011-2016	Ollanta Humala's government
2016-2018	Pedro Pablo Kuczynski's government
2018-to date	Martin Vizcarra's government

**APPENDIX 3: TENTATIVE QUESTIONNAIRE FOR OPEN-ENDED INTERVIEWS DURING  
FIELDWORK IN PERU**

**La Rinconada**

1. How long have you lived in La Rinconada?
2. How long have you been a miner?
3. What has changed in La Rinconada since you arrived?
4. What motivated you to come to La Rinconada?
5. How harsh is living in La Rinconada?
6. Are you a permanent or seasonal worker?
7. Are you concerned with your health because of waste, altitude, mercury?
8. Have you heard of stories of miners striking it rich?
9. Can you freely move from one contractor to another?
10. For how many contractors do you work?
11. Are you unionized?
12. What is your mining routine?
13. How many hours do you work per day? Per week?
14. How much gold do you extract per day? Per month?
15. What type of cachorro contract do you have?
16. What motivates you to work during the non-cachorro days?
17. When did cachorro first begin in La Rinconada?
18. What do you think is the origin of cachorro?
19. How is your relationship with the contractors?
20. Do you own or rent your tools and personal protection equipment?
21. What are the rules for cashing your cachorro day?
22. Who can start working in La Rinconada?
23. Are there any adjudication mechanisms?
24. Are you familiar with the government's formalization program?
25. Are you registered in the Ministry? Why did you register?
26. Would you prefer to have a formal, labor relationship and a regular monthly wage?
27. How do miners contribute to their community?

28. How do you see yourself in the future?
29. Do your children work in the mine?
30. Who do you sell the gold to?

### **Lima**

1. Is ASM a nuisance or can it help tackle poverty / unemployment in rural Peru?
2. Under what circumstances would you consider ASM sustainable / acceptable?
3. Has the government's formalization program failed? Why?
4. Is the government doing anything right regarding the ASM sector?
5. Why is informality so persistent in the ASM sector?
6. Peru has proscribed mining in national parks and the use of certain equipment. It has also designated areas for ASM and set up traceability mechanisms. It has also adopted the flexibilization of permitting for ASM. What else can it try?
7. Is the government leading the eradication of illegal mining or is it simple rhetoric?
8. Does a property rights approach work for ASM, as De Soto proposes?
9. What impact does military evictions and raids have for the sector? Does it send a message?
10. Do you think it is possible to formalize ASM from the bottom-up? How?
11. Some customary rules and practices may violate children and labor rights. How should this be addressed?
12. ASM takes place in areas that are in the margins of the state. How should this be addressed?
13. How should governments react to gold rushes?
14. ASM is financing political parties and miners have reached regional governments and even Congress. How has this changed the local politics and the perception of ASM?
15. The ASM legal framework has been amended dozens of times over the last decades. What does this tell us about ASM policy and governance?

#### APPENDIX 4: VERBAL CONSENT FORM FOR INTERVIEWS

Hello, my name is Patrick Wieland and I am a doctoral student from Yale University in the United States. I am conducting a research study to study the informal rules of *cachorro*. Participation in this study will involve an interview with me. Your involvement will require 20-30 minutes.

There are no known or anticipated risks to you for participating except for a possible loss of confidentiality. Although this study will not benefit you personally, I hope that our results will add to the knowledge about the formalization of artisanal and small-scale mining.

All of your responses will be held in confidence and anonymously. Only I will have access to the information you provide. Your responses will be handwritten and later transcribed onto Word documents, which will be password-protected on my computer. Additionally, your responses will be translated into English.

I will not record your name or personal data in any form.

[In case of public figures, inter alia, ministers, vice-ministers, executive directors of NGOs, I will ask for their permission to include some quotations in my dissertation]

Participation in this study is completely voluntary. You are free to decline to participate, to end participation at any time for any reason, or to refuse to answer any individual question without penalty.

If you have any questions about this study, you may contact the investigator, myself, at [patrick.wieland@yale.edu](mailto:patrick.wieland@yale.edu) If you would like to talk with someone other than me to discuss problems or concerns, to discuss situations in the event that I am not available, or to discuss your rights as a research participant, you may contact the Yale University Human Subjects Committee, +1 203-785-4688, [human.subjects@yale.edu](mailto:human.subjects@yale.edu). Additional information is available at <https://your.yale.edu/research-support/human-research/research-participants/rights-research-participant>

Do you have any questions at this time? Would you like to participate in the study? Are you over the age of 18?

**APPENDIX 5: LIST OF INTERVIEWEES**

**Interviews in Lima**

<b>Interviewee</b>	<b>Organization / Position</b>	<b>Date</b>
1. Máximo Gallo	MINEM, Former Director of ASM Formalization	05/14/2019
2. Jorge Toyama	Labor Law expert	05/14/2019
3. Confidential	SNMPE, Anonymous executive	05/15/2019
4. Gabriela Pérez-Costa	MARSA Mining Corp., Legal Manager	05/15/2019
5. Fabián Pérez	Social conflicts expert	05/16/2019
6. Vanessa Valverde	Criminal Law expert	05/16/2019
7. Juana Kuramoto	Prime Minister's Office, Sub- secretary of Territorial Development	05/17/2019
8. Luis Carlos Rodrigo	Mining Law expert	05/17/2019
9. Luis Miguel Inchaústegui	Former Vice Minister of Mines of Peru	05/19/2019
10. Anonymous	LSM operator	05/20/2019
11. Ada Alegre	Ada Alegre Consultores, CEO	05/20/2019
12. Gabriela Soto	Ministry of Labor of Peru, Chief of Cabinet	05/20/2019
13. Pedro Solano	<i>Sociedad Peruana de Derecho Ambiental</i> , Former Executive Director	05/20/2019
14. Rosa María Ortiz	Former Minister of Energy and Mines of Peru	05/20/2019
15. Jaime Cuzquén*	Labor Law expert	05/22/2019



16. Alicia Abanto	Ombudsman, Environmental Officer	05/23/2019
17. Iris Olivera and Ciro Salazar	<i>Derecho, Ambiente y Recursos Naturales</i> , Environmental experts	05/23/2019
18. Miguel Ego Aguirre	Ego Aguirre & Smuda, CEO	05/23/2019
19. Lenin Valencia	MINEM, Former Director of ASM Formalization	05/24/2019
20. Elsa Galarza	Former Minister of the Environment of Peru	05/29/2019
21. Juan Carlos Ramírez	Former Vice Minister of Mines of Peru	06/02/2019
22. Gustavo Marini	ILD, Senior Researcher and Project Manager	06/11/2019
23. Renata Bregaglio	Human Rights expert	06/12/2019
24. Gonzalo Tamayo*	Former Minister of Energy and Mines of Peru	06/13/2019
25. Liliana Cenzano	Tomás Cenzano Cáceres's daughter	07/02/2019
26. Eva Arias	Poderosa Mining Corp., CEO	07/03/2019
27. Sergio Quiñonez	Ministry of Labor of Peru, Director of Human Rights	07/03/2019
28. Lucía Ruiz*	Former Minister of the Environment of Peru	09/14/2019
29. Nancy Chauca*	Ministry of Environment, Director of Environmental Policy and Regulation	04/13/2020
30. Víctor Hugo Pachas*	ASM expert	04/14/2020
31. César Ipenza*	ASM expert	04/14/2020
32. Javier Yrigoyen*	ASM expert	04/14/2020

33. Marlene Molero*	Labor law expert	04/15/2020
34. Roxana Barrantes*	Commission for Sustainable Mining Development, President	04/27/2020
35. Tessy Torres*	OEFA, Executive Director	05/11/2020

### Interviews outside Lima

Interviewee	Organization / Position	Date	Place
1. Reiner Paredes	MINEM	06/15/2019	Juliaca, Puno
2. Confidential	Anonymous cachorro worker 1	06/18/2019	La Rinconada, Puno
3. Confidential	Anonymous cachorro worker 2	06/18/2019	La Rinconada, Puno
4. Jacinto Flores	Anonymous cachorro worker 3	06/18/2019 <sup>1339</sup>	La Rinconada, Puno
5. Fidel Huisa	Universidad Nacional del Altiplano, Professor	06/19/2019	Puno
6. Roberto Zegarra	Universidad Nacional del Altiplano, Professor	06/19/2019	Puno
7. Jesus Álvarez	Regional Government of Puno, Staff	06/19/2019	Puno
8. Trinidad Carlos	Puno Ombudsman, Legal advisor	06/19/2019	Puno
9. Confidential	Anonymous <i>cachorro</i> worker 4	06/24/2019	La Rinconada, Puno

<sup>1339</sup> Additional interviews during June 24, 25, 26 and 27, 2019.

10. Confidential	Anonymous <i>cachorro</i> worker 5	06/24/2019	La Rinconada, Puno
11. Confidential	Anonymous contractor 1	06/24/2019	La Rinconada, Puno
12. Confidential	Anonymous contractor 2	06/24/2019	La Rinconada, Puno
13. Confidential	Anonymous nurse	06/24/2019	La Rinconada, Puno
14. Confidential	Anonymous <i>pallaquera</i>	06/24/2019	La Rinconada, Puno
15. Confidential	Anonymous <i>acopiador</i>	06/26/2019	La Rinconada, Puno
16. Confidential	Anonymous ball mill operator	06/26/2019	La Rinconada, Puno
17. Confidential	Anonymous <i>cachorro</i> worker 6	06/26/2019	La Rinconada, Puno
18. Confidential	Anonymous <i>cachorro</i> worker 7	06/26/2019	La Rinconada, Puno
19. Yuri Coaila	OEFA Puno, Manager	06/26/2019	Puno
20. Javier Accha	Upina Peasant Community, President	07/09/2019	Upina, Puno
21. Confidential	Group interview to <i>chichiquero</i> workers	07/09/2019	Upina, Puno
22. Confidential*	Contractor	04/17/2020	Secocha, Arequipa
23. Confidential*	ASM expert	04/24/2020	Secocha, Arequipa
24. Tomás (Tommy) Cenzano Sierralta	Cooperativa San Francisco, Manager	06/25/2020	Juliaca, Puno

\* Telephone interview

## APPENDIX 6: KEY ASM LEGISLATION

<b>Date</b>	<b>Act</b>	<b>Topic</b>
2002	Law 27651	First ASM legislation
2010	Urgency Decree 012-2010	Land use management of Madre de Dios prioritized
2012	Legislative Decree 1099	Measures to combat illegal mining in Puno
2012	Legislative Decree 1100	Measures to combat illegal mining in the whole territory
2012	Legislative Decree 1101	Measures to strengthen environmental supervision to combat illegal mining
2012	Legislative Decree 1102	New illegal mining crimes added to Criminal Code
2012	Legislative Decree 1103	Measures to control and supervise the distribution, transportation, and commerce of feedstock used by illegal miners
2012	Legislative Decree 1104	Rules for asset recovery in case of illegal mining activities
2012	Legislative Decree 1105	ASM formalization program
2012	Legislative Decree 1106	Measures to combat asset laundering connected with illegal mining
2012	Legislative Decree 1107	Measures to supervise the transportation and commercialization of machinery and equipment used in illegal mining activities
2012	Supreme Decree 004-12-MINAM	Rules for IGAC

2012	Supreme Decree 027-2012-EM	Regulates Legislative Decree 1105 as referred to gold trade
2012	Supreme Decree 039-2012-EM	Amendment to Supreme Decree 27
2016	Legislative Decree 1293	ASM formalization declared of national interest
2017	Legislative Decree 1336	Rules for the holistic formalization of ASM-activities
2017	Supreme Decree 018-2017-EM	Rules for IGAFOM
2018	Supreme Decree 018-2018-EM	Amendment to Supreme Decree 27
2019	Law 31007	Restructuring of REINFO

**APPENDIX 7: DRAFT LEGISLATION TO REGULARIZE CACHORREO (NOT APPROVED)**

<p><b>1. 4279/2014-CR (2015) - <i>Ley que reconoce y regula el trabajo del minero artesanal</i> (Law that recognizes and regulates the work of the artisanal miner)</b> Political Party: Fuerza Popular (author: Congressman Francisco Ccama)</p>
<ul style="list-style-type: none"><li>• Purpose: To recognize and regulate artisanal miner’s employment relationships and forms of payment developed on third-party concessions.</li><li>• Recognizes <i>cachorro</i> as an activity that, due to ancestral costumes and usages, has been practiced in ASM.</li><li>• Mining concessionaires and artisanal miners area allowed to negotiate and decide between two methods of payment: a monthly salary or payment in kind (miners can exploit the deposit and keep some of the mineral for themselves).</li><li>• Mining concessionaires are bound to pay social benefits.</li></ul>
<p><b>2. 4490/2018-CR (2019) - <i>Ley que regula las actividades de la minería artesanal como actividad tradicional y ancestral en el Perú</i> (Law that regulates artisanal mining activities as a traditional and as an ancestral activity)</b> Political Party: Cambio 21 (author: Congressman Lucío Ávila)</p>
<ul style="list-style-type: none"><li>• Purpose: To regulate traditional mining activities such as <i>cuñaqueo</i>, <i>cachorro</i> and <i>pallaqueo</i>.</li><li>• Regulates the rights and obligations applicable to both mining concessionaires and artisanal miners.</li><li>• The law recognizes the right to <i>cuñaqueo</i> (to keep to themselves waste rock), <i>cachorro</i> (to keep to themselves the exploited mineral) and <i>pallaqueo</i> (to sort out manually waste rock from the mine).</li></ul>

(Source: By author)

**APPENDIX 8: MINISTRY OF LABOR’S ACTION PLAN UNDER *DECRETO SUPREMO 27***

In 2016, the Ministry of Labor of Peru issued an assessment report for its own Action Plan under *Decreto Supremo 27*.<sup>1340</sup> The following Table summarizes the main activities and results attained by different offices within the Ministry of Labor and SUNAFIL between 2014 and 2015. The report concludes that 63 percent of goals were fully accomplished, seven percent partially accomplished, and 30 percent not accomplished.<sup>1341</sup>

All activities below are circumscribed to La Rinconada and Cerro Lunar, Sandia and Carabaya and vicinities, within the scope of *Decreto Supremo 27*.

<b>Topic</b>	<b>Goal</b>	<b>Result</b>	<b>Level of accomplishment</b>
1.1.1.	3 information pamphlets on core labor, health and safety, and social security rights	SUNAFIL: 3 pamphlets (Jul. and Nov. 2014) DGPIT: 3 pamphlets	200
1.1.2.	2 sensitization conferences or workshops on core labor, health and safety, and social security rights	DGPIT: 2 workshops held, one in La Rinconada (Jul. 2014, 68 attendees) and one with CMA’s workers (Nov. 2014, 30 attendees)	100%
1.1.2.	40 people sensitized or trained in core labor, health and safety, and social security rights	DGPIT: 98 miners trained (see above)	245%
1.2.1.	2 information pamphlets on forced and child labor	DGDFSST: 7 pamphlets distributed in sensitization conferences or workshops	350%
1.2.2.	2 sensitization conferences or workshops on forced and child labor	DGDFSST: 2 conferences or workshops (Oct. and Nov. 2014)	100%
1.2.3	40 people sensitized or trained in forced and child labor	96 miners trained	240%
1.3.1.	2 sensitization conferences or workshops on core labor, health and safety, and social security rights target to public servants that work in the area	DGDFSST: One conference or workshop on forced and child labor (Juliaca); One conference or workshop on forced and child labor (Puno);	100%
1.3.1.	20 public servants sensitized and trained in core labor, health and safety, and social security rights	99 public servants trained	495%

<sup>1340</sup> See Ministry of Labor of Peru, *supra* note 1197 (on file with author).

<sup>1341</sup> See *id.*

2.1.1.	40 employers sensitized in core labor, health and safety, and social security rights	SUNAFIL: 116 employers sensitized (Nov. 2014)	290%
2.1.1.	400 employees sensitized in core labor, health and safety, and social security rights	SUNAFIL: 444 employees sensitized in La Rinconada (312 in Sep. 2014) and un Puno (132 in Nov. 2014)	111%
2.1.2.	40 employers supervised in core labor, health and safety, and social security rights	SUNAFIL: 0 supervisions conducted in 2014. In 2015, 40 inspections programed, but none of them could be completed due to threats to public servants	100%
3.1.1.	2 work meetings to establish the information needed on labor, social, economic and demographic variables in the area	DGPE: 3 meetings and 8 surveys conducted to <i>cachorreros</i> , <i>pallaqueras</i> , CMA, cooperatives, etc.	150%
3.1.2.	1 action plan for conducting a baseline in the area	DGPE: 6 meetings between May and October 2014 to design the surveys	100%
3.2.1.	1 plan to visit the area	Plan completed in December 2014	100%
3.2.2.	1 instrument to obtain data in the area	DGPE: 6 meetings between May and October 2014 to design the surveys	100%
3.2.3.	1 meeting to with public and private parties to obtain data in the area	DGPE: 2 meetings with different public agencies	200%
3.2.4.	Social and labor database	DGPE: Four baselines completed in 2015 (includes dwellers, merchants, <i>pallaqueras</i> , and <i>cachorreros</i> )	400%
3.3.1.	1 technical document on social and labor aspects	Report complete: <i>Principales Resultados de La Rinconada y Cerro Lunar - Direccion de Investigacion Socio Economico Laboral (2015)</i> <sup>1342</sup>	100%
4.1.1.	2 meetings with La Rinconada stakeholders	DGPE: 2 meetings with <i>cachorreros</i> and contractors	100%
4.1.2.	2 reports on the dissemination of information on employment, employability and entrepreneurship	Not accomplished	0%

<sup>1342</sup> See MINISTRY OF LABOR OF PERU, *supra* note 600 (on file with author).



4.1.3.	3 meetings with stakeholders in Sandia and Carabaya on employment, employability and entrepreneurship	DGPE: 8 meetings between 2014 and 2015	267%
4.2.1.	1 action plan for entrepreneurship	Not accomplished	0%
4.2.2.	1 report on the implementation of the action plan for entrepreneurship	Not accomplished	
4.2.3	1 report on the monitoring and supervision of the plan for entrepreneurship	Not accomplished	0%
5.1.1.	4 meetings with public agencies in charge of informal mining	First meeting (18 Jun. 2014); Second meeting (21 Aug. 2014); Third meeting (31 Oct. 2014) and Fourth meeting 30 Dec. 2014)	100%
5.1.2.	2 coordination meeting between the Ministry of Labor, SUNAFIL, the Police, Prosecutor's Office and other agencies in charge of forced labor and child labor	2 meetings in Aug. 2014	100%
5.1.3.	2 coordination meetings among agencies to develop joint supervisions in the area	Not accomplished	0%

(Source: By author)

**APPENDIX 9: FREEDOM OF INFORMATION REQUESTS FILED BY AUTHOR**

<b>Request</b>	<b>Agency</b>	<b>Date</b>	<b>Topic</b>
1. 2896629	MINEM	02/03/2019	La Rinconada
2. 2896525	MINEM	02/02/2019	La Rinconada
3. 2896526	MINEM	02/02/2019	La Rinconada
4. 2896527	MINEM	02/02/2019	La Rinconada
5. 2896528	MINEM	02/02/2019	La Rinconada
6. 2896530	MINEM	02/02/2019	La Rinconada
7. 2896531	MINEM	02/02/2019	D.S. 027-2012-EM
8. 2908878	MINEM	03/13/2019	REINFO
9. 2898707	MINEM	02/07/2019	La Rinconada
10. 2896629	MINEM	02/18/2019	La Rinconada
11. 2949815	MINEM	07/12/2019	Upina
12. 29467741	MINEM	06/27/2019	La Rinconada
13. 21338	Ministry of Labor	02/08/2019	D.S. 027-2012-EM
14. 10817	Ministry of Labor	01/22/2019	D.S. 027-2012-EM
15. 21346	Ministry of Labor	02/08/2019	D.S. 027-2012-EM
16. 89198	Ministry of Labor	06/16/2019	La Rinconada
17. 60724	OEFA	07/04/2019	La Rinconada
18. 60733	OEFA	07/04/2019	La Rinconada

**APPENDIX 10: LA RINCONADA MINING RIGHTS**

Name	Ana María N° 1
Code	13006374X01
Location	Ananea District
Year of filing	1972
Year of award	1978
Current owner	Corporación Minera Ananea S.A.
Size	152 hectares

Name	Ana María N° 2
Code	13006904X01
Location	Ananea District
Year of filing	1972
Year of award	1978
Current owner	Corporación Minera Ananea S.A.
Size	132 hectares

Name	Ana María N° 3
Code	13006905X01
Location	Ananea District
Year of filing	1972
Year of award	1978
Current owner	Corporación Minera Ananea S.A.
Size	132 hectares

Name	Ana María N° 4
Code	13007079X01
Location	Ananea District Cuyocuyo District Quiaca District
Year of filing	1972
Year of award	1978
Current owner	Corporación Minera Ananea S.A.
Size	930 hectares

Name	Ana María
Code	P0000206
Location	Ananea District
Year of filing	N/A
Year of award	2006
Current owner	Corporación Minera Ananea S.A.
Size	9.50 hectares

(Source: INGEMMET)<sup>1343</sup>

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<sup>1343</sup> INGEMMET, *Sistema de Derechos Mineros y Catastro (Sidemcat)* (2019), <https://www.ingemmet.gob.pe/sidemcat> (last visited Sep 4, 2019); Instituto Geológico, Minero y Metalúrgico del Perú (INGEMMET), *Geocatmin*, <http://geocatmin.ingemmet.gob.pe/geocatmin/> (last visited Aug 19, 2019).

## APPENDIX 11: UPINA MINING RIGHTS

Name	Media Naranja No. 1000
Code	13007000X01
Location	Ayapata District Ituata District
Year of filing	1978
Year of award	1978
Current owner	Compañía Minera Ayapata S.A.
Size	1,000 hectares

(Source: INGEMMET)<sup>1344</sup>

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<sup>1344</sup> Instituto Geológico, Minero y Metalúrgico del Perú (INGEMMET), *supra* note 630; Instituto Geológico, Minero y Metalúrgico del Perú (INGEMMET), *supra* note 1343.

**APPENDIX 12: SECOCHA MINING RIGHTS**

Name	Posco
Code	01000002Y01
Location	Mariano Nicolás Valcárcel
Year of filing	1935
Year of award	1952
Current owner	Compañía Minera Caravelí S.A.C.
Size	599.8733 hectares

Name	Posco N° 2
Code	01000001Y01
Location	Caravelí/Mariano Nicolás Valcárcel
Year of filing	1937
Year of award	1951
Current owner	Compañía Minera Caravelí S.A.C.
Size	499.895 hectares

Name	Posco Número Tres
Code	01000004Y02
Location	Caravelí/Mariano Nicolás Valcárcel
Year of filing	1937
Year of award	1952
Current owner	Compañía Minera Caravelí S.A.C.
Size	399.9162 hectares

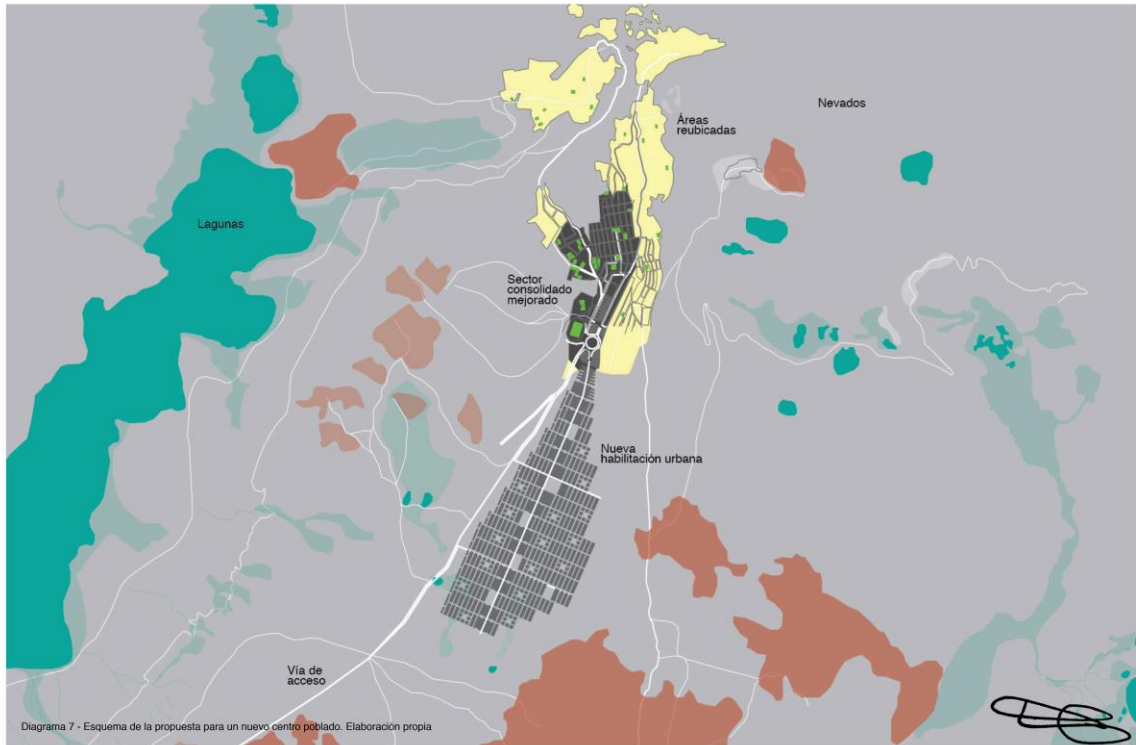
Name	Chacchuille
Code	P0100133
Location	Huanuhuanu
Year of filing	1991
Year of award	1996
Current owner	Compañía Minera Caravelí S.A.C.
Size	63.3223 hectares

(Source: INGEMMET)<sup>1345</sup>

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<sup>1345</sup> Instituto Geológico, Minero y Metalúrgico del Perú (INGEMMET), *supra* note 630; Instituto Geológico, Minero y Metalúrgico del Perú (INGEMMET), *supra* note 1343.

### APPENDIX 13: TENTATIVE RELOCATION PLAN FOR LA RINCONADA



(Source: Green Building Company)<sup>1346</sup>

<sup>1346</sup> GREEN BUILDING COMPANY AND URBES, *supra* note 645 at 35.



## **APPENDIX 14: PHOTO GALLERY**

La Rinconada

<https://photos.app.goo.gl/fvy9EEYFgdnHqbHN7>

Upina

<https://photos.app.goo.gl/eo24j6agKMqC6WSPA>