CHAPTER 2

The Miners

Abstract This chapter has two main objectives: to introduce readers to the main characters of the book, the Zama Zama, or miners, and to outline in detail the process of informal gold mining. The chapter begins with some content on the extent of informal gold mining, followed by a rich ethnographic narrative of Sipho, an informal miner, and his pathway into informal mining. It then explains the process of informal mining in detail, from extraction to when gold enters the formal market. At each point, the story of a key individual involved in mining is discussed. Finally, the chapter concludes by placing informal mining with a decolonial context, showing how the Zama Zama regard mining as a bounty of the land and the Creator. This concept is returned to in subsequent chapters. The overall thesis statement in this chapter is that informal gold mining is a precarious livelihood activity for the poor and marginalised, but is unfused with carefully constructed rules and norms by the Zama Zama.

Keywords Buyers · Sponsors · Informal mining · Zama Zama · Gold mining

Golden-hued heaps of sand tower high across the Johannesburg landscape. These are mine dumps, marking the spots where for the last 130 years capitalists dug holes, or sunk shafts to mine the gold reserves

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underground (Goldblatt, 1973). Today, they loom like giant tombstones, mounds of sand stacked high, anchored by crops of weeds and wildflowers growing on their slopes, littered by debris, as the city grows and bustles around them (Bobbins, 2018; Goldblatt, 1973; Tang & Watkins, 2011).

Mining has raped and robbed the earth of its riches, leaving mines standing damaged, disused and discarded. After more than a century of industrial mining, thousands of mines have been left ownerless and abandoned. Despite extensive regulations on mine rehabilitation and safety, in practice there is little enforcement once they are abandoned or closed down (Legal Resources Centre [LRC], 2016; SAHRC, 2015). The national government is responsible for securing and rehabilitating closed or abandoned mines, but has lacked the capacity to do so (Bobbins, 2018) contracting the Council for Geoscience and Mintek, who has largely excluded mining communities and the Zama Zama from the process (Makhetha, 2020; South African Human Rights Commission [SAHRC], 2015; Watson, 2019). In reality, closed and abandoned mines are sealed with flimsy fencing, shafts are closed with a layer of thin concrete and some shafts have a single security guard lazily keeping watch.

In South Africa, abandoned mines are a serious challenge to regulate and a hazard to surrounding communities. Mining companies are able to simply abandon mines with no responsibility towards their rehabilitation due to weak regulatory frameworks. One study suggests that up to 6,000 mines are abandoned in this way (Stacey, 2010). As Mholongo and Dacosta (2016) argue more efforts to secure mines is needed to ensure the safety of communities and to address the environmental impacts of decades of mining. To compound the challenge, pervasive urbanisation and in-migration, coupled with unemployment and poverty has added further pressure to land access and use. In the meantime, the legacy of mines remains long after they are closed. This includes challenges with environmental rehabilitation, safety hazards, socio-economic implications for former workers and surrounding communities, and public health concerns (Mhlongo & Dacosta, 2016). Globally, there have been uneven efforts at addressing the roles and responsibilities of mining companies and governments towards closed mines. Part of the problem stems from a disagreement of how to define whether a mine is abandoned the lack of clear standards in mine rehabilitations, and the high cost associated with this process. At the same time, the entry of small-scale mining in abandoned mines complicates any efforts to close and rehabilitate the

space. In this study, as is others, the burrowing of tunnels and active work underground make it difficult to safely close a mine once it is abandoned.

Sipho

Gold deposits remain buried deep beneath Johannesburg, luring thousands of people who are seeking survival, or fortune, much like those who came more than a hundred years ago when the mineral was first discovered. Today the people that come to the mines are the urban poor, a mixture of South Africans and migrants from neighbouring countries connected by a shared search for a livelihood, and driven by a sense of desperation from being unable to find steady work, or sufficient wages that can meet the needs of their families. Among them are former mine workers who have the skills and knowledge of working underground, but here too are ordinary people, those who have piece jobs in low-paying work such as construction, street trading or gardening (LRC, 2016). Still others are those in search of a quick fortune, lured from their comfortable abodes in the suburbs to the dusty mines by tales of bags of gold. And so they congregate, early in the morning until sundown, each to their assigned task, a carefully organised economy, highly structured with practical rules and spiritual principles, each day, each person carefully striving to balance the hope of a livelihood, with fear of the danger that surrounds it (Figs. 2.1 and 2.2).

There is a city park on Main Reef Road, in western Johannesburg, fenced in by a green municipal fence. Behind the park, hugging its southern perimeter is a shaft, a hole blasted into the surface decades ago by industrial miners that leads to a labyrinth of tunnels underground (Goldblatt, 1973). The park contains a monument commemorating the site of the first discovery of gold on the Witwatersrand. During apartheid, it was a recreational space for "whites only" a place to enjoy an afternoon tea perhaps or play some rugby. One can imagine the chatter of children as women with carefully coiffured hair lay tablecloths and set out thermos of tea and rusks. Now the park is derelict, weeds everywhere, garbage strewn around and all the grass long gone. Main Reef Road is a major artery into the city and so streams of people walk by, and public minibus taxis race along in the early morning and late evening, on their way to and from the big city. The park looms like a ghost from days gone by.

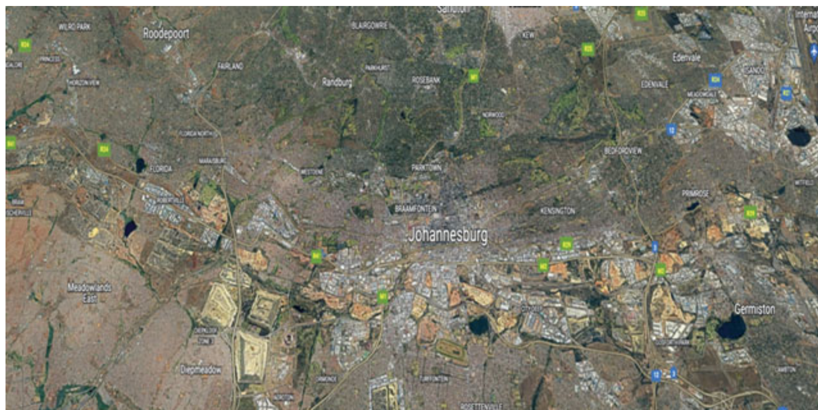

Fig. 2.1 Map of Johannesburg showing mines and mining dumps in yellow at the bottom (*Source* Google Earth, May 2022)

Fig. 2.2 Aerial view of main reef road, with mine dumps, informal housing communities and a suburb in view (*Source* Google Earth, May 2022)

At the entrance to the park, a tall man stands nonchalantly, watching people streaming past. He is dressed in the dark blue overalls common to workmen all over the city: the top buttons are undone revealing a stained t-shirt underneath, and between his lips dangles an unlit cigarette. His name is Sipho, and he is the boss of this park, this shaft. Sipho's power is evident in the quiet respect he commands from the groups of men who file past the gate of the park in threes or fours, making their way to the shaft entrance at the rear. He determines who enters the shaft and under what conditions, who will alert rescue teams if there is an accident, and who will arrange reparations and compensation in the event of a fatality. As the one with real authority here, he holds a commanding presence over this park and over this community. His authority is cloaked not in his stance or formal position (of which he has none), but in the quiet respect and deference he receives from this community.

Sipho has had a long and difficult journey to get here. As a young man, he did what countless others before and after him did, joined the queue at The Employment Bureau of Africa, TEBA, formerly known as the Native Recruiting Corporation, the company established in 1902 to recruit men for the mines. He signed on as a worker at the gold mines, leaving the fertile green valleys and meadows of his home in the beautiful coastal province of KwaZulu-Natal for the concrete, mines and dust of Johannesburg. For him, beauty did not fill empty bellies. For years he was employed on a yearly contract, earning enough money to send back home to his mother, and indulge his love of tobacco, sleeping in mine hostels, worked in the shafts, learning how to extract gold; slowly forgetting his other life in the peaceful rural homestead, and building a new one in the bustling city.

Sipho's story is not unique. For most of the twentieth century, hundreds of thousands of Black men were trapped in a capitalist system of exploitation and migrancy which extracted profits for white-owned mining companies (Callinicos, 1980; Goldblatt, 1973) which in turn helped prop up South Africa's apartheid regime (Vosloo, 2020). These men sacrificed their labour, their futures, their ways of being and knowing, their families and their health, to extract gold they would never own or enjoy.

The transformation in gold mining in the 1990s and 2000s resulted in a 38% drop in the number of people employed in the sector between 2009 and 2018 (Statistics South Africa, 2019a, 2019b). One of the 61,891 people who were made redundant by the industrial mining retrenchments

was Sipho. With nowhere else to go, no other home left to return to, and no other work he knew of, he remained in Johannesburg, moving out of the mine's hostel and into a backyard shack, a type of informal housing constructed of corrugated metal sheets in a township, close to the mine he had worked at. He took odd jobs as a day labourer when he could find them, on construction sites or in gardens in middle-class suburbs. But the wages were inconsistent and too low. He needed to find another way to survive. He knew there was still gold underground, he had seen it, and he knew how to extract it. In the informal community he lived in, he heard of men working at another shaft nearby, doing the exact same work he had done for decades, but this time they were selling the gold themselves and keeping the money. With his skills and experience, he entered the underground world again, this time as a Zama Zama. He made enough money to cover his rental, and look after his family, and even managed to save some cash each month.

Over the years his expertise, his long connections to the Zulu men of his community and his strong personality made him a leader. People trust him, because of his knowledge and connections, and they like and admire him because of his affable manner. He is street smart, and he sniffed an opportunity when he saw young men like him coming from the rural areas, or from neighbouring countries, looking for work. Eventually, he stopped going underground and started hiring and training other men to do the work instead. Carefully he selected who he employed, testing them with small tasks each day to determine their loyalty and honesty. He kept his eyes and ears in the townships open, did the men drink too much, or argue with their girlfriends? If so, they were not to be trusted. But the ones who were eager to work hard and live clean, these he took under his wing, and soon he was employing a small group of Zama Zama who he sponsored with clothes and equipment, trained with skills and knowledge and provided access to the best shafts in the city.

In this park, at this shaft, access to the abandoned mines and the gold wedged in them, is navigated through a complex web of patronage-based relations that exemplify and exercise informal power. And at the heart of such power are people like Sipho.

The Work

The informal mining economy in Johannesburg is a wide network of employment and business practices involving men and women. Some of

these practices are well organised, led by groups of people, following standard rules and processes, while others are organic and fluid. The economy of informal mining includes underground mining; surface work of extraction; supporting economies of food preparation and childcare; supply networks of essential materials and services; buyers; and sponsors. This is the bottom end of a global gold supply chain, a ground zero if you will. It is the most precarious but also the most important. The Chamber of Mines of South Africa in a 2017 report provides a helpful classification of gold mining structured across five tiers. I have illustrated the formal/informal connections across tiers below and discuss these in more detail later on. The work of the Zama Zama is mainly located in tiers 1 and 2 (Fig. 2.3).

Miners refer to their labour as 'work' or 'business'. The common words used to describe their own activities included: *korokoza* ('we are doing business' or 'we are trying to earn an income' in Shona). Men who are engaged in artisanal mining are known as *gweja* and women as g*wejeleni*. The plurals used extensively in this book of *magweja* or the more well-known Zama Zama both mean 'we are hustling or trying' and borrow from the self-identification and preferences of the people interviewed. Many miners spoke of their desire for their work to be legalised, but there are narrow provisions for legal artisanal small-scale mining in South Africa, which favour capital investors who can negotiate the bureaucracy needed to obtain the licences to explore and mine. The majority of small-scale miners have neither the money nor the ability to secure permits. In contrast the popular and academic press in South Africa misrepresent informal mining with multiple forms of illegality (Munakamwe, 2017; Thornton, 2014). This includes an assumption that most miners are 'illegal', that they are all foreigners with no documentation, and are involved

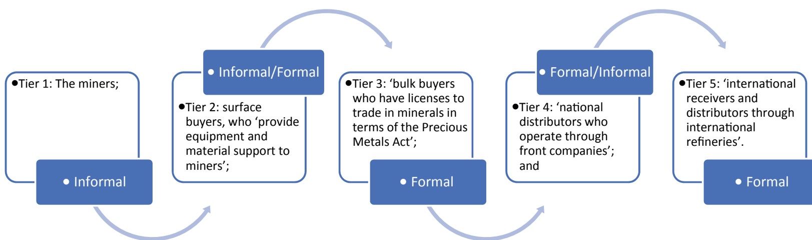

Fig. 2.3 Classification of informal gold mining based on chamber of mines

in criminal activities such as drug dealing, human trafficking, robberies. Rather than adopting a binary, normative, approach on informal mining as good or bad, the approach here, as informed by the South African Human Rights commission hearing on informal mining (2015), is to centralise the voice of miners themselves with an effort to understand and contextualise their realities and lived experiences.

Underground Mining

Miners get to and from the shaft on foot or in public minibus taxis. As they get closer to their worksites, they walk along rough pathways which have been hewn by heavy foot traffic to reach the mine shaft. At the shaft, miners don dark clothes and caps, and huddle at the entrance as they prepare to go underground. Some say prayers and offer food to the ancestors to bless their way, others take care of more practical matters: water, food and torches. The entrance of the shaft is littered with the tools of the trade: old plastic water bottles used to clean their faces, discarded rags and clothes that lay dusty on the ground; batteries from headlamps rusting in piles and foil wrappers from energy bars, and packets of crisps. As some get ready to enter the shaft others emerge in cloud of dust, squinting in the harsh sunlight after days underground, weary, but proudly carrying their packages of gold.

Emmanuel is a miner. He nears the entrance to the shaft, a small dark hole wedged into the cliff. Facing it, the sounds of the city can be heard in the distance, fading slowly as he goes further and further in. Inside it is dark, cold and silent. He braces himself for the chill that will grip him as he begins his descent into the mine. He says a prayer, pleading with the ancestors for help and protection, and uses the rope that has been tied to the entrance to guide him, as his body adjusts to life underground. Emmanuel started doing underground work as an artisanal miner near Bulawayo, although the mines are not so deep there and are better secured with pillars and beams, he claims. He has been mining in Johannesburg, on a casual basis for about 3 years, supplementing his income as a contracted security guard with a private company. When work is slow, he comes here to the shaft going underground, deeper and deeper until he can imagine 20 buses piled on top of each other, remaining underground for a few days at a time to loosen and retrieve rocks with gold deposits which he will give to the women to grind.

Underground mining is the principal component of artisanal informal mining and miners demonstrate a wealth of knowledge, skills and creativity to do this work informally. The long and well-established industrial mining sector on the Main Reef (Witwatersrand) has resulted in a significant network of underground tunnels that stretch for kilometres. Miners say that they can enter a shaft in the west or central part of the city, walk several days underground, and emerge in eastern shafts or shafts further south from the Reef. At times, a miner walks for three days and at depths of 4000 metres to get to gold-bearing deposits, and works there for three to four days before returning to the surface by walking all the way back to the entry point. Although many informal miners follow tunnels that already exist underground, at times miners bore and drill new passageways, using small amounts of dynamite.

The majority of the 100 or so *magweja* we interviewed for this book were Zimbabwean, although there were also South African, Malawian, Mozambican and Basotho informal miners we engaged with. Some of the respondents had previously worked in industrial mining in South Africa or Zimbabwe; others had worked in other informal employment. Among the former, experience with underground mining is an important form of knowledge. Miners state that they look for *'solid rock, which has money'*. To know if a rock contains gold, miners test it by chiselling a portion of it into a plate and sieving it. The goal is to look for a "belt", or a stretch of rock rich in gold deposit, chisel it into smaller rocks that can be fit into a sack, and carry these out to be extracted. The knowledge and skill one has determines how much of useless stone you will carry versus gold-rich rocks, how safely you work to access and loosen the belt, and how long it will take. In informal mining, just like in any other economy, time means money. The more skilled miners have perfected the art of informal mining, they are able to complete the process safely and quickly, allowing them to return back to the surface within a few days and rest until their next shift.

Informal miners use and adapt a variety of tools and materials in their work: hand-held tools like hammers are used to break smaller rocks; they fuse, ignite and coat chisels and copper cables to assist; or they use drillers called *mugwara* (long chisels) to extract gold underground. On their heads they wear simple head torches. Some also use basic "Nokia" cell phones (i.e. not smartphones) for torches, they prefer these for the longer battery life they offer. Where a huge concentration of gold has been detected, they use dynamite or generators to blow out the rock.

However, the use of "large machinery" has been attributed by some informal miners as the cause of rockfall landslide accidents. Copper cables are used to suspend materials or to steady their foothold on loose underground surfaces or when the ground is not stable enough for miners to step on without causing rockfall landslides. However, this is regarded as the worst form of conveyance as miners mentioned that any slight mistake may lead to very dangerous conditions, including fatal accidents. To loosen rock and create passageways, miners use dynamite, known as *hoora* (see Chelin & Els, 2020). This process can take several days, as conditions are difficult. As one *magweja* puts it, "it's us who are the real soldiers", referring to the bravery and hard work that informal mining demands. At one of the shafts, *hoora* is sold by women to miners (see Chelin & Els, 2020).

Miners work on narrow underground ridges, where there is little light or ventilation, and in high temperatures. To survive, miners strip their clothes off down to their trousers or underpants only. In areas where ventilation is poor or oxygen supply limited, informal miners have developed a system of using domestic-use garden hose pipes to facilitate breathing while they are working in small groups of four to six. Some miners will stay in higher shafts where oxygen supply is good and act as the base location for the hose pipes. A smaller group will carry the other end of the hosepipe with them as they descend further down, and use it for breathing once they reach lower depths where they will work. Once rocks have been chipped off at a "belt" and broken into pieces that are easier to handle, they are loaded into makeshift sacks and backpacks and carried back to the surface. From here miners will retrace their steps to get a taxi that will take them to the surface workers.

Miners engaged with police as well as private security guards, who control and regulate the site of mining in multiple and strategic ways. These include the payment of bribes for access to sites, or to evade arrest, or using networks to create a warning system if police are nearby. Despite this, we had witnessed many raids and arrests, and were aware that part of work in this sector involved adopting strategies of survival in the face of the criminality associated with the sector in South Africa.

Surface Work

After their massive efforts underground to obtain the ore and bring it to the surface, the bundles of rock, held in domestic-use plastic buckets or

backpacks, are carried by hand or transported in public minibus taxis to surface sites located in nearby communities. At the four sites, where we conducted our study, surface work is done in various types of spaces. At one site, there is a long stretch of open land behind a line of informal houses where some of the miners live. The Zama Zama rent the open land from local 'landlords' pay an average of R 400 per month to use it for surface work. At two other sites, work is done in an abandoned and half-demolished old mining compound. At the fourth site, surface work is done in a secluded thicket, hidden by thorny bushes and trees hidden from view from a major road. Further surface work on that site takes place in the backyards of houses and shacks nearby.

Surface work involves extraction of the mineral deposit or ore from the rock, and much of it is done by women, often with young children tied to their backs or playing nearby. One of them is Gloria, a 20-something woman of slender built and piercing eyes from a village near Bulawayo. She has been in South Africa for about 5 years she says, leaving her home and family so that they "could eat". Mugabe's devastating economic and political policies has turned the former bread basket of Africa, into a begging bowl (Dzingirai, 2015). And millions of Zimbabweans, like Gloria have fled in search of protection and livelihoods. She left elderly parents, three younger siblings and her own child at home. She came to South Africa on a visitor visa and applied for asylum as a refugee. Hers is one of the approximately 1 million asylum applications that have yet to be determined by the Department of Home Affairs, effectively placing her in legal limbo (Fassin, 2017; Mukumbang, 2020).

With no formal employment or access to social security and limited social capital, Gloria worked odd jobs as a cleaner earning around R 2,500 a month, just enough to pay for her backroom shack in Alex, the township bordering wealthy Sandton in the north, some food and transport. She remitted money home when she could. One evening she heard neighbours talking about making money in gold mining. They pointed her to this mine in the west of the city, and she arrived at the surface area bright-eyed one morning demanding work. It had been a busy time, miners had brought up a lot of rock and hands were needed on deck. She was hired by another woman, a 'syndicate leader', on the spot joining a group of women for R 150 a day. Working 7 days a week meant she could almost double her monthly wages. That was two years ago and now Gloria has saved up almost enough money to open a small spaza shop, the informal general dealers in the townships.

Surface work is organised into teams, or ‘syndicates’ as the women refer to them, consisting of families, friends or people who sometimes hold shared ethnic ties. This helps maintain trust in the group, we are told. The ‘syndicates’ are employed by ‘sponsors’ or miners often with reference to shared ethnic identification. Some surface workers are hired as day workers (paid by the day), alternating between various casual jobs such as domestic work or child minding to supplement their income, while others are on the site full time on longer ‘contracts’. Some women are hired by individual miners, although the majority are recruited and paid by ‘sponsors’ who are men like Sipho. Each ‘syndicate’ is overseen by a surface leader who is responsible for all work arrangements, maintaining a ‘store room’ where work equipment such as iron balls and *maphenduka* gas cylinders, because *maphenduka* is a reference to the rolling action that gas cylinders perform in crushing the rock) are kept, and for liaising with buyers.

MaElizabeth is a syndicate leader. A heavy-set woman in her late forties or early fifties, she has a commanding maternal air about her that she uses expertly to shepherd the cluster of younger women working around her. MaElizabeth is an old hand at mining. She is South African, Zulu, and has lived in Johannesburg all her life. Her mother was a domestic worker, her father she had never met. Elizabeth rents a backyard shack close by, where she stores the tools her syndicate needs: gas bottles, stamps to grind the rocks, jugs and buckets to wash and other bits and pieces of the trade. She gets bags of gold-bearing soil from the underground miners because she sponsors them, giving them food, buying torches or batteries for the headlamps, and paying the ‘tributes’, the money used to pay the shaft owner to go underground. From the soil she earns she pays women like Gloria to grind for her. All of these transactions she manages in her mind with no written record, yet she effortlessly gives us a tally of how many men are underground and how many women are above, grinding her rocks.

‘Syndicate’ members are grouped as a team, where each member specialises in certain aspects of work. For example, some work as grinders, some in drainage and others work only with mercury. Incomes vary depending on the type of contract and employer a woman has, and the amount of gold that is yielded; for example, some women each earn R 100 per day (approximately $8) grinding a 20-Litres bucket of rocks. Others get paid much more because they have the skill to grind and extract faster and more carefully. Newcomers start off as grinders, ‘working’ for either

the *magweja* or 'syndicate' leaders, and are paid per 20-Litres bucket of rock that they grind. The 'syndicate' leader pays the syndicate members a wage that varies from week to week: a typical amount reported to us was R 600 each a week, but this depends on the amount of work done.

Gloria and other women in the group are also paid "in kind" through being allowed to collect the leftover, gold-bearing soil known as *mvhovo*, which can be further refined and sold directly by 'syndicate' members to buyers. Gloria keeps her sacks of *mvhovo* in Elizabeth's shack until she has about 20 bags, then takes these to a white man at the other end of the city. He has some electrical equipment that can further extract gold from the soil and she often comes back with another R 200 or so per sack. MaElizabeth thought prefers to use another white guy who will send a driver to the shaft, and they will fill his pickup truck with bags and bags of soil, up to 100 in exchange for more money.

The first stage of surface work consists of crushing the rock into smaller pieces and then grinding it (*kukuya*) until it looks 'ash-like' or is ground into a fine sand. The process is physically demanding and takes places outdoors on concrete slabs. Often the slabs have been salvaged or stolen from the foundations of buildings and houses. The flat and tough surface is ideal to crush and grind, although it results in chapped hands and knees, as the women work on all fours. While they rock back and forth under the hot sun, the whiteness of the concrete reflects a harsh glare. A 20-Litres bucket of rocks and stones takes about four to five hours to process. For this a woman is usually paid around R 100 per bucket, in addition to the *mvhovho* they will collect.

In the second stage, the ashy-like sand is mixed with water and drained through a drainage system. Drainage consists of washing the ground sand several times and is done on structures that are especially built for that purpose. Typically, a drainage site involves several pipes, wash areas and sieves, all set up across a stretch of land.

Finally, the sand and small particles of stone are treated with mercury which clings to gold once it has vaporised, thereby facilitating the extraction of gold. Only the most skilled of the women work with mercury, and they are proficient at extracting even the tiniest particles. Using tin or zinc sheets which have been taken from abandoned machinery or stolen, a fire pit is created. Firewood from trees and shrubs is gathered and burnt to create the heat necessary for *kupisa*, the burning process.

It is mainly women engaged in surface work and their burdens are many, and heavy. Women in the mining communities are particularly

vulnerable to crime. Rape and gang rape are reported commonly. For this reason, some women we interviewed said that they enter into 'protective relationships of convenience' with men to make them feel safe, but this does not always work. At other times, their partners are the danger. Three incidents of domestic abuse were reported to us, two were Zimbabwean women who said that as migrants they do not have any rights in the country. By this they refer to their fear of being further victimised by police because they are migrant women.

Women also bear the major responsibility of childcare. Informal childcare arrangements with neighbours, or women who operate overcrowded, and unregistered day cares are the only childcare option in the communities. Many mothers hesitate to leave their kids in these either due to the cost or concerns about how well they would be taken of. Instead women doing surface work bring their children, especially those under 5 years of age with them, tied to their back or playing at their feet. For children of schooling age, migrants report that they are forced to pay brines to school principals to allow their children to register in the school, and some simply find it cheaper and safer to send their kids home to Zimbabwe to be cared for by extended family.

The earth below holds many riches indeed, but extracting it comes at a price. Hands are chapped and lungs are infected, backs are broken, burns are common, and limbs become stiff. Mining is dangerous. Here aboveground, like the men underground, only rudimentary equipment is available which provides little, or no, safety or protection. "We are always coughing, its hurts here", they say, pointing to their chests. Some cover their mouths and noses with a wet *doek* (Afrikaans for small cloth). Because of these risks, many prefer to work hard for a year or two and then use their earnings as 'capital' to start small businesses like selling food *shisanyama* (isiZulu: to burn/braai/barbecue meat) and pap in their communities. After almost two years Gloria has saved up almost enough to do just that. She laughs coyly, when we ask her about her plans: "hah! I was a nobody, everyone was saying oh poor Gloria she works so much she is the cleaner, but now gold has made me a somebody, and one day I will have my business and they will line up to buy from me".

Buyers

After extraction on the surface, shaft owners and miners sell gold to buyers at a price determined by the international market. At the time of

this portion of the study in 2016, it was fluctuating between R 480 to R 510 per gram. The sellers use a small digital scale to weigh it. Once sold to an informal buyer, the gold then enters the formal market for gold: it is either sold directly to traders who have permits and shops for dealing in gold; or sold indirectly through other buyers who will resell it to the traders. This constitutes what the Chamber of Mines described as Tier 3 (Chamber of Mines, 2017). Among surface and underground workers, these end-buyers are referred to as the "market" and usually refer to those places in Johannesburg or Roodepoort that trade in gold.

We witnessed a few of these transactions and interviewed four buyers. Paul is one of them, and according to Sipho he is a 'big man' referring not to his physical stature but his social status. Paul is Sotho, and his family come from Soweto. He owns several shops in the townships and is well connected politically to the local African National Congress (ANC) branch, the governing party of the country. Some say he was part of the anti-apartheid movement, living in exile, but Sipho laughs this away, saying that people like Paul make up their history to suit their future. Nevertheless, Paul is friendly and approachable and we manage to meet and interview him.

Late one morning, he arrives in the informal settlement behind a surface site in his shiny SUV. The car is parked under a clump of thorny trees, the engine running. After a quick call a sponsor hustles over too Paul's window which glides down smoothly. Paul and the sponsor talk for a while and then they make their way into a nearby shack where goods and money are exchanged. Paul agrees to meet us another day at a local KFC. Paul orders two lunch combos (at our cost) and after a satisfying meal he is ready to talk. Buying gold is a small-time side hustle for him, he says, he has a job with the local municipality, something he hates. All those queues and angry people who want you to fix all their problems. He has a hearty laugh that makes his belly dance. He buys gold maybe once or twice a month and sells it to someone in the city centre. The money is used to finance his luxury car.

Other buyers measure the gold on scales that they bring along, although miners sometimes complain that these scales are not accurate. As the entire transaction is in cash and involves sums of up to R 100,000 buyers take precautions to ensure their security by bringing bodyguards to accompany them and by carrying firearms. The majority of the buyers do not live in the mining communities, but in the middle-class suburbs, although they employ assistants who live locally and who will act as

middlemen for the buyers. For the buyers, there are risks too: trading without a licence is illegal, and buyers are weary of the police, who they say are more likely to confiscate their money and gold than to arrest them.

To make money they take risks. Informal mining is bound by danger: gangs prowl, criminals pounce, rockfalls and death are realities of everyday life. In addition, police are always on the prowl, doing so-called clean-up operations where they round up foreigners, looking to butter their own bread from the gold they know is all around. And then there are the private security companies employed by mining houses, and by neighbourhood community groups, heavy-handed men who pounce on the poor, doing citizens arrests, and beating up miners (Legal Resources Centre [LRC], 2016).

The Supporting Economy

Thokozani is an affable woman from Harare. Short and plump, she has dimples in her cheeks when she smiles. She is an astute businesswoman and turns on the charm often. Thokozani lives in the city centre near the Methodist church which has become a haven for Zimbabweans and other migrants in the face of xenophobia, providing protection, accommodation, food and even a school for kids (Bompani, 2015). Not content with selling fruit and vegetables as a street trader (another informal form of livelihoods in South Africa that is often criminalised and subject to harassment from police (Skinner, 2018), Thokozani has diversified her business, buying and reselling prepaid cards, cellular data in small denomination favoured by many due to their affordability, in townships. For this she takes the minibus taxi to different informal settlements each day of the week selling data, logging entries in her notebook and collecting the payments at the end of each month. She usually offers credit to people from her church "so I can trust they will pay" she laughs. With her friendly personality she struck up conversations with Gloria and the other women working the gold, and now she sells various goods to them including drinks and foodstuff that she can source at better price than the local township store (the *spaza* shop). She also sells similar supplies to other women who in turn supply the underground miners.

To enable survival underground, a parallel economy supporting the underground miners' activities has been created aboveground and is run by sponsors. This parallel economy supplies food, usually *pap* (the staple diet in southern Africa, Afrikaans for maize porridge) and soft drinks at

highly inflated prices, provides communications networks through the use of runners, stores essential tools such as torches, chisels or *hoora*, and, most importantly, activates search or recovery efforts when a miner is missing or there has been a rockfall. This complex network has been developed to support informal underground mining and is accessible exclusively through patronage-based networks.

The Meaning of Gold

The miners believe that "gold lasts forever". This approach represents the value associated with informal gold mining, as one bucket of gold can sustain the livelihoods of many people, from underground workers to buyers and end users. As one respondent noted.

The *magweja* bring gold containing rocks, gives them to grinders or they lend the *maphenduka*, the payment is residues of the soil, *mavovo*. The *maphenduka* owner or grinders or drainage owners process the *mavovo*, leave them for others and so on. The *mavovo* can be recycled for close to a decade, and the processor still gets something from them. For us gold lasts forever, and no one starves.

This is a decolonial approach that symbolises an interconnected relationship to the land and its resources. For generations of people who lived off wage work, the ability to access, mine for, and sell gold represents a deeper connection to being self-sufficient and to find a pathway out of intergenerational poverty. For millions of Black low-skilled workers, who were denied access to land, adequate education and services that kept their families in cycles of grinding intergenerational poverty, informal mining is an opportunity to move up. For many the high cost of living in a major urban centre such as Johannesburg, means that their wages cover only basic needs such as rental of a backyard shack in a township, public transport to and from work and some essential groceries. In the townships, people hear and see the fruits of informal mining, a job that is risky and dangerous, hard and unconventional but which pays better. Some begin to try it out working part-time, going into shafts on the weekend or during lulls in their casual employment, but soon realise they can make more money in informal mining. As one miner said, he had earned in one weekend the equivalent of his monthly wages as a security guard and decided to become a full-time Zama Zama. And for South Africans from the towns, and townships, the villages and cities across

the country, the pathways into gold mining are similar. High unemployment and poverty in rural areas drive many to seek employment and opportunity in Johannesburg. Once here they are trapped into a cycle of low-waged work, rising costs and limited future prospects. All the miners agreed that informal mining is hard work but rewarding. Many have little knowledge of what they are getting themselves into, but skills and information is freely shared, and in turn the recipients become experts of the hustle and share what they know with newcomers.

A Zimbabwean miner said that he is considering returning home to start a farming and livestock business once he raises enough capital. Other miners drive expensive cars, and some had moved up the supply chain to become influential buyers. These Zama Zama who have accumulated capital are known among the surface and underground miners as “big shots”, who can afford to buy larger amounts of mercury, cyanide, electric blasters and dynamite. This enables them to become “sponsors”, that is, they can finance *magweja* to go underground. The more capital that is invested, in terms of equipment or labour, the greater the return. Among women too, informal mining can be rewarding. Many begin as grinders and work their way up. Some are involved in the support economy, selling food, drinks or alcohol at sites. A few dealt in dynamite, a prized resource for underground mining. Others are syndicate leaders and employ men to go underground. A young woman told us that she has employed her former teacher. Another woman from Zimbabwe started working at sixteen and now has built a home and bought several cows.

Alongside the riches though, lurk risks. Competition within the sector is stiff. Between 2012 and 2016, two new surface sites emerged in the areas in which we conducted research, and miners told us that new members join the sector every day. Shafts are loosely controlled by men like Sipho and his team, and fighting among groups is commonly reported. The police play an important role in balancing power relations within the community. Competition between traders is often resolved by ‘snitching’, calling the police to raid a site and confiscate goods, which are returned after paying a bribe. Police are also reported to work with syndicates of robbers and provide them with guns to rob their fellows. *Mkunzi* is a form of daylight robbery by fellow neighbours or friends, depriving miners of their earnings.

Many miners do not have bank accounts, due to either a lack of documentation among migrants and some South Africans from rural areas, or a lack of trust in the banking sector, and so the economy is largely a

cash or favour-based one (Landau, 2005). Miners are constantly entangled with each other, borrowing or being owed money, trading goods, or as needed. Both cash and favour systems lend easily to accusations of cheating, and fraud, and inevitably to drunken brawls. And so, the money that is earned disappears as quickly as it comes in, leaving many families indebted to informal loan sharks or *mashonia* who charge interest of fifty per cent or higher. The *mashonisa* are part of the township too, and a part of everyday life, and if a miner no longer needs a loan, he is still persuaded into borrowing when the former courts him, slyly whispering, "my friend, did we fight that you no longer come to me?" Miners refer to *mashonisa* loans as "an albatross around our necks". These loans keep many in perpetual debt, and that to honour them has dire consequences, including physical harm by the *mashonisa* or their bodyguards, or the destruction of their property.

It is a delicate job, balancing the risks of gold mining with the rewards it offers.

* * *

And so Paul, and Sipho and Gloria and MaElizabeth, and Emmanuel, and the other men and women find themselves connected in this chain of gold extraction and supply. Whether as locals, or as visitors on this land, they are bound by a search for money, to survive or to get ahead.

As the sun sets over the golden cityscape of the Highveld, the raucous shouts of the hadada birds and the cries of crows' echo. Sipho, MaElizabeth and Gloria make their way to their shacks in the township close by, Paul is long gone to his comfortable home in the suburbs. In the township, those who are lucky to have a job return from their work elsewhere in the city, wearing private security guard uniforms or in a smart pair of trousers and shirt. Many more come home from a day's work as a gardener, as a domestic worker or as a day labourer on a construction site. Women arrive carrying bundles of groceries balanced on their heads and in their arms, while children in their school uniforms are filling rickety old buckets with water from the taps nearby. They splash in the drainage pipes and laugh as their mothers call out. And many, many more people sit, at a corner or outside their homes, to talk, drink and smoke, while they are waiting to wash, to cook and to bed down for another night. On borrowed land, they dream of the beautiful hills and valleys of a home long left, of hot water on tap in their homes and of a full belly.

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