



**University of Cape Town**

**Department of Social Anthropology**

# **The Invisible Story: Underground Health Narratives of Women in Mining**

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**MTNMUT002**

**2017**

**MA dissertation supervised by Dr. Helen Macdonald submitted in partial fulfillment of the requirements for the award of the degree of MSocSc in the Department of Social Anthropology.**

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## Declaration

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## **Acknowledgements and Dedication**

My first thank you goes out to my supervisor Helen Macdonald who has supported and assisted me during this long journey to freedom. Not only did she provide insightful advice when I could not even make sense of my own ideas, but she went above and beyond her duty as a supervisor, she provided me with the courage and emotional support to continue when I had hit rock bottom. Thank you, a thousand times over.

I would like to acknowledge the National Research Foundation (NRF) and Australian Universities Network (AUN) for financial assistance towards this research. Opinions expressed and conclusions arrived at, are those of the author and should not be attributed to the NRF and AUN.

I would also like to acknowledge my new-found friends in Rustenburg for your encouragement when work got tough. I thank Hilary Chimbi and Nelly Nstimane for all your support. I would like to say a special thank you to Marco, not only for supporting me emotionally and academically from the very second I arrived in Rustenburg, but for also having my back when I was treated unfairly based on the colour of my skin.

I would like to thank my friends Dumisani Lucas and Mawutor Letsu for picking up my frantic phone calls in the early hours of the morning to listen to me reading paragraph after paragraph to make sure I was making sense. Thank you for always for encouraging me comrades, even when I had no kindness and patience left. To Shingai Skipa, who made the time and effort to visit me in Rustenburg when times got tough.

Finally, thank you to my mother (the anchor of my life) and the rest of my family, for your unwavering support. Your enthusiasm and optimism during my research and writing process pushed me on. Your support is greatly appreciated and did not go unnoticed.

I dedicate this dissertation to all the brave and phenomenal female mineworkers I have met whilst doing my fieldwork. Thank you for expanding my Masters research beyond the scope of academia. Through this research process I have sisters and family for life, lessons on life and the lessons of the harsh reality of motherhood. The most valuable life lesson I have learnt

from you phenomenal women is that often our destiny as women is in the shadow of men. We are constantly condemned for thinking for ourselves, being ourselves, for owning our experiences, our bodies and our lives. Yet despite these condemnations, you have managed to gather all this energy around you and match with the realisation that this life is yours. Sorting out your life through 'making a plan' entails the risk of being misunderstood, perceived as ignorant, a bad mother and broken. I have watched you sort out your lives and honestly it takes a certain kind of bravery. This bravery gives you the courage to own your own agency, to own your desires, to own your fear and to own your own destiny.

## **Abstract**

This dissertation may be read on several different levels. At its most accessible, it is a detailed ethnographic description of how 'women in mining' negotiate the daily terrain of caregiving and being exposed to highly contagious and resistant diseases that are associated with mining, which could potentially adversely affect their day-to-day lives, wellbeing and family relations. At its most analytical, it utilises Nixon's concept of 'slow violence' by carefully charting the challenges that a female mineworker faces; having to provide for her family even in the most difficult situations, and sometimes at the expense of her own health. Hence, 'women in mining' are situated in a web of connections that exist between working underground and being caregivers in their homes; while at risk of transmitting tuberculosis (TB) and acquiring reproductive health related problems. This dissertation illustrates the tactics and coping strategies that women in mining employ, and argues that they 'make a plan' to minimise the negative social consequences of ill health.

**Key words:** Women in mining, mothering, slow violence, occupational diseases, reproductive hazards, dust, tuberculosis

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## **Abbreviations**

AIDS:	Acquired Immunodeficiency Syndrome
DOTS:	Directly Observed Therapy, Short Course
HIV:	Human Immunodeficiency Virus
HR:	Human Resources
FOG:	Fall of Ground
MDR-TB:	Multi-Drug Resistant Tuberculosis
PPE:	Personal Protective Equipment
RDO:	Rock Drilling Operator
TB:	Tuberculosis

Figure 1: Map showing South Africa<sup>1</sup>



Figure 2: Map showing the North West Province<sup>2</sup>



<sup>1</sup> Available:  
<http://www.worldatlas.com/img/areamap/a8b8630e8facdf7d750e5756042e8fbf.gif> [2017, June 6]

<sup>2</sup> Available:  
[https://upload.wikimedia.org/wikipedia/commons/thumb/f/fc/North\\_West\\_in\\_South\\_Africa.svg/1200px-North\\_West\\_in\\_South\\_Africa.svg.png](https://upload.wikimedia.org/wikipedia/commons/thumb/f/fc/North_West_in_South_Africa.svg/1200px-North_West_in_South_Africa.svg.png) [2017, June 6]

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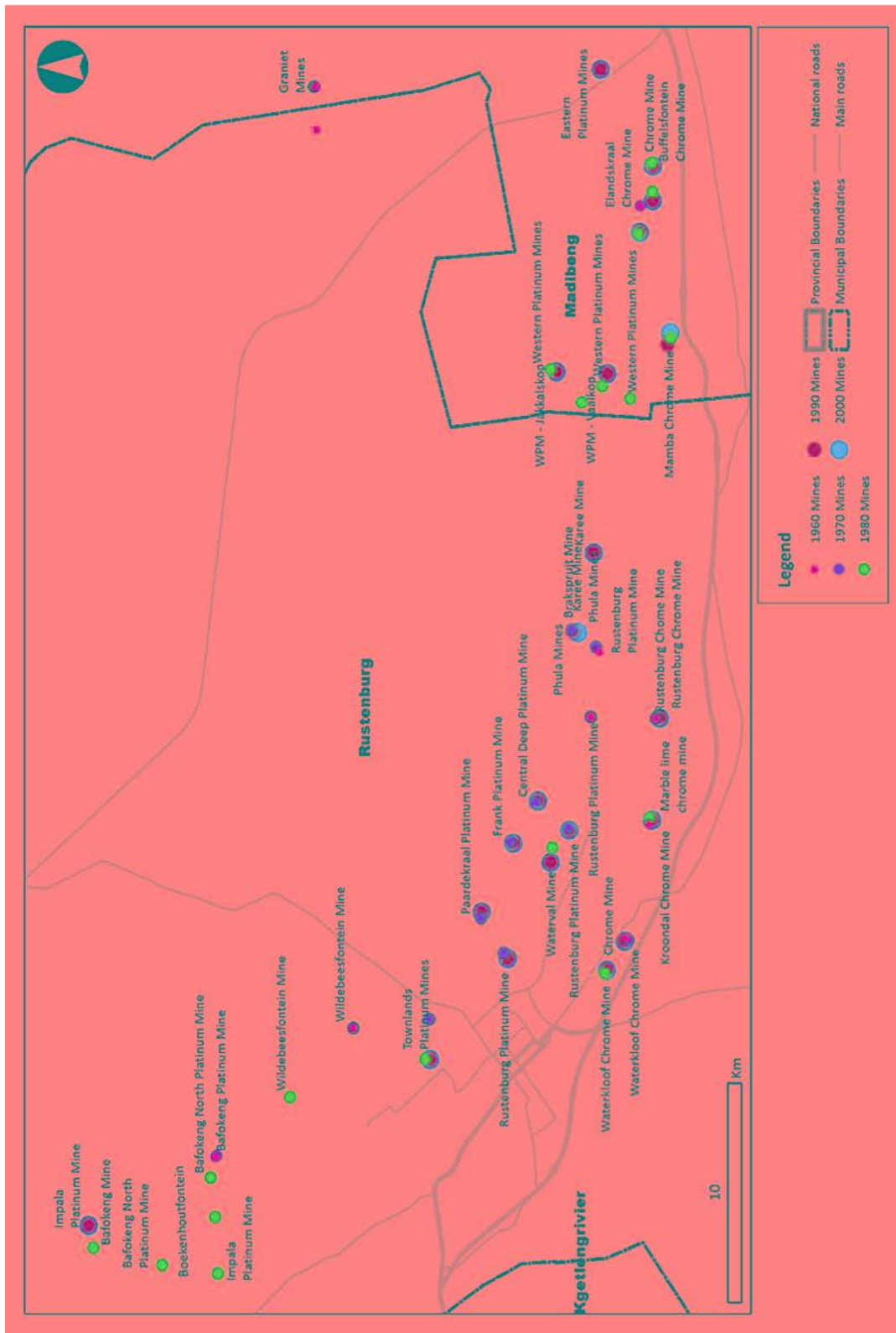
<sup>3</sup> Available:

[https://upload.wikimedia.org/wikipedia/commons/thumb/b/b5/Map\\_of\\_South\\_Africa\\_with\\_Bojanala\\_Platinum\\_highlighted\\_%282011%29.svg/150pxMap\\_of\\_South\\_Africa\\_with\\_Bojanala\\_Platinum\\_highlighted\\_%282011%29.svg.png](https://upload.wikimedia.org/wikipedia/commons/thumb/b/b5/Map_of_South_Africa_with_Bojanala_Platinum_highlighted_%282011%29.svg/150pxMap_of_South_Africa_with_Bojanala_Platinum_highlighted_%282011%29.svg.png) [2017, June 6]

<sup>4</sup> Available:

<https://www.sa-venues.com/maps/northwestprovince/rustenburg.php> [2017, June 6]

Figure 5. Map showing Mine Shafts



Source: Lefekane and Maina, 2014 in Rubin 2015

## 1. Introduction

### Women in Mining

'Women in mining' is a relatively new phenomenon and phrase. The term 'women in mining' was coined by Benya (2009) and refers to women who work underground in mines. Historically, mining has always been portrayed as highly risky occupation, suitable for men and not women (Benya, 2009). According to Dutt and Macintyre (2006), the heavy manual nature of mine work combined with the risk and dirt that is associated with the job makes men suited for the job. Whilst literature suggests that women's involvement in mining activities can be traced back to centuries ago, these women generally worked in lower rank activities in mining companies as cleaners or administrators (Badenhorst, 2009; Botha & Cronje, 2015). Benya (2009) refers to these women, restricted to above ground employment, as 'women at mining'. Evidence shows that over the past number of years there have been a significant number of women underground mineworkers working in South African mines (Bezuidenhout, 2006). The term 'women in mining' can be generally understood as women who work underground, undertaking jobs in a historically male-dominated industry (Benya, 2009). I have deliberately chosen to focus on 'women in mining' as opposed to 'women at mining' because of the increased occupational risks these women face. Working underground exposes these women to TB, silicosis<sup>5</sup>, and occupational reproductive health related issues which potentially put their families, whom they care for, at risk of contracting or acquiring these diseases/conditions.

The increase in the number of female underground miners can be attributed to targets set by the South African Mining Charter. The Mining Charter set a goal that required women to comprise at least 10% of any mining company's workforce by 2009 in an attempt to create employment for those who are classified as 'historically disadvantaged South Africans', as well as to promote gender equality. The South African Minerals Act of 1991 banned women

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<sup>5</sup> Silicosis is a lung fibrosis that is caused by inhalation of silica dust.

from working underground (Simango, 2006). However, the Mineral and Petroleum Resources Development Act (MPRDA) of 2002 replaced this law and opened underground occupations to women (Benya, 2009). The Mining Charter is founded on the core aspects of this recent law; to introduce and ensure the full incorporation of women into this historically male-dominated sector. According to Benya (2009), the target of 10% set by the Mining Charter is taken seriously by mining companies as their renewal operating licences are directly linked to how they score on this criterion. In 2000, it was estimated that 4% of employees in mining were women. The figure has risen steadily over the years, first peaking at about 14% in 2010, dropping slightly before rising to current record levels of 17% (Sidler, 2014).

I chose to conduct my research within the mining sector because it plays a major role in driving South Africa's economic growth and development. For many years, the mining industry has produced some of the largest quantities of gold, platinum, and other minerals, contributing up to 7.1 % of South Africa's annual Gross Domestic Product (Fitzpatrick et al., 2013; Chamber of Mines of South Africa, 2017, 7). In addition to contributing significantly to South Africa's economic growth, the sector has provided work to hundreds of thousands of people from across southern Africa (Fitzpatrick et al., 2013). In a briefing on the economy in May 2013, the South African president, Jacob Zuma, stated, "Our country needs a stable and growing mining industry. Mining has been a key feature of this country's economy for more than 130 years".<sup>6</sup> However, this desired stability and economic growth has been, and continues to be, undermined by a full spectrum of mining-related health problems, in particular, lung diseases and cancer (Eisler, 2003). Occupational lung diseases have posed a significant threat to the physical well-being and productivity of mineworkers in southern Africa (Aeras, 2014). South Africa's mining sector is said to have a shockingly high prevalence of TB and Pneumoconiosis<sup>7</sup> in comparison to other mining countries (Areas, 2014).

This dissertation may be read on several different levels. On the first level, this ethnography reveals how mining makes female mineworkers vulnerable or susceptible to various mining-related health problems. In particular, the research began with the assumption that women's

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<sup>6</sup> 'Zuma says government is committed to growth' Available: <http://www.enca.com/south-africa/zuma-economy> [2016, May 3]

<sup>7</sup> Pneumoconiosis refers to occupational lung related diseases and to restrictive lung disease that is primarily caused by the inhalation of dust, often on the mines.

working conditions in the mines places them at risk of contracting occupational lung diseases such as TB and silicosis. Through research, I learned that women's reproductive health is often compromised through circumventing the very mining protocols that are designed for their protection. I focus on each of these in turn.

South Africa has the highest rates of TB in the world; about 482 000 people per year die from this deadly disease<sup>8</sup>. However; the incidence of TB among mineworkers, suggests that this population is more vulnerable than any population in South Africa (Fitzpatrick et al., 2013). It is estimated that the rate of infection in South African miners is 3, 000 to 7, 000 per 100, 000, which is up to seven times higher than that of the South African general population (Fitzpatrick et al., 2013). TB is an infectious disease caused by the bacteria *mycobacterium tuberculosis* which is spread through the air when a person with active bacteria in their lungs coughs, sneezes, spits, talks, laughs or even sings. The TB bacilli are propelled into the air. Ingesting or inhaling even a small number can lead to TB infection in a susceptible host. The bacterium can remain latent as an asymptomatic infection for years, thus the *bodies and spaces* involved in a chain of transmission may be puzzling to identify or exclude (Abney, 2011). The mining environment is often damp, overcrowded, enclosed and has poor ventilation. These factors create an ideal setting for maximising the transmission of the disease (McCulloch, 2012). In addition, the limited amount of sunlight in these working conditions allows the bacteria to thrive and pass between co-workers.

There is a large body of evidence, which supports the claim that mining significantly elevates the risk of a miner contracting TB (Plackard, 1989; Stuckler et al., 2011; McCulloch, 2012; Dharmadhikari et al., 2013). Professor Neil White, who tracked the history of diseases and illnesses associated with mining, notes; "The South Africa gold mining associated silicosis and tuberculosis epidemic is without parallel in human history, when its extent in terms of duration, intensity and magnitude are taken into account" (2004: 22). The high prevalence of TB among miners coincides with the early Gold Rush. It is estimated that nearly 50,000 miners died from 1886 – 1912 from TB and other occupational lung related diseases.<sup>9</sup> However, these

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<sup>8</sup> WHO TB Statistics. Available <http://www.who.int/mediacentre/factsheets/fs104/en/> [2016, May 3]

<sup>9</sup> Available: <http://www.tbfacts.org/tb-mining/> [2017, May 4]

figures are expected to be higher as those miners who were repatriated home as a result of contracting the disease, who later died after repatriation were not included in the mortality statistics (Roberts, 2009). The high TB mortality rates amongst miners led to an inquiry. *The Miners' Phthisis and Pulmonary Tuberculosis Commission* (1912) report found that working conditions in the mine, as well as the overcrowded conditions in the mine compounds, played a major role in facilitating the TB epidemic which subsequently contributed to the high mortality rates amongst the miners (Packard, 1989). The report stipulated that radical changes were needed in the mining medical and housing policies to curb the high TB mortality rates (McCulloch, 2012). Despite this inquiry, Randal Packard's work in 1989, notes that the incidence of TB amongst then current and ex-mineworkers was still considerably high despite medical advancements to lessen the impact of the disease. In 1995, *The Leon Commission* argued that mining conditions had not significantly changed over the past 50 years, concluding that, "It seems to be generally agreed that the mining industry made a major contribution to the development of TB among miners in South Africa, and from the miners who then circulate it back home to their families".<sup>10</sup> It is against this background that I argue that mining operates as an 'institutional amplifier' for TB (Basu et al., 2011).

In addition to the risk of miners contracting occupational diseases as a result of mining, miners are also more susceptible to reproductive health related problems. However, until recently, there was limited evidence to support this claim, given women were rarely employed in the formal mining industry. Badenhorst (2009:55) notes that the mining industry poses a "significant concern about the potential effects of occupational exposure to chemicals substances, physical, ergonomic and biological hazards on reproductive outcomes". It is against this backdrop that scholars such as Dorman and Boudreau-Larivière (2012) bring to light, the less visible gendered aspects of mining. They argue (2012) that mining exposes a miner to a range of reproductive hazards that affect primarily those who are of reproductive age. Reproductive health hazards are defined as agents, such that mentioned by Badenhorst earlier, that have the potential to adversely affect the reproductive health of miners, which can have a negative impact on the growth and development of a fetus (Best Start, 2011). Women miners are observed to be more at risk of reproductive health related problems in

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<sup>10</sup> Available: <http://www.tbfacts.org/tb-mining/#sthash.AuWqnpE1.dpuf> [2017, May 4]



comparison to their male counterparts because of the nine-month gestation period. Thus, reproductive abnormalities can be passed on to the fetus resulting in a miscarriage or chromosomal defects. The danger of reproductive hazards is in their invisibility, the impact is not known until the baby is born and in some instances, problems can be passed on to future generations. It is also important to note that the majority of the literature is drawn from cases of women coal miners in Canada (Badenhorst & Platinum, 2009). The full extent to which platinum mining affects the reproductive health of female mineworkers remains unknown.

On the second level, the dissertation demonstrates the less ethnographically visible. By drawing on the embodied meanings that miners attach to ideas of health and ill health, as well as, their experiences of ill health in relation to mine work, I argue that their everyday experiences pertaining to health intertwine with the violence of capitalism.

It is at this point, I draw on the notion of slow violence, a central theme that weaves across all the chapters in this dissertation. Nixon (2011: 3), in his book *Slow Violence and the Environmentalism of the Poor*, formulates the concept of slow violence as, “a violence that occurs gradually and out of sight, a violence of destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all”. This theoretical concept is used by Nixon (2011) to highlight the invisibility of strategic challenges posed by environmental calamities. In his work, he demonstrates that environmental degradation of our environment now will have repercussions that are postponed for years, decades or even centuries. For instance, he (2011:2) argues that the heating of the atmosphere, deforestation, the radioactive aftermath of wars, oil spills and other slowly unfolding environmental calamities that are degrading our planet may not be visible now, but in the long run they will be. He (2012) argues that the environment is not the only discounted casualty of slow violence, humans who primarily rely on the environment, i.e. farmers, are also casualties of slow violence.

While Nixon’s (2011) concept is primarily based on the impact of environmental calamities, this concept can be used to change the way in which we perceive and respond to mining health-related problems. I will, very briefly, draw on the narratives of two of my research participants, whom I will introduce to the reader in the later chapters along with a full

description of the field site, to contextualise how I view miners to be casualties of slow violence.

It was afternoon. I was done doing my rounds on the mine for the day. The heat was unbearable on this particular day. I was so uncomfortable I could feel the sweat rolling down my back. Dreading the drive back home (to Kasime's house) with no air-conditioning in the car to keep me cool, I decide to go and camp in Amo's office to allow the sweat on the back of my t-shirt to dry. The air-conditioning in her office was effective. I walk into the office, which she shares with her co-worker, who I referred to as *malume*<sup>11</sup> Rob, who mockingly greets me by nodding his head, saying, "Madam Chair<sup>12</sup> you are back at it, don't you run out of questions?" Gao who is at her computer, laughs in response to *malume* Rob by saying, "this one, never!" I drag the extra chair that is by Amo's table closer to the air-con and quietly go through my field notes from my pervious conversations with Amo. I discover in my notes that she had mentioned that it was a private physician that had diagnosed her TB instead of the mining hospital doctors. I asked her to clarify this for me. It is at this point that she mentions that she had gone to a private physician as she was not feeling well. Her physician recommended an x-ray in an attempt to rule out all possible causes of her illness. She frowns at the computer screen for a while and continues to narrate:

When he received the x-ray he immediately diagnosed me with TB, however, he stared at the x-ray for quite some time. I could see the concern in his face. Eventually, he asked what job I did. I responded. After my response, the doctor remarked that my lungs did not look good for a woman of my age and that the longer I work in the mines the more I will age my lungs beyond their actual age.

Sipho is a gold miner I interviewed during my Honours fieldwork (Mutendi, 2014). He repeatedly complained that he was "*Ndibile*" (the isiXhosa word for 'suffocating') and "*umoya lubile*" (isiXhosa for 'the air is contaminated'). During my Masters' field work; I followed up

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<sup>11</sup> Zulu word for uncle. I referred Rob as uncle as a sign of respect. He is substantially older than me, I have been raised to address people who are older than me with a title.

<sup>12</sup> To my knowledge Madam Chair is the person who facilitates conversations or debates. This became my nickname at the mine safety offices.

on his progress through a mutual friend who was working in Rustenburg at the time. Our mutual friend, Loyiso, informed me that Sipho had now returned home to the Eastern Cape because he had a growth in his lungs because of working in the mines. Sipho's words and the doctor's commentary of Amo's lungs highlight the invisible form of violence perpetrated within a miner's body gradually over time, substantiating Nixon's argument that the repercussions of slow violence are not immediate or immediately visible.

It is against this backdrop that I argue that miners are exposed to a slow violence in the form of dust and, for female miners in particular, reproductive health hazards on a daily basis that will adversely affect their and their families' health in the future. Both narratives above (Amo and Sipho) capture how these diseases and illnesses slowly waste away the miner's body, solidifying Nixon's (2011) argument of relative invisibility of slow violence over time. In this regard one could argue that a miner's past is never over; mining continues to impact the body and lives of miners' even post-mining. For example, the recent class action suit filed by Richard Spoor Inc. Attorneys in 2012 was and continues to be an attempt to get justice on "behalf of all the miners who have silicosis and TB as a result of exposure to silica dust since 1965, and on behalf of the families of miners who have died of silicosis and TB"<sup>13</sup>. The severity of the high prevalence of silicosis and TB amongst miners can now be fully comprehended. Miners who left the mines more than fifteen years ago are still dying at an 'alarming rate' (Roberts, 2016). According to the court papers, since 2012, 13 of the 68 mineworkers who brought this class action civil suit against the mining industry have died. This is because silicosis is a progressive and invisible disease that becomes visible in the body 15 years after exposure to silica dust.

The descriptions that my research participants have drawn on are close to the realities that have been experienced by miners across South Africa. There is a Sotho miners' song that translates as, "The mines eat the men. Even when you have left, the mines may be eating you". At face value illness that has a source in a miners' body can be treated individually. However, when one takes the historical context into account, the magnitude and intensity of

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<sup>13</sup> Available: <https://business-humanrights.org/en/gold-miner-silicosis-litigation-re-so-africa?page=2> [2017, May 6]

the diseases and illnesses associated with mining are skewed to impact on a significant portion of the wage labour force, who already labour under extremely oppressive conditions. It is not surprising that miners view and experience this slow bodily violence as cannibalism – a slow consuming of their bodies even when they have left the mines.

Nixon's (2011) concept of slow violence overlaps with other theoretical forms of structural violence. Paul Farmer's (1992) structural violence is recognised as a violence that persists through political, economic and social organisations that both design and sustain inequalities. Farmer, in his work on structural violence, pays attention to precise ethnographic moments, the violence that plays out in everyday life. For example, in his work in Haiti, 'Anthropology of Structural Violence', he narrates the story of Antie to demonstrate how social arrangements put individuals in harm's way. Antie is a patient that Farmer examines. She complains about a hard mass in her left breast. Upon closer examination, Farmer discovers that it is a 'fungating mass' that weeps a clear yellow fluid. Farmer, who is struck by the severity of Antie's case, asks why she did not come to the clinic sooner. Antie narrates her ordeal. She claims that when the mass initially appeared she went to her local clinic where she was given painkillers. With no change in her symptoms, she went to fourteen different clinics, where none had the adequate resources to perform a biopsy. Eventually, she was referred to a doctor in the city who would operate on her mass however, it would cost her \$700.00; money she did not have. She was left with no choice but to leave her mass as it was which consequently resulted in the complete destruction of the architecture of her left breast. Similarly, the calamities that Nixon (2011) has drawn upon include class oppression, dispossession, super-exploitation.

From my reading of Nixon, and Farmer's concepts, they are very similar. For the purpose of this dissertation, I wish to particularly focus on Nixon's theorisation of slow violence as it pays attention to the impact of the slow bodily cannibalistic violence that occurs in a miner's body over generations. However, I draw on Farmer's form of violence to highlight the nuanced ways in which slow bodily violence is often exacerbated by social, political and economic organisations within the mining setting. I do this by illustrating how mining policies and practices pertaining to health materialise in the form of violence, which is embodied by female mineworkers in their everyday lives. Throughout this dissertation, I draw on key

phrases, such as 'dust', 'being sent home', 'waste', 'we are like bubblegum' and 'they spit us out', to illustrate the negative impact of health mining policies and practices on a mineworkers and their families' health. These phrases, in this context, serve as metaphors for neo-liberal greed, the way mining companies dispose of bodies that no longer pursue their economic agenda and the state's ambivalence on how to legislate for better protective and compensatory practices in the mining industry.

In addition, this dissertation highlights how these policies and practices threaten a mineworker's economic stability through the processes by which slow and structural violence operates. Similarly, my argument coincides with Packard (1989; 19), when he argues that mining health related problems must be seen as a "product of a particularly pathological intersection of political, economic, and biological processes that have a much wider distribution". Therefore, there can never be a body, in this case, the mineworker's body that is free in the sense of not being subjected to large-scale forces, namely capitalism, industrialisation, and super-exploitation (Butchart, 1996). By drawing on Packard and Butchart's ideas, I highlight that mineworker's anxieties of being discarded like 'chewed bubblegum that has lost its flavour' that stem from no longer being economically viable rather than concern for their wellbeing; are resisted by mineworkers through 'making a plan' (Phakathi, 2013). At the heart of 'making a plan' is the paradox of the long-term emergency. Nixon (2011) claims that we are accustomed to dealing with the immediate emergencies first, then turn to the long run. His claim coincides with my observations that 'women in mining' made plans to address economic instability immediately by boycotting certain mining policies, however, the effects of boycotting these policies in the interim means that long term emergencies are being compounded; often encroaching more emphatically on the present. In some instances, 'making a plan' results in adversely affecting the long-term health of the miner and her family – the very heart of the slow violence argument.

On the third level, this dissertation provides a counter-narrative to the super-exploitation that often renders miners powerless, vulnerable and disposable. This dissertation tells a tale of hope and resilience. I demonstrate that the notion of 'making a plan', a central theme in this dissertation, is linked to concepts such as dignity and integrity. It is against this background that I draw on the latter concepts as theoretical to capture what I observed in the field.

Similarly, Moodie (1994:2), in his work *Going for Gold*, illustrates how gold miners strive for integrity in situations of total repression. He defines integrity as, “taking responsibility for one’s life project, within the limits and pressures imposed by structural constraints”. In this case, we see how ‘women in mining’ make plans; such as boycotting mining policies, taking time out, redirecting care to other family and community members in an attempt to address radical constraints that in many instances strip them of their dignity. Dignity thus is lodged in a number of practices, such as ‘making a plan’ to cope with the slow violence that perpetuates in their everyday lives.

### **Dissertation Layout**

Chapter two outlines the methods I employed to conduct my research and the ethical issues I had to consider prior to and after entering the field. The chapter also provides a brief history and description of the site. In addition, this chapter highlights how mine work acts as a livelihood option for my research participants. This is done by drawing on the life histories of my research participants to provide the social, political and economic contexts that propel them (female mineworkers) to work on the mines for a source of livelihood.

Chapter three provides a multidimensional analysis of how miners understand, interpret and experience TB. It argues that miners understand TB less in bacterial terms and more in terms of TB being geographically/spatially located in the mines and life underground. Miners claim that TB comes from ‘mine dust’. The ‘mine dust’ metaphor surfaces the environmental forces that lie below the surface, that make miners more susceptible to contracting TB and slowly consuming their health. Lastly, this chapter illustrates how women juggle the burden of illness, providing a livelihood for their families and being a mother by ‘making a plan’. These plans are often overlooked when understanding TB’s epidemiology.

Chapter four, through drawing on the notion of ‘humans as waste’ and ‘being sent home’, demonstrates how female mining bodies slowly waste away due to health-related problems to a point where they are discarded like trash. This chapter further argues that those miners with compromised health are rendered more vulnerable to further forms of legitimate, yet

no less violent structures, such as mining safety and health policies that have extremely negative health, financial and generational repercussions on the miner and her family.

Finally, chapter five, argues that policies pertaining to pregnancy often inadvertently place female mineworkers in more vulnerable situations. Through policy they are forced to 'make a plan' to manoeuvre themselves out of tricky situations to ensure financial stability, dignity and most important of all, to change the destiny of their children. Paradoxically their plans to attain the latter goals mean they subject themselves to slow bodily violence, which could negatively affect the health of their children.

## 2. 'Making a plan': Mining for data

Phakathi's (2013) research highlights how gold miners employ *planisa* (Fanakalo<sup>14</sup> word for 'informal plans') inside the pit to deal with the complexity of uncertainties that characterise their working environment. He defines the notion of *planisa* or 'making a plan' as a process in which mineworkers have to deploy their skills and ingenuity to tackle their daily problems posed by the endemic uncertainties and organisational dysfunctions of the mine. The gold miner's informal working practice of 'making a plan' can be viewed as a creative strategy that is designed to improve their health, safety, and productivity (Mutendi, 2017). Examples of miners 'making a plan' include stealing materials, assisting each other by loaning each other money or looking for material elsewhere due to cost pressures, budgetary constraints, material shortages or tight budgetary allocations (Balogun and Johnson, 2004).

While Phakathi's (2013) notion of making a plan only refers to plans that are made inside the pit, I extended his key finding to understanding why women take up mining. I do so by making use of life histories to "give a rich documentation of personal experience, ideology, and subjectivity" (Connell, 2002:89). Using McAdam's (1995) definition of life histories as 'stories' about someone's life and Phakathi's 'making a plan', I came to understand women miners' background better, as well as the reasons that motivated them to join the mining industry. However, my research participants were not the only ones 'making a plan'. I too, had a plan before I entered the field and that plan had to be open to the contingencies that come with fieldwork.

My choice of research methods were prompted by my research question which aimed to explore how women in mining negotiate the terrain of caregiving while being exposed to highly contagious and resistant diseases that might adversely affect their day-to-day lives and family relations. I triangulated participant observation with focus groups, detailed life histories, and formal and informal interviews. I even made a plan to go underground. But like

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<sup>14</sup> Fanakalo is the language that is most spoken in South African mines.



all good plans, many go awry and need to be tinkered with, or as Cerwonka & Mallki (2008) advocate, 'improvised' in the field. I turn to these now.

### **'Inside' the Field**

My research was conducted in Rustenburg, a platinum-mining town about 130km north-west of Johannesburg over a period of two months: April – June 2016. Rustenburg is one of the largest producers of platinum in the world. According to a news report aimed at providing investors with possible mineral investments, Rustenburg has two of the largest platinum mines in the world and the world's largest platinum refinery, which processes around 70% of the world's platinum<sup>15</sup>. According to Benya (2009) the broader Rustenburg area is the biggest supplier of female mineworkers to the platinum mines, which is not surprising given that when mines are recruiting women miners they look within a 60km radius of the mines.

The majority of my data was collected in Phokeng, which is situated in the broader Rustenburg area - about 20km from Rustenburg CBD (see Figure 3 & 4). I have come to know this area's history through one of my research participant's father, whom I referred to as Papa<sup>16</sup>. Phokeng is a small rural town that is situated 9,6kms from Rustenburg. It is the capital of the Royal Bafokeng Nation and is the heartland of the Bafokeng people, who are descendants of Sotho settlers. According to Papa, the Bafokeng people have lived in Phokeng since the early 18<sup>th</sup> century. The Batswana had been living in Phokeng for hundreds of years, where they were scattered among Boer farms and worked for white farmers. By the mid-19<sup>th</sup> century, Chief Mokhalte, with the help of German missionaries, was able to purchase the land thus making it the heartland of the Bafokeng people.

When platinum was discovered around 1929 on the Rustenburg platinum belt, villagers owning land within this village became quite wealthy by earning royalties as a form of compensation for their land being used to mine platinum. These royalties were and still are mediated between the Royal Bafokeng chief and the mining companies within that region.

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<sup>15</sup>Available:

<http://investingnews.com/daily/resource-investing/precious-metals-investing/palladium-investing/top-platinum-palladium-producing-countries/> [2017, March7]

<sup>16</sup> Papa is the word by which Kasime referred to her father.

During these years, the Bakwena Bafokeng of Phokeng were described by Papa as one of the wealthiest “tribes” in South Africa.

Today Phokeng rural villagers in Rustenburg serve as a labour reserve to the surrounding mines, particularly Impala Platinum and Bakubung mines, which are within a less than 20km radius. This is evident from the constant movement of women and men in various coloured overalls and soiled gumboots or heavy-duty shoes. The type of housing within this village varies from the traditional mining accommodation described by Stuckler et al (2013). They (2013) describe the typical housing for miners as single sex compound or hostels as appalling, overcrowded, unsanitary and poorly ventilated. Other housing can be attributed to the fact that the housing in this area was for families and not miners alone. Phokeng existed as a rural settlement long before the discovery of platinum and therefore differs to mining settlements such a Sunrise Park<sup>17</sup> that were purposively developed for mining activities. The majority of Phokeng consists of typical rural dwellings (see figure 6 & 7) however, there are household dwellings that are more modern and very spacious. Whilst running water is accessible in Phokeng, not many people have access to flushing toilets—the majority makes use of long drop toilets situated outside the house.



*Photo 1 : Showing the house of one my research participant's*



*Photo 2: Housing located near the mine shafts*

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<sup>17</sup> Sunrise is a housing settlement that has been built for mineworkers at Impala Platinum. This is a joint venture between the company and government’s National Housing Finance Corporation.

An informal economy has formed to support the Phokeng community. There were many tuck-shops, what locals refer to as 'spaza shops', that provide the community with essentials as the nearest mall is about 10/15mins drive away. There were car panel beating shops, hair salons and car washes. On the outskirts of Phokeng, some of the Bafokeng people engage in livestock farming as opposed to mining.



*Photo 3: Showing a farmer herding cattle, 900m from the mine shaft*

### **Access to the Field**

I developed a survey (see appendix) as an entry tool to gather general information about the mineworkers' understandings of TB. I surveyed 12 female and three male mineworkers. The survey served more as a tool of first contact and building rapport. Initially I was introduced to two female mineworkers by my cousin, who works for Bell's construction company, which is sub-contracted to Impala Platinum shaft 16. After conducting the survey with these two female mineworkers, I felt more comfortable approaching them for additional information. I then employed a snowball sampling method. According to Noy (2008), the snowball sampling method makes use of a small pool of initial informants to nominate, through their social networks, other participants who meet the eligibility criteria and could potentially contribute to the study. Thus, the majority of my research participants were introduced to me through social networks. I conducted follow-up interviews to gain a better understanding of certain

themes and topics that arose from our conversations pertaining to TB. Over time, rapport grew and I identified my main five key informants with the help of Kasime, my research assistant, who I met through the snowball sampling method.

Given the linguistic diversity of the mining community, Fanakalo is the language that is most spoken in South African mines. It is a unique language that has been developed by miners from different regions to communicate with each other. Fanakalo can be classified as a form of pidgin, primarily based on isiZulu, isiXhosa and a mix of English and other African languages such as Shona. Given the diverse linguistic make-up of the mining community, I employed a research assistant, Kasime, to assist me in conversations with mineworkers. Kasime is a female mineworker at Impala Platinum, who at the time was on maternity leave. She thus had time to show me around Phokeng, as well as to introduce me to other female mineworkers. She provided her invaluable translation skills, as well as a sense of security, companionship and humour as I navigated a terrain with which I was largely unfamiliar. Her good nature and gentle attitude, as well as her acquaintanceship with the research participants aided in the facilitation of speaking about delicate subjects. Most of the interviews were conducted in English as many miners accommodated for my lack of proficiency in Fanakalo and Tswana (despite Kasime's presence). Kasime translated for the miners who were more comfortable speaking in his or her mother tongue or translated statements that the miner did not understand. However, my Tswana speaking abilities improved overtime and I could conduct some parts of the interviews in Tswana. This enabled me to get thick descriptions on particular topics that often lose their richness when translated into English.

### **Participant observation**

In order to gain an understanding of the female mineworkers' day-to-day realities and the challenges they faced pertaining to health and mothering, I used participant observation as my main method as it yielded the bulk of data. Hammersley and Atkinson (1994, pp. 1-2), define ethnography as:

Ethnography involves the ethnographer participating, overtly or covertly, in people's daily lives for an extended period of time, watching what happens,

listening to what is said, asking questions – in fact, collecting whatever data are available to throw light on the issues that are the focus of the research.

According to Musante and DeWalt (2010) observing and participating are integral to understanding the breadth and complexities of the human experience. I decided to use participant observation as a primary method because it enabled me to gain an understanding of the physical, social, cultural and economic contexts in which my research participants live, as well as gaining an in-depth understanding of people's behaviours and activities within a mining environment. In addition; this methodology provided me with a lens to examine verbally inaccessible but observable practices, experiences, contradictions, and frustrations 'women in mining' face pertaining to underground life and mothering. I was able to obtain thick and rich descriptions that highlighted the subtle and nuanced challenges and coping strategies that these women employ to minimise the negative social consequences that occupational lung related diseases and motherhood have, particularly in relation to their caregiving roles within the family unit.

On arrival, I stayed in a lodge in Rustenburg Kloof until I moved to Phokeng to stay with Kasime, a female mineworker who had just had a baby. From here, I adopted the role of 'active participant observer' by immersing myself in the daily rituals of female mineworkers (Musante and DeWalt, 2010). This move was convenient for the both of us as she needed help taking care of her newborn baby and I needed a research assistant who was familiar with the area and mining. Staying with Kasime enabled me to meet other female miners and incorporate myself into their "everyday". Even though I found myself primarily taking care of Kasime's baby, I also helped mineworkers by doing chores with them, doing grocery shopping, accompanying miners to work, clinic visits as well as "hanging out" in the same social spaces and attending the same social events. At times, I was even sent on errands to collect medication for their children from the mine clinics.

On one occasion, I found myself at 10pm in the evening driving around Rustenburg CBD looking for non-alcoholic colic medication for the baby. I draw out this example in detail to allow the reader into the world of research and all its contingencies. Baby Omph was not in

a good mood on this evening, and I was surprised at the loud sound that this tiny little being could produce. Kasime and I had tried everything to calm him down. Eventually we concluded that it might be colic and Kasime asked me to go and get non-alcoholic colic medication. Given how late it was, I asked Kasime where I should go and get the medication. In her anxiety-riddled state she snapped at me, “Mutsa, I can’t think properly. Just go into town and find a pharmacy that is open”. In a state of panic I called on a friend of mine (Marco), whom I had met upon my arrival in Rustenburg to accompany me on my mission. On my drive to his place, I kept wondering how on earth I had become responsible and attached to this little human (Kasime’s baby). As I arrived at Marco’s place, he was already waiting outside at the gate for me - with a bottle of Black Label (local beer) in his hand for the mission. He entered the car and said to me, “Maaan! I see your motherly instincts are kicking in. You busy calling in the middle of the night to find some non-alcoholic medication instead calling me to *phuza*<sup>18</sup>. Man, you crazy.”

I was granted access to the Impala Platinum mine through one of my research participants. Underground visits enabled me to gain an embodied experience of what my research participants experience underground, such as the conditions in which they mine in, the heat and the sensation of constantly suffocating. I went to level 17, which is at a depth of 1300m. This enabled me to see conventional mining<sup>19</sup> as well as trackless mining/ unconventional mining. I was also granted permission to take photos underground, however, on my second mine visit I did not take my camera because having a camera underground made miners reluctant to talk to me and singled me out as an ‘outsider’. I could feel their eyes gazing at me and their whispers as I walked past them. One of the miners explained, "They think that you are a spy that's why they are looking at you funny. They think you work for the ‘Department of Minerals’ or something like that, and, that you are here to report on the conditions underground.” There might have been several reasons as to why I might have been perceived to be a spy by miners, however, at the time of my research one of the biggest class actions

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<sup>18</sup> Zulu word for drinking

<sup>19</sup> “Conventional mining refers to the type of classic underground mining process, where pits, shafts or tunnels are dug, and the extracted minerals are lifted to the surface” - [http://dakotasalts.com/index.php%3Foption=com\\_content&view=article&id=18&Itemid=35.html](http://dakotasalts.com/index.php%3Foption=com_content&view=article&id=18&Itemid=35.html)

against gold mining companies was being tried in the South African Supreme High Court. This court trial created a lot of tension in the mining industry. I was cognisant of this fact throughout my fieldwork and at times it meant that I needed to change my research methodologies such as with the example of taking photos underground. My ground visits lasted for seven to eight hours.



*Photo 4: Researcher on an underground mine*

Whilst hanging out with my research participants, I used informal conversations to gain contextual information. There were moments where I would use a car ride to focus on a topic that arose in previous conversations, and use these brief moments to interrogate the subject matter in more depth. On the other hand, I conducted formal interviews with medical personnel at the mining clinic and hospital to get information on the mining company's policy and procedures pertaining to TB treatment. These interviews were typically followed up with several further interviews to get an in-depth understanding of the TB screening and admission processes. These interviews took approximately two hours.

## Ethics

The South African Ethical Guidelines and Principles of Conduct for Anthropologists (ASnA, 2005) influenced my methods and ethical considerations. This code of conduct stipulates that anthropologists should obtain consent from the research participants as well as provide their participants with all the information about their research projects. I informed my research participants about the purpose of my research and the methods I would employ to collect data. I obtained verbal consent from them, as signed consent forms could have possibly made my participants reluctant to speak about TB and silicosis. Throughout my research, I continuously renegotiated consent through open communication with miners. I informed my participants that they could retract their participation at any time in the course of the research process for whatever reasons.

Given the sensitive nature<sup>20</sup> of the research, I chose to protect the identity of my research informants. I make use of pseudonyms throughout the dissertation.

One of the negative social consequences of an illness such as TB and silicosis is the social stigma that such illnesses carry (Sontag, 2002; London, 2009). I was well aware that my mere presence along with the intent of my research could reveal one's illness and this could potentially impair my "ability to collect the necessary data for a full portrait of TB infected persons and their lived conditions" (Macdonald et al., 2016:1123). While I was not sure exactly how I would negotiate these potential challenges, I used my judgement in every situation. One way was to ensure that interviews were conducted in a space conducive to the comfort of the miner.

Another ethical concern is the disclosure of one's HIV status. According to Diwan & Thorson (1999), TB is a serious opportunistic infection for people living with HIV. During my fieldwork miners often disclosed other miners' HIV statuses. In one instance, I was speaking to a miner about introducing me to other miners who have had TB. She went on to say; "I think I should

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<sup>20</sup> The area where I was conducting my research was about 22km away from where the Marikana massacre occurred. I had to be mindful and cautious because this mining area is highly volatile; violence and protests could occur at any moment.



introduce you Mo Athi. She has had TB before, but not the normal TB. She has the other type of TB, if you know what I am saying. People sometimes call it TB two. She will be perfect for your research". At first when the miner referred to the other type of TB, I was not sure as to what type of TB she was referring to. From my previous research among miners, many spoke of 'the TB that makes you die', a phrase used for miners who have multi-drug resistant TB, hence I thought that maybe this what she was referring to. However, when she made the follow up statement of 'TB two', I knew she was referring to Mo Athi's HIV status. 'TB two' is a phrase I am quite familiar with and I have heard often in my early childhood days - during the early days of the HIV/AIDS pandemic in Zimbabwe. I remember eavesdropping on my parents' conversations about how family members, friends and acquaintances had died from TB two. One day I plucked up the courage to ask my mother what 'TB two' was. She responded, "*Mutsawashe Mutendi!*, her Zimbabwean accent intensified as it does when she is about to school you on your ignorance. She continued:

You don't know what TB two is *mwanangu* (Shona for 'my child). HIV/AIDS are autoimmune diseases. This means that soldiers in your body that keep you healthy are not working properly. The medical term for these soldiers is antibodies. When your antibodies are not functioning properly, it means you are not able to fight off infections and diseases such as TB. You remember what TB is right? If you can't remember go look at your natural science textbook. TB two refers to someone who has HIV/AIDS and TB. In some cases, TB is the leading cause of death among people living with HIV.

When I finally met Mo Athi I did not ask her to disclose or even discuss HIV with her. The same principle applied to all the other miners whose HIV/AIDS status had been revealed to me by other research participants.

In regard to the potential for TB infection, I conducted interviews in areas that were well ventilated to minimise the risk of my research assistant and me contracting the disease. In addition, I was issued with a mask that was recommended by the nurse at the mine clinic, in the event that we would have to conduct an interview in an unventilated area. However, we were never in a situation that required us wearing a mask. I did wear a mask on one particular day as a social experiment. Given my research assistant was pregnant at the time I

recommended that she should go for a doctor's examination, just to take precautionary steps before conducting fieldwork with miners that could possibly have TB.

### **Meet the women 'making a plan' through mining:**

#### **Meet Amo**

Amo works as a safety officer at Impala Platinum and has been working there for 15 years. She started working in the mines at the age of 23. When I initially asked her why she started working in the mines she simply responded by saying that she was out of job and she needed work. Upon further investigation, I asked what she was doing between the ages of 18-23 and she responded by saying that she had studied to be a paramedic. When I asked why she chose to be a miner over a paramedic she responded by saying:

Mining was better than being a paramedic. To be a paramedic you have to volunteer first, before you get a job. I was volunteering for the emergency and fire unit. It was just too much work, and for what, I was not getting paid. I had to put food on the table. I had a baby. My son was not going to survive on volunteering. When you do get a job after volunteering you start with a sub-contract. No guarantees. I was not prepared for that...With mining, I get a living out allowance, which is what I enjoy the most. That money goes a long way...More money, more benefits, more pension. I wouldn't have gotten all these benefits if I had chosen to be a paramedic. Now I can afford to send my son to a good boarding school and make sure that he has a good life.

#### **Meet Kasime**

Kasime now works on the surface because at the time of the research she was eight months pregnant. Pregnant women are prohibited from working underground because of the associated risks that working underground poses to the fetus. She used to work as a winch operator before pregnancy. According to female miners, operating a winch is one of the most

difficult jobs to do underground.<sup>21</sup> This job is associated with status because it is considered to be a 'man's job'.

Kasime is the mother of two boys, one is four and the other is a couple of months old (when I left the field). She stays with her children, parents, two sisters, brother, two nieces and her sister's friend's child. She has managed to build a small extension at the back of her mother's house where she stays with her children. This where I stayed too. She has been working in the mines since 2008.

It was a sizzling afternoon, and Kasime was doing homework with her oldest boy whilst I was bathing the baby. Athi (her son) had to trace over the number eight, Kasime kept erasing her child's tracings in frustration. He was not doing it according to her perfection. At this point, Dineo (Kasime's cousin) walked into the extension swaying her new hair from side to side. Kasime and I burst into laughter; 'it is so typical of this diva' were my thoughts. Dineo looks at us and says, "It's a Peruvian weave. It is really expensive. Do you guys wanna know much it was? Before we could even attempt to answer the question, she blurted, "It was R3,000". Kasime gives her the disapproving look, and begins to rant:

Dineo, you are doing that *mvavuso*<sup>22</sup> thing again? You think you are too pretty to mine. One of these days, the guys you are sleeping with are gonna give you the illness. Is it really worth giving up your dignity? I had friends that were doing what you doing but I decided to work in the mines. It is not worth it. One day you will look back and realise that you could have done something meaningful with your life. You need a job that will sustain you, not this. Look how many people I manage to look after because I work in the mines. What are you doing except for looking pretty? Yes, your hair looks nice but do you have a medical aid if you get sick, you don't even have a place to stay. If you worked in the mines all that would be taken care of.

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<sup>21</sup> A winch operator controls equipment with powered cables to hoist and move large loads. They use pedals and levers to operate these machines. A winch operator also monitors equipment gauges, uses tools to connect and disconnect winch cables to loads being moved or lifted and moves winch or hoist machinery around sites as needed.

<sup>22</sup> Tswana slang for 'transactional sex' or 'contemporary prostitution' where girls have sex in exchange for gifts and the expensive lifestyle.

As she urged her cousin to ‘make a plan’, I came to understand that Phakathi’s (2013) miners were making a plan because of the uncertainties brought about by mining and the occupational risks inherent in mining. Here, my participants were expressing something slightly different. Choosing mining was ‘making a plan’ in response to life’s overall gendered dangers and uncertainties. Kasime’s comment prompted me to ask why she decided to take up mining. She responded by saying:

There is money in mining as opposed to this *mavuso* thing. If you move up the ranks, there is good money in mining. I want to be able to send my kids to good universities like you. I want to give them opportunities I never had. I want them to be something in life. Mining allows me to do that. I don’t have to worry about medical aid for my kids because I added them on it. It’s not that expensive.... The living out allowance is of extreme use, with that money I managed to send my older sister to nursing school. I have been able to get DSTV for my parents. I have been able to raise my sister’s friend’s child as well as the rest of the family (you know she just dumped her child here). I am the one who knows what that child has eaten or what she wears or what she needs at school. Her mother doesn’t even know. She is studying education at the University of Potch<sup>23</sup>. She was also into this *mavuso* thing until she fell pregnant. That is when she got bursary from the Royal Bafokeng. The living out allowance has been good to me; no other industry gives it employers a living out allowance. That is why I chose mining. Oh... next year I plan to move to Platinum Village.<sup>24</sup> I am going to buy a three-bedroomed house, my children will be able to have their own bedrooms.

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<sup>23</sup> University of Potchefstroom, located in North West province of South Africa.

<sup>24</sup>Platinum Village is also housing settlement that has been built for mine workers in the workers at Impala Platinum. This a joint venture between the company and government’s National Housing Finance Corporation.

## Meet Mo Athi

Mo Athi is in her mid-forties and has been working at Impala platinum for over 12 years. According to her and her work colleagues, she was one of the first female miners (a rock drilling operator) to work in shaft 16. This job title is associated with a lot of stature and status because this is an extremely difficult job even for men. According to Amo, “men who hold the title of RDO (rock drilling operator) are considered to be real *‘amadoda’* (isiZulu word for men) so you can imagine the glory that a woman possesses when she holds such a job title”. When I met Mo Athi she had been demoted due to health-related reasons. She was disgruntled about her situation. She now works as a cleaner in the change rooms (the bathrooms where the miners shower and change after their shift) at the mine.

Mo Athi previously worked in the hospitality industry before she started working in the mining industry. When I asked her why she left the hospitality industry for mining, she said:

I left there because there is no money to afford things. My man, the man of my baby was not working. It is only me who was working that time and I also need to take care of my parents in Mafikeng. I was the only breadwinner, but there was not enough money to take care of everyone. When my man left me, I knew I had to be serious about putting food on the table. At the time, my uncle told me that they were hiring women on the mines. I had seen that some of the miners who got good jobs were able to build nice houses for families back home. I also wanted to do that. I managed to buy this house because of the subsidies that the mines place on the houses here. I wouldn't have been able to buy this house if I was still in the hospitality industry. There is money in mining for sure. One of the other reasons that motivated me to take up mining is that I knew I could better myself. I managed to do my standard ten at the mining school. I also did a first aid course and I got my rock drilling certification at the mining school. I also wanted to do I.T. or computer literacy but they closed the mining school due to all these bloody retrenchments.

## **Meet Lerato**

Lerato is in her mid-thirties and has been working on the mines for more than eight years. She works as a Safety Officer. Unlike all the other research participants, Lerato lives in a nuclear family, where she is not the primary breadwinner. She lives with her husband and two children. Her reasons for joining the mining industry were as follows:

When you come from a small mining town like this you almost know everyone. You know what small towns are like, it is easy to see who had made it in the mining industry. I grew up seeing the rich black people who made it in the industry. You could tell from the fancy BMWs and their big houses in the white suburbs such as Waterkloof estate. You know where it is, right? The estate with the big houses on the mountain, by the mall. I aspired to have such a lifestyle so I chose to mine.

## **Meet Noma**

Noma is in her mid-forties and has been working on the mines for over a decade. She works as a pipe installation officer, and is responsible for repairing and installing water and gas pipes underground. She is the sole breadwinner of her kids and extended family. When I asked her why she joined the mining industry she responded by saying:

When they started taking up women in the mines, that was early 2006 I think, my uncle had been sent home from the mines. He was too sick to work, so I replaced him. The mining company agreed to send him home and as a form of compensation I would work on the mines as we had lost the breadwinner of the family... It is tough working underground, you can die at any moment. There have been times where I saw my life flash right before my eyes but I have a family provide for and this the best way I know how to do it.

## **Concluding Thoughts**

While Phakathi (2013) argues that uncertainties underground propel miners to make a plan or improvise, I argue that the social-economic uncertainties within other industries in Rustenburg propels female mine workers to work underground. It is evident from the above narratives that mining is very lucrative for them and their families; mining allows female mineworkers to be “capable of maintaining control” over their lives in the same way that, “making a plan inside the pit indicates that gold miners are creative beings capable of maintaining control over their working day” (Phakathi, 2013:126). One can argue that making plan inside the mine is an act of heedfulness - a calculated risk of “knowing how to get on and get by” (Gherardi and Nicolini, 2002: 420). By drawing on the latter claim, I argue that female mineworkers make calculated risks, they opt to work in a dangerous environment where death is a daily possibility and they are prepared to sacrifice their health in order to better provide a better standard of living for themselves and their families. It is thus evident from the narratives that women make a plan for the benefits that are associated with mining before they take up mining. Taking up mining is how the female mineworkers ‘make a plan’.

My plan making was decidedly less risky for me than those made by female miners. However, due consideration had to be given to various research methods and whether they would cause harm. It was also an opportunity to plan and become the kind of ethical researcher I wanted to be.

### **3: “Oh! That dust is powerful hey.”: Unfolding TB’s violence**

The aim of this chapter is to provide a multidimensional analysis of how miners understand, interpret and experience TB. Drawing on Lock and Farquhar’s (2007) notion of ‘understanding the body’ to provide a ‘phenomenological’ experience of a miner with TB, they argue that the person’s notion of ill-health and suffering can be an assemblage of discourses, images and institutional arrangements that shape the way in which our bodies experience both health and ill-health, in this case TB. Thus, this chapter highlights how a miner’s geographical, political and historical contexts are crucial factors that enable one to better understand the unprecedented rate of TB among mineworkers as well as the forces that make them vulnerable to the disease. By drawing on the notion of “dust” and my research participants’ sentiments that locate TB to a particular geographical setting, i.e. the mines, I argue that the source of TB is not in the miners’ body; nor can it be treated individually (Gorz, 1985). The phrases and sentiments pertaining to TB that miners’ draw on, allude to the social, political and economic causes of the disease that operate in the form of slow violence which manifest themselves within localities. Lastly, this chapter demonstrates how mothers ‘make a plan’ by navigating constraints in infrastructure, health and safety, accesses to resources, social networks and diseases which are often overlooked when understanding TB’s epidemiology.

#### **What causes TB?**

To start conversations with miners pertaining to TB, I made use of a survey tool (see appendix) to gather general information about miners’ understanding of the disease. The survey consisted of three core questions:

What do you think TB is?

What do you think causes TB?

What are the symptoms of TB?

My research participants shared the same sentiments, namely that mine dust is the major cause of TB. It was evident from the miners’ narratives that the mining environment, life



underground, has shaped their perceptions of TB and its illness trajectories. I will draw on several narratives to illustrate the latter claim. Amo is a safety officer at Impala Platinum. She is responsible for making sure that the work force underground works according to mining standards. This entails educating miners in and ensuring that they correctly use personal equipment such as masks and the rescue pack, as well as educating miners on how avoid occupational risks. In January 2014, Amo was diagnosed with pulmonary TB after she returned to work from her holiday. Her narrative reveals how TB transverses bodily spaces between social, economic and political spheres:

I think it is safe to say that I got TB underground from the dust. Oh! That dust is powerful hey. It is funny we only thought about fall of ground<sup>25</sup> and how they are so dangerous but no one warns you about the dust and the damage that the dust does to your body. There is so much dust down there that sometimes we can't even see each other." She reflects for a moment coughing and rubbing her chest at the same time, as she imagines being underground and being subjected to the deadly<sup>26</sup> dust. She continues; "Everything underground is covered by dust. There, dust is in the air, at ventilation sites, on the walls, in the tunnels, on my tongue, face, hands, work overalls and even on my work tools. Sometimes at the end of my shift, my body is covered in a thick layer of dust. But, the worst is the taste of the dust after explosives.

While Amo identified mine dust as the root cause of TB, Kasime could identify the exact types of dust that were associated with TB, "I can't with hundred percent accuracy say what causes TB, but I think majaratine,<sup>27</sup> Pickret cement<sup>28</sup> and rock drilling dust. But also the fumes and the chemicals. Those chemicals are strong. They just sit in your chest and make you suffocate. I don't know if I can explain it properly but you will understand when you go underground." She pauses for a second and looks at T-man her friend who had come to visit her. He too is a

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<sup>25</sup> Fall of ground "is a term used to classify accidents that relate to unexpected movement of rock mass and the uncontrolled release of debris and rock, as a result of gravity and/or pressure, strain burst or rock burst". Available: <http://www.mosh.co.za/falls-of-ground/summary>

<sup>26</sup> I choose to call it a 'deadly dust' because of recent findings in the Silicosis Class action that reveal exposure silica dust has deadly consequences on the miner's body.

<sup>27</sup> The Tswana word for is Diatomaceous earth (a naturally occurring, siliceous sedimentary rock) that is soaked in nitro-glycerine - the soil that is used in explosives. The English name for it on this mine is Afnex.

<sup>28</sup> It is a pre-mix cement that consists of very fine clay particles. The cement is used to build support structures underground.

miner at shaft 16, Impala Platinum. He was on sick leave on this day as he had smashed his finger in a car door and could not operate heavy machinery. He looks at me briefly and then turns to Kasime, and finally blurts out, “Can I speak or you only want to hear what women have to say, since your research is on women?” I chuckle at his wittiness and signal for him to speak his mind. “Kasime is right, very right but I just wanted to add that certain jobs make you more likely to get TB. Like RDOs (rock drilling operators) always have TB. I think it has to do with constantly breathing dust”.

Not only did my research informants allude to the fact that the root cause of TB was dust, they were also able to identify specific dust and jobs underground that increased a miner’s likelihood of contracting TB. In addition to RDOs, Kasime and T-man also pointed out that winch drivers who operate machinery that pulls the ore from the working<sup>29</sup> stations to the tips (where it will then be transported to the surface), women who work at the conveyor belt (loading pieces of ore onto the conveyor belt with shovels), as well as people who work night shift after blasting, were all susceptible to contracting TB.

The latter jobs involve miners constantly inhaling plumes of dust, further solidifying the claim that TB comes from mine dust. Interestingly, miners’ claim to a link between job type and the high incidence TB among miners is supported by McCulloch’s (2012) research.

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<sup>29</sup> A working station is a where workers load, drill and blast.



*Photo 5: Majaratine (the explosive dust that is believed to cause TB).*

When one looks at the image of majaratine, it raises interesting questions about what dust is. What Amo is holding in her hands is not technically classified as dust. According to the Oxford Dictionary (2017), dust may be defined as a “fine, dry powder” that consists “of tiny particles of the earth or waste matter lying on the ground, on surfaces or carried in the air”. Similarly, Amato (2001:3) describes dust as “amorphous” which can be “found in all things, solid, liquid, or vaporous”. Dust particles vary in size ranging from 1 to 100  $\mu\text{m}$  in diameter.<sup>30</sup> This means, at times, they might be visible to the naked eye, and at times invisible to the human eye (Amato, 2001). However, what is known is that dust particles can permeate in-between spaces and can even be inhaled because of their “amorphous” nature (Amato, 2001). Given the literature I have explored, it would be physically impossible for Kasime to inhale the particles that are depicted in the image. Therefore, the dust particles that Kasime claims to inhale should be smaller than that in the image. Yet, from my underground visit, I was aware that majaratine in the blasting process is fractured into smaller particles than what is depicted in the image. I am not suggesting that Kasime was lying or somehow deluded, but rather I argue that the particles in the image are the closest representation at hand to articulate the

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<sup>30</sup> Available:

[http://www.who.int/occupational\\_health/publications/en/oehairbornedust3.pdf](http://www.who.int/occupational_health/publications/en/oehairbornedust3.pdf) [2017, May 25]

invisibility of dust that she is breathing in. Kasime's metaphorical and material handful of dust makes the unapparent appear, which lies at the heart of the slow violence argument (Nixon, 2011). Kasime alludes to the fact that environmental hazards within the mining industry, such as dust are not often described in terms of violence, at least not violence against humans (Nixon, 2011; Turner, 2016:190).

What I found particularly interesting about the notion that TB comes from mine dust was that it was not my first time hearing this phrase. During my Honours fieldwork, which was conducted in the west of Gauteng (commonly referred to as the West Rand), home to many of the gold mines in the province, miners their expressed the same views. I will draw on Siphos (a gold miner) narrative to illustrate this point (Mutendi, 2014). Siphos started working at Drie Gold in 1997 and left in 2003, after six years of service on his own accord. He complained that the air underground was dusty. He was still breathing in dust even though he wore a mask for protection. He repeatedly said, '*umoya lubile*', isiXhosa for 'the air was contaminated' (Mutendi, 2014). The dynamite used to blast rocks in the mine had a potent smell that made him feel like he was suffocating. '*Ndibile*, he constantly moaned: he was 'suffocating'. He could not breathe due to the combined smell of dynamite and the suffocating dust, so he quit his job. At the time of my research, Siphos was working for a construction company. He was a lot happier and claimed to have no trouble breathing now that he was no longer exposed to mine dust. Siphos was diagnosed with TB towards the end of 2007, four years after leaving his job in the gold mine. Siphos proclaimed with certainty that the only place he could have contracted TB was the mine because of the dust. When comparing mine dust to that produced on a construction site, he claimed, 'The dust on the mines is even worse.' For Siphos, it was not simply any 'dust' that was the problem; it was 'dust' from the mine.

According to biomedical research, TB is an infectious disease caused by the bacteria *mycobacterium tuberculosis* (Macdonald & Mutendi, 2017). TB is spread via minuscule droplets of fluid in the air. Coughing, sneezing or even singing can be enough to propel the 'offending invaders' into a person's lungs (Macdonald & Mutendi). The bacterium can remain latent as an asymptomatic infection for years, thus the *bodies and spaces* involved in a chain of transmission may be puzzling to identify or exclude. This means a person may not know

that they are infected with the bacteria until they become sick.

Whilst none of my research participants acknowledged, as a first response that TB was caused by bacterial infection, they all stressed the importance of understanding TB, more in terms of conditions of life underground, particularly in relation to 'dust'. I would like to stress that I am not suggesting that miners hold an inaccurate view of TB transmission or to argue that 'education' will 'correct' these views. It is important to note that their perceptions pertaining to the cause of the disease did not interfere with their treatment regimes. Despite the biomedical evidence that TB is caused by bacterial infection, there is overwhelming evidence that can be traced back to a 115 years ago that suggests that the presence of harmful dusts, such as silica dust makes miners more susceptible to contracting occupational lung diseases such as TB. In fact, in 1902, *The Weldon Miners' Phthisis Commission* determined that the primary cause of occupational lung diseases such as silicosis, tuberculosis and silico-tuberculosis was miners inhaling air contaminated with silica dust (Ledwaba & Sadiki, 2016).

Silica or Silicon Dioxide is a waste of hard rock mining. The toxic dust particle ranges from approximately 1-10 microns in size (Ehrlich, 2016). The silica dust particles tend to deposit onto the surface of the macrophage (the respiratory system), and affect the body in one of two ways. First, if a person is exposed to high levels of silica, this may result in the death of the macrophage, "releasing a variety of chemical by-products which set up a continuing cycle of inflammation" (Ehrlich, 2016: 30). Alternatively, the toxic dust may impair the macrophage. This reduces the macrophage's ability to perform normal defensive actions. In this case, the miner's macrophage is not able to ingest and rid the lung of *mycobacterium tuberculosis*, the cause-active infective agent for TB. This evidence can thus be used to support the miner's view that TB comes from mine dust. To this day, despite major technical advancements to minimise dust levels such as wet drilling, water sprays for layering dust and mechanical ventilation, the mines are still perceived to be full of dust (McCulloch, 2012). This highlights the embedded meaning that is attached to mine dust by the miners and the power this ideology has in shaping the miners' perceptions of TB.

My research participants from both the platinum and gold mining industry claimed that TB could be located to a precise location, which illustrates how miners' lay understandings of TB

transmission relies upon notions of space, in this context the mine (Abney, 2010). While evidence demonstrates that crystalline silica is a component of almost every mineral deposit and rock type, the amount of silica dust that platinum miners are exposed to is minimal in comparison to gold mining (Breedt, 2012). Breedt (2012) claims that exposure measurements in the South African platinum industry indicate low exposure to respirable silica dust which is less than 1%, whereas in the gold mining industry it varies from 9% -39%. Given this evidence, I was prodded to question why platinum miners attributed TB to mine dust, when they are exposed to less levels of silica, which in turn makes them less likely to contract TB. It is against this background that I argue that mine dust is a key organising metaphor used by miners to understand TB in relation to infection and the impact it has on their lives, regardless of what compound is being mined or the gender of the miner (Ortner, 1973).

The metaphor that 'TB comes from mine dust' not only highlights that environmental forces are responsible for TB amongst this population, in my opinion it is a miner's commentary on the inhumane conditions under which their bodies are exploited and that make them vulnerable to contracting TB. Furthermore, this key phrase illustrates how capitalism in the mining industry has skewed the burden of occupational lung related diseases among this population (Macdonald and Mutendi, 2017). This high burden of morbidity and mortality has always been borne by miners in comparison to the general population. This metaphor thus demonstrates that human experiences and socio-cultural representations of images and meaning can be - and are - attached to occupational diseases.

Most miners work underground at depths up to 3500m and at temperatures ranging from 20 to 41 degrees Celsius, in overcrowded, confined (mining seams may be one to two meters wide, see image below) and poorly ventilated environments that are conducive to the transmission of disease. Take Amo's commentary for example, "How can one not get TB in the cage?" Amo says as we exit the cage<sup>31</sup> to go and access the fall of ground that happened minutes earlier. "We are packed like bloody sardines in a can. Do you now believe me when I say that you are literally breathing on top of everyone and breathing in people's germs in the

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<sup>31</sup>A cage is a conveyance used for moving workers and supplies below the surface.

cage?” From my observations, respiratory proactive equipment was not always issued underground, and if it was issued, miners tended to remove it as breathing in such stifling conditions was a challenge and on top on this, the enforcement of utilising protective gear is poor.

This metaphor ‘TB comes from mine dust’ highlights the socio-political economic conditions beneath the surface of the ground that accelerate the TB epidemic, regardless of the mineral being extracted. Further, it highlights the invisibility of other nuanced factors of underground life that are related to the transmission of the airborne disease. This further supports my argument that mining acts an institutional amplifier of TB, the described conditions of life underground, create the ‘perfect storm’ for the disease. Dharmadhikari et al. (2013) estimate that 89% of miners are latently infected with TB despite laudable efforts by mining companies to address the TB epidemic.



*Photo 6: Miners working underground without masks.*

### **“I got TB from my cousin”: Locating the source of TB in the surrounding mining communities**

It is a sizzling afternoon, and Kasime is restless as she has been home all day. Upon my arrival home from the mine, Kasime insists that we go and visit her cousin, Tebogo, who lives down the road. We arrive at Tebogo’s house and are greeted by her son who comes running up to us and mocks Kasime, “Haawa! You still have energy to be walking with that tummy”, he

remarks as he is hugging her. Tebogo is sitting on the *stoep* (Afrikaans word for veranda) eating an orange, as Kasime and I join her on the *stoep*. Tebogo asks her son to get us oranges from the tree adjacent from where we are sitting. As we eat oranges we begin to speak about tuberculosis. Tebogo recalls her experience of the disease and begins to narrate her ordeal, “This madala<sup>32</sup> over here”, she says whilst gazing her eyes on her son who is now nine years old, “He was only six months old when I got TB. It started out with me vomiting, mostly at night for a couple of days. I also experienced sweating at night and I was just always tired. I didn’t think much of it. What did I know? I thought the things I was experiencing were normal. I had just had my first child. I was trying to adjust and cope. I just assumed that these are things that every mother goes through after they give birth. It was only after T-man came to visit me and we were talking about my cousin who works on the mines that everything clicked. I had not seen him in a while. T-man informed me that my cousin had been admitted into the mine hospital, he had TB. I almost fainted as I was listening to T-man. How could I have been so silly to miss all the symptoms of TB. I knew it that very moment I had TB. I couldn’t stop trembling. I had to get to the hospital right away but it was late afternoon, it was useless. I would go to the hospital first thing in the morning.” Kasime interrupts Tebogo’s train of thought as she excuses herself to go to the bathroom. Tebogo continues, “The whole night I could not sleep, it was the longest night I have ever felt. Minutes felt like hours, I kept checking the clock. Time was not moving. I was stuck in time with my crazy thoughts. Was my baby sick too, had I given him TB? He was too young for TB. What if the TB was gonna kill him? If grown men can die from TB what chances did my baby have?” Her eyes start to shine with tears as she remembers that horrific night. I try to shift her attention by asking where and what caused her TB. “Well that’s the obvious. I got the TB from my cousin. He works on the mines, and that’s where he must have gotten it from. My mistake was sharing gwaais<sup>33</sup> with him. I should have never shared gwaais with him. I regret that moment”.

The next day Tebogo went to the hospital with her son, and it was confirmed that she had contracted pulmonary TB. According to her the doctors did attempt to test whether her son had contracted TB by collecting a sputum sample. However, this method of testing for TB fails

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<sup>32</sup> Zulu word for old man

<sup>33</sup> Afrikaans slang for cigarette



to diagnose TB in many children because they do not produce enough sputum to perform the test. As soon as Tebogo got her diagnosis she was put on TB medication. She was issued with big orange tablets that she had to take every day for the six months. The doctors at the hospital issued her with small sachets with powder in them. She was instructed to mix the powdery substance with water and give it to her baby. "It was just like juice except it didn't taste nice", she remarked.

Tebogo's narrative highlights two major facts. First, it is evident once again that the origin of TB is understood as spatially orientated. It is in the mines. This highlights that mining communities also perceive mines to be full of TB. Miners in this mining community are perceived as carriers of TB. The second issue that comes to light through Tebogo's narrative is that TB is not only an epidemic in the mines, the mines are also responsible for secondary outbreaks in sending communities. This further solidifies my argument that mining acts as institutional amplifier for the TB epidemic within South Africa and across southern Africa. The mines have a historical legacy of fueling TB transmission in the home regions through oscillating migration. TB has spread rapidly from the mines to both sending and receiving communities through the migrant labour system.

The migrant labour system came into existence in southern Africa in 1869 with the discovery of gold on the Witwatersrand. Mining magnates had a huge demand for cheap, unskilled labour. Hundreds of thousands of men from South African rural areas and neighbouring countries were recruited to work on the mines for short periods of time. Usually their contracts lasted 9 months due to restriction of movement and was legislated under the Apartheid government. This meant that their families had to remain home in the rural areas of South Africa or in their respective countries of origin. At the end of their contracts the miners were made to return home for variable periods. When they had renewed their contracts, they would return to the mines. This is what is termed oscillating migration: the movement between the mines and home and back to the mines (David et al., 2010). Statistics indicate that the extraordinary TB burden among miners working in South Africa is responsible for more than 760,000 cases per year that are reported throughout the southern Africa region (Dharmadhikari et al., 2013). Migrants export health problems back home.

The platinum industry in Rustenburg does not rely on migrant labour in the same way as the gold mines do. Therefore, platinum miners may not spread TB over a large geographical area, as in the case of the gold mines. But it is evident from my research participants' experiences that the TB epidemic within this region can be attributed to the movement of miners between the mines and labour sending communities.

TB in labour sending communities is often exacerbated by the fact that the local community rely on the state government hospitals for treatment. These institutions are often under resourced and as a result are ill equipped to deal with the epidemic. Rapid diagnosis in these institutions is not always possible in comparison to privately-owned mine hospitals and clinics. For example, the sputum smear microscopy, one of the most common, cheap and relatively efficient TB tests, is used to diagnose TB in countries with a high rates of TB infection. Patients are asked to produce a sputum sample. A series of special dyes are applied to the sample, and the stained slide is examined under a microscope for TB bacteria. The sputum smear microscopy test is a simple and inexpensive test and results should be available within a couple of hours. However, in state institutions, which may or may not have access to onsite laboratories and staff trained in microscopy, it often takes a long time to obtain TB results - and such was in the case with Tebogo. She was told to go home and return to the hospital several days later to obtain her results. This is highly problematic. If patients do in fact have active TB they can infect 10 to 15 people thus further increasing the secondary outbreak in the labour sending communities. Furthermore, patients are 'DOTed'<sup>34</sup> every two weeks. On the other hand, privately owned mining hospitals and clinics are better equipped to deal with the TB epidemic. Diagnostic test results are usually issued within several hours and at most 24 hours. Patients with active TB are admitted to the mining hospital for 14 days, as the majority of patients are no longer infectious after two weeks of treatment. This reduced diagnosis waiting period reduces the number of people a patient with active TB can infect. In addition, miners are required to be 'DOTed' every day at their respective clinics. Impala Platinum has two clinics that service the different shafts. As a result, the mining

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<sup>34</sup> DOTS is a strategy that has been implemented by the South African Government to address the TB crisis and ensure treatment of all who are diagnosed with the disease. DOTS is based on five key elements: Government commitment, case by case detection of the TB bacterium, standardised treatment, with supervision and patient support, ensuring free access to drug supplies and monitoring and evaluation system (WHO, 1996). Whilst it is a noun my research participants turned it into a verb.

industry has a zero percent default rate<sup>35</sup> as opposed to the national default rate which is estimated to be at 6.8%<sup>36</sup>. Impala clinic also has another hospital, situated in Klerksdorp that primarily deals with complicated occupational lung related diseases, which is where Impala Platinum sends miners with drug resistant (MDR) TB. When one compares the disparities between the types of care that the miners and the general population receive in relation to TB diagnosis and treatment, the burden of this epidemic is most severely felt by these local communities. The above evidence highlights that the majority of the general population in these labour sending communities' health has been undermined by structural factors such as inadequate health services, unemployment and low income, conditions that facilitate the spread on the disease.

### **Mothers 'getting by' with TB**

It is evident from the ethnographic evidence above that the etiology of TB was consistent regardless of gender. However, when you move past epistemology, TB becomes very gendered. Craddock (2001) argues that the social impact of TB on women is very different to that experienced by men. The disease is observed to mainly affect women who are economically and reproductively active; such as my research participants (Badenhorst, 2009). Women often face different obstacles in relation to their experiences of TB and its social effects; getting successful tuberculosis treatment and managing the impact of the disease on their children and families (Rajeswari et al., 1999). Diwan and Thorson (1999) claim that the societal structure of many developing countries relies on women doing a double or triple workload, i.e. taking care of the family and home and perhaps doing waged work. Diwan and Thorson's (1999) claim was observed during my fieldwork. All my research participants had double workloads, barring two who were single parents, who bear the brunt of a triple workload. As a result, these women live in fear of contracting occupational diseases and are presumably reluctant or unable on their part to adopt the sick role because of their productive and reproductive obligations.

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<sup>35</sup> Impala Platinum (2017)

<sup>36</sup> Available:

<http://www.tbfacts.org/tb-statistics-south-africa/> [2017, May 30]

It is against this background, that I investigate the interaction of factors within family, social environment and healthcare systems that contribute to the embodied experience of a mother with TB. The aim of this section of the chapter is to unravel the multiple challenges that female mineworkers face managing the converging impact of TB, particularly in relation to motherhood. I do this pointing out the coping strategies that have been put in place by these miners to attain good health.

In an attempt to understand how mothers balance the triple burden in relation to TB illness I draw on Backman et al.'s (2007) work to demonstrate how women with chronic illness have employed certain strategies to balance the triple burden. Their (2007) research findings illustrate three interrelated concepts that describe the impact of arthritis on the role of parenting, particularly mothering. They chose to call them respectively; "Sometimes I can, sometimes I can't", different types and levels of support from others and the notion of "my time". I will draw on these theoretical concepts in an attempt to shed light on how mining, disease, childcare and illness interact.

### **Amo**

Amo was a single mother when she contracted TB in January 2014. She was living in Sunrise with her son who was eight years old at the time, her nephew who was couple of months old and her sister who was in her early twenties. Several weeks before Amo went on leave she went to the mine clinic, complaining of chest pain. She claims that the nurses at the clinic did not run any tests but simply issued her with pain medication. The pain progressed whilst she was on leave, although in addition to the pain, she was now also complaining of shortness of breath. She returned to the clinic, although this time she was referred to the mine hospital where a sputum test was conducted. Her sputum results came back negative but her symptoms still progressed, "It was at this point that I decided to go to a private hospital. I felt like the doctors and nurses at the mining hospital were not doing their job, which is funny because I now had to waste money on health even though I have mining medical aid. I had to pay for the consultation and the various tests, money which I would have used for something else. They conducted several tests. They took my sputum, blood and X-rays", Amo says as she files a report she had written. Her results came back positive - she had "TB of the lungs" (pulmonary TB). Amo requested the doctor at the private hospital write a note for the doctor

at the mine hospital, stipulating that she had TB alongside the results. Amo returned to the mining hospital with her results, she was immediately informed of the admission and treatment procedure. She was admitted into the mining hospital after having the procedures explained to her:

I had no time to prepare, I was meant to fetch my child that afternoon. I was so worried. What was going to happen to him. I was going to be separated from him for two weeks and even after me being discharged I was scared, I didn't trust that I wouldn't give him my illness. Who was going to take care of him? Who would feed him, do homework with him or put him to bed. These were the thoughts that were going through my mind as I was changing into the hospital gown. Surprisingly, my last thought was did he have TB too? That's when I began to lose my mind.

Amo called her niece to ask her to bring her some toiletries and nightwear, she also instructed her niece to collect her child from school.

The next day Amo asked her neighbour to bring her son for a TB test, "I was in isolation and I was not allowed any visitors. I pleaded with the doctor to see my son so I could explain why mommy had just vanished and why he had to come to hospital for tests. The doctor was kind he agreed. He gave me a mask and walked me to my son. My son was also wearing a mask. It was the most heart-breaking thing, having to speak to your child through a mask. I could tell that he was scared, I don't know if he was scared of me or the mask". The TB diagnosis results were inconclusive, so as a precautionary measure the doctor gave Amo's son TB medication in the form of two injections. Amo could not recall how far apart the injections were.

Jackson et al. (2000) makes use of the concept "disrupted mothering" to refer to a phenomenon that occurs to mothers because of their illness. The term is used to explain a mother's inability to care for her children the way she used to prior to her illness. This notion of 'disrupted motherhood' can be observed in Amo's narrative. Amo was placed in isolation for twenty-one days, as she was still infectious after 14 days, which is the usual timeframe it takes for a patient to become noninfectious after beginning treatment. She spent up to another month in the TB ward. During the time that Amo was hospitalised, she had to make

arrangements through her social networks to take care of her son. Amo's son temporarily moved in with her neighbour who had a daughter the same age and attended the same primary school. Amo made arrangements with her neighbour because her niece occasionally worked as a live in domestic worker in Rustenburg CBD, this was the case when she was hospitalised. Amo thus had to redirect her mothering responsibilities to her neighbour.

Ncube's (2014) research highlighted the experiences and challenges faced by Maphisa locals when caring for an infant. She draws on the notion of 'posting' children back home, as a coping strategy for mothers with TB. Ncube (2014) uses the concept to refer to the process by which mothers who have contracted TB in Johannesburg post their infants home to Maphisa (Zimbabwe) in attempt to obtain good mothering. While Ncube's (2014) notion of 'posting' children back home was used in the context of international migrant labour and infancy, I extend this concept to how mothers 'post' children on a smaller geographical area, in Amo's case just a few houses from her as a way of adhering to her TB treatment regime. My observations are similar to what Ndzendze (2012) notes in her research, where she too notes that children were typically posted to family in the same vicinity.

After Amo was discharged from hospital, she was afraid that she would transmit the disease to her son as she still felt weak. Her son moved back with her but there were days when she did not even have the energy to cook dinner for her child or even bathe him. On days where Amo could not physically take care of her child, her child would reside with her neighbour until she was well enough. Amo's narrative coincides with Backman et al.'s (2007) observations that women with arthritis often have difficulties managing the competing demands of their illness and motherhood. Amo's ability to participate in the mothering role after hospitalisation, can be observed to have, "fluctuated, both over time (related to disease progression, changing demands of the role, and shifting attitudes about what was most important) and from day to day (related to symptoms and abilities including pain, fatigue, strength, dexterity, and mood)" (Backman et al., 2007). This is what Backman et al (2007) refer to as "Sometimes I can, sometimes I can't".

The above process often results in a mother redirecting her motherhood responsibilities. Ndzendze (2012) argues that the redirection of mothering duties consequently results in

patterns of 'burdening and unburdening'. These patterns emerge when the disruption of motherhood requires unburdening by transferring children to other family members or neighbours. This becomes a burdening factor on the new caregivers as they attempt to mimic mothering duties. Ndendze's concept of 'burdening and unburdening' coincides with Collin's work. He (2005) argues that the sharing of mothering responsibilities has been and continues to be one of the most important features of black motherhood and argues that the responsibility is shared with grandmothers, sisters, aunts and female cousins. It is evident from Amo's narrative and the literature that I have drawn on that illness poses tremendous challenges on mothering duties. Mothers often manage these challenges by redirecting care to family, friends or neighbours to attain better health.

The notion of 'my time' was also a crucial coping strategy that Amo implemented to overcome TB. While Backman et al (2007) highlight that the notion of 'my time' was something that mothers with arthritis learned in order to become healthy and better mothers, the notion of 'my time' is not particular to the impact of arthritis on mothering, it is concept that can be applied to mothers who are coping with rigorous TB treatment too. Backman et al.'s (2007) and Ndendze's (2012) research demonstrates that participants who endorsed the concept of 'my time' had an opportunity to become healthy and better mothers in the absence of their children. Both case studies highlight how children serve as a driving force that help mothers adhere (getting better for one's children), and this was also the case in my fieldwork. One also sees the inter-relationship between the notion of 'my time' and 'posting' children. I would like to draw on Tebogo's (Kasime's cousin) narrative to elaborate:

There were days when I just didn't have any energy. I was so weak that times I couldn't pick up my baby. I would just watch him cry, too weak to move to comfort him. It got to the point where I was not producing enough milk for the baby, my body was just drained. I felt sooo terrible, I felt like I was a bad mother because I could not care for my child. I knew I had to get my act together for the sake of my child. I just needed time to myself to heal myself. That's when I sent my baby to Kasime's mother just to recuperate for a couple of days. When I look back at it, it was a wise decision. It's exactly what I needed.

## **Noma**

While the above narrative demonstrates how Amo needed social support to combat her illness, I would like to draw on Noma's narrative to illustrate the socio-economic impact that having TB can have on mothers. I came to know of Noma through Amo. Prior to meeting her, Amo and I were speaking about the economic burden that mothers often face as a result of contracting occupational lung diseases. Amo narrated how some of the miners had come together to raise money for Noma to help relieve her of some of her financial obligations as a result of lost wages due to her illness. Amo also mentioned that at times miners would also put together food parcels to help her. Noma contracted pulmonary TB in late 2009. She claims that her TB had some complications, although she could not exactly articulate what these complications were. Because of her illness, she was unable to work for more than eight months. Impala Platinum adheres to The Occupational Diseases in Mines Act 1993 (ODMWA). This act is responsible for ensuring that mining companies compensate miners for temporary incapacity, in this case contracting occupational diseases. However, this was not enough to cover Noma's expenses.

Noma received some form of compensation, however, that was only enough to cover her expenses for six months, "The real problems started after that. I had so many expenses to cover. I had to pay for the mortgage of the house, school fees, transport for the kids. There were times I went to bed not knowing where my next meal was coming from but I survived. But I thank the spirit of Ubuntu that these women had, if it wasn't for them I don't know what I would have done".

Noma's narrative highlights the various costs that are often associated with one contracting TB. It is evident from the narrative that the inability of a mother to provide for a child because of lost wages due to illness manifests in disruption of motherhood. My observations coincide with Rajeswari et al.'s (1999) research that quantifies the various costs that are associated with the disease in India. They observe that the indirect costs associated with TB are high. One of the major reasons is that patients lose an average of 83 work days due to TB. The direct consequence of this is that these patients lose their livelihood. This means that mothers are unable to provide food for their children. This burden is redirected to community members. It is against this background that Rajeswari et al (1999: 874) argue that "TB has the



potential to impede the development of both individuals and society”. While this impact of TB is unquestionable, I would like to argue that the presence of TB in this community has resulted in community members deploying resources to minimise the socio- economic impact of the epidemic on individuals (Khomba, 2011).

It is against this backdrop that I draw on the notion of Ubuntu as a theoretical framework to capture how community members ‘make a plan’ to minimise the negative social consequences of the epidemic and everyday uncertainties (Mutendi, 2014). According to Moloketi (2009:242), the word Ubuntu is derived from a Nguni (isiZulu) aphorism: *Umuntu Ngumuntu Ngabantu*, which means “a person is a person because of or through others” (Tutu, 2004:25-26) (Khomba, 2011).

Ubuntu is a moral principle by which Africans live by, which expresses the culture compassion of reciprocity, dignity, humanity and mutuality in the interests of building and maintaining communities with justice and mutual caring (Tutu, 1999:34-35; Luhabe, 2002:103; Khoza, 2006:6). It is evident from the narratives I have drawn on that the Ubuntu philosophy is integrated into all aspects of day-to-day life in Phokeng.

For example, there was a day I got home (Kasime’s home) from my interviews on the mine. When I arrived, Kasime’s mother informed me that Kasime had gone to get her hair braided across the road. I hurriedly placed my backpack inside the house, changed into flip slopes and went to the hair salon to keep her company. When I got to the salon Kasime and a number of the salon staff were sitting on the stoep having conversations about everyday life. I plonked myself down on the bench with exhaustion and joined in on the conversation. Several moments later a homeless man, whom they refer to as Legotlo (which means mouse) passes by. He stops and greets us. T-man who is sitting next to me passes Legotlo a beer. Kasime asks Legotlo if he has eaten lunch today. She pauses for a moment and then quickly blurts, “Come home for dinner” before he could respond to her question. Kasime, T-man and the salon’s staff members genuine care for the wellbeing of Legotlo is an example of how Ubuntu philosophy is shared by this community. Even though these community members are struggling with everyday pressures, such as putting a meal on the table, every community member makes sure that Legotlo is fed, has clean clothing and a roof over his head, if he

wants. In this context, I argue that Ubuntu is the motivating force that propels community members and miners to ‘make a plan’ in an attempt to resist the suffering and violence imposed by structural constraints.



*Photo 7: Showing Mouse holding a Black Label that he was offered by T-man*

## **Conclusion**

This chapter has provided a thick ethnographic description of miners’ experiences with TB within their homes and communities. It tells narratives of their lives in relation to mine work, healthcare and compensation outcomes (Roberts, 2009:11). My research participants did not acknowledge, as a first response, that TB is caused by a bacterial infection. Instead, they stressed the importance of understanding the disease in the context of mining. My research participants expressed that TB comes from ‘dust’, a metaphor that captures the social, political and economic causes of the disease that operate in the form of slow violence which manifests in particular localities, in this case the mine. The phrase brings to light the invisibility of violence that dust poses on miners’ bodies and lives. Furthermore, this chapter illustrates

the impact of occupational diseases on the everyday lives of the female mineworkers. The reflections of previously ill female mineworkers reveal that the impact of TB and initial TB treatment policies, have on the miners' productive and reproductive lives are often associated with gendered inequalities. The responsibility of caring for children or the household is not distributed equally. For example, the majority of my research participants were single parents, they could not rely on the fathers of their children to take care of the children when they were sick. Thus, the burden of caring and providing for children was placed solely on the sick mother. I shall draw on a snippet of a conversation I had with Kasime to further emphasise my argument:

Me: Is your TB the same as those of your male colleagues or rather, is the impact of TB on your life that same as that of a man?

Kasime: I think that the effect of TB in the body is the same, whether you are a man or a woman, it eats the inside of your body. But if a man had TB today, he doesn't have to worry about taking care of the family, the kids because, you know mos, in our culture it is a woman's duty to take care of the children. Imagine if I were to get TB, I could not even ask my baby's daddy to take care of Athi. He has not been a part of that child's life for years. So, if I get TB, I would have to worry about my children on top of being sick. Men can just up and leave and be admitted into the mine hospital for TB for two weeks. I cannot just dispose of children and get admitted, I have think about what I will do with my children first.

Kasime's concerns and anxiety pertaining to ill health and the negative impact it has on maternal responsibilities echoes the lived reality of my research participants. In addition, the narratives I have drawn on in this chapter, offer a valuable critique of TB treatment policies in the mining sector. Female mineworkers begin to question the male-centered TB treatment policies and procedures. In this context, TB policies and procedures were observed to overlook women's needs, particularly in relation to maternal responsibility. When probing my research participants about what could be done to make these policies more favorable to mothers, miners expressed that the mining company should offer facilities where their children could stay until they are able to make alternative arrangements.

Lastly, this chapter demonstrates that the various forms of violence (e.g. slow bodily violence and gendered inequalities) that women are subjected to requires them 'make a plan' to deal with the heaviness of ill health. It provides insight as to what remains of the 'miner' that has been exposed to repetitive slow violence through the hands of exploitive capitalism. Her narrative tells a tale of how her health has deteriorated through labour exploitation, but it also illuminates how she has been stripped of her life and dignity in the process of losing both her health and her profession.

#### **4. "I am like a skorokoro": Humans-as-Waste**

*My nightmare started the day I got TB... Yoh, Yoh. My world came crushing down on me like there was no tomorrow. My life has never been the same. I remember that day so clear. I was sitting in the doctor's office trying not to bite my nails. I don't know why I was so nervous on that day but I had a feeling. You know mos, when you get the feeling.*

*The doctor flipped through his charts for a while, he looked so serious. Just like that, he was like, "You have TB". I am sure he said more but I could not hear anything. All I could hear was the word TB ringing loudly in my head. I don't know why I was shocked to hear that I had TB, everyone gets TB here at the mines at some point but I think I was worried about my children. Who would take care of them? Had I given them TB?*

*They admitted me right there and then. What scared me the most is that my TB was critical. They had to call a TB specialist from outside of the hospital to examine me. I spent more than three months in the mine clinic of which I spent a month and a half in isolation. Yoh... that was the worst. I couldn't see my children. For the next six months after I was discharged from hospital I had report to the mine clinic to take my medication. Taking the medication made me feel even worse, it made my skin so hard and it also made me gain a lot of weight.*

*When I eventually recovered, I went to go do mochongolo<sup>37</sup>. I passed but they won't give me back my old job. I didn't understand and I still don't understand. I took all my TB medication as I was supposed to. I took it every damn day. I ate healthy, lots of fruits and vegetables. I exercised like I was meant to, to make sure I got better so I could return to work. I did everything that I was meant to do, I was a good patient. The doctor told me that my TB is gone. So why won't they give me my old job back? I went to the shaft after I passed my*

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<sup>37</sup> Tswana word for the medical examination, with specific reference to the heat tolerance test that determines whether miners are fit enough to work underground.

*medical examination to report to work. Can you imagine that my card would not swipe me in? I was so shocked. I went to HR and he could not give me a proper reason as to why I could not go back to work. Instead, he started harassing me and saying all crazy things. He said that I looked pregnant so I could not work underground. I asked him: did he give me a baby? How did he know I was pregnant? He was sooo rude. I know I gained weight in my tummy because of the TB medication. It is like he was looking for reasons not to give me back my old job. He even made me go for mental examination. He said I was not fit to work.*

*I now I work in the change rooms as a cleaner, can you imagine that? How humiliating? I used to be miner and now look at me I am just a skorokoro<sup>38</sup>.*

The above is a snippet of a conversation I had with Mo Athi during my fieldwork. I was struck by the conversation I had with Mo Athi for two reasons reason. First, she referred to herself as a *skorokoro*. This metaphor captures the violence of capitalism and it references the cheapening of human existence through the pursuit of capital. Secondly, her narrative provides insight as to what remains of the ‘miner’ that has been exposed to repetitive slow violence through the hands of exploitive capitalism. Her narrative tells a tale of how her health has deteriorated through labour exploitation, but it also illuminates how she has been stripped of her life and dignity in the process of losing both her health and her profession, and regaining only a portion of each. Thus, the aim of this chapter is to highlight the squandering and wasting of black lives, that has been an intrinsic part of capitalism, “especially in contexts in which race is central to the simultaneous production of wealth and of superfluous people”, like in the mining context (Mbembe, 2011). Through drawing on collective narratives of miners, who have common historical experiences of subjugation and suffering, I argue that the used-up body of a laborer is rendered as waste by the mining company, the body discarded like waste. I draw on Wright (2006), Mbembe (2011) and Biehl’s (2014) notion of disposability to substantiate my argument; humans (miners) take the form of waste in a contemporary capitalist society. I will begin this chapter by contextualising Mo

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<sup>38</sup> To my knowledge *skorokoro*, is of Afrikaans origin. It is used to refer to something that is worn and ragged beyond its years. It is usually used by South Africans to describe a battered vehicle.

Athi's narrative. I will then draw on scholarship that makes the connection between waste and humans.

In late 2014 Mo Athi went to the mine clinic complaining that her "leg was refusing to work". In addition, her skin had become darker and she had a burning sensation in her chest. She stopped going to work because she was not feeling well. In January 2015, after numerous visits to the clinic, she was admitted at Impala hospital for further investigations and observations. She was diagnosed with TB. As she is narrating her story, she stops and pauses for a moment. She sighs, "Sisi why you do think it took them so long to find the TB in my body? Did they make my TB worse by taking so long find it?" She spent three months in the hospital, of which she spent a month and half in isolation. After Mo Athi was discharged from the mine hospital she had to take report to the mine clinic daily to take her TB medication, in accordance with the DOTS regime. Upon completion of her TB treatment Mo Athi went for the *mochongolo*. She claims that she passed her medical examination, however, she was not given her old job back, instead she was allocated a job as a cleaner in the change rooms. When she asked HR why she was not given back her, HR could not give her a clear and concise answer:

At first the HR manager said that I could not work because I was pregnant, which I was not. It was just a side effect of the medication I was taking. Then it was; I am not mentally stable to work. That whole thing is just a fuckin' mess. That guy made me go for a mental examination over a silly incident. I went to the shaft right after the *mochongolo*, all ready to report to work. My access card would not allow me to enter the shaft. I asked the security guard why my tag would not allow me in. He couldn't give me an answer. I was scared I was going to be late for work, you know once you late to catch the cage, it is over for you. I asked the guy to let me in and the next thing I know he was all aggressive. He yanked me by pulling on the chain I was wearing and the next thing I know I had given this guy a good klap<sup>39</sup> with the back of my hand. I mean how dare he touch me like that? I reacted in self-defense and would do it all over again. And they call me mentally unstable. They got to be fuckin' kidding me.

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<sup>39</sup> Afrikaans for 'smack'

Why wasn't the guy also ordered to go for a mental examination? But, honestly maybe the reason why they won't let me go to work is because my lungs might be too damaged for me to go underground. Yes, the TB might be gone but maybe my lungs are not what they used to be. If they told me that then they would have to compensate me, and we know that these rubbishes are stingy with money. That would explain all of this craziness.

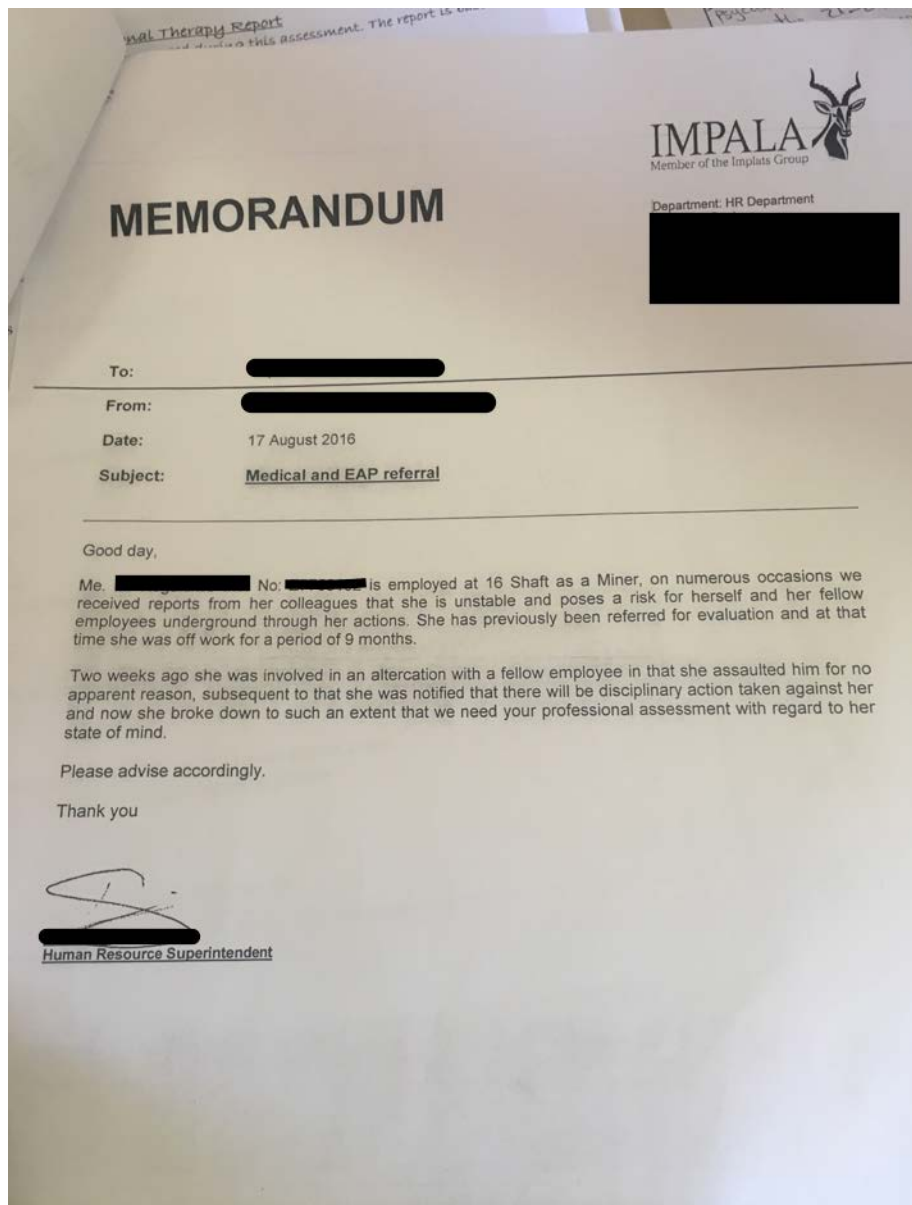


Photo 8: Showing the letter that was written by HR requesting Mo Athi have a mental examination



## **Wasting away slowly: Contextualising Humans as Waste**

Traditionally, waste in the contemporary capitalist society is often understood as something other than human. Likewise, environmental scholars across various disciplines and theoretical fields understand waste as something that is produced physically and socially by humans (Yates, 2001). Clapp (2002) highlights that our understanding of waste is associated with production, such as pollution and toxic industrial chemicals or with “post-consumer waste”. However, recent literature on humans-as-waste can be linked to three overlapping analytical approaches: symbolic, bio-political and politico-economic.

Symbolic approaches to waste can be linked to Douglas’s (2003) notion of ‘matter out of place’, humans can be rendered as ‘matter out of place’, such as that expressed by Mo Athi. While Mo Athi has not been retrenched, she perceives herself as ‘matter out of place’. She cannot understand why she has not been given back her old job nor why she is working in the change rooms, a place she never imagined working in. The bio-political approach to humans-as-waste is primarily informed by Foucault’s (2008) work on biopolitics and the state, and Mbembe’s (2003) writings on necropolitics. The last approach, politico-economic, usually employs a Marxist critique.

For this chapter I will draw on Yates’ (2011) notion of disposability and humans-as-waste to argue that narratives such as Mo Athi’s highlight how humans are excreted from capitalist society like waste, much like how non-human waste is excreted from the production process. Yates’ notion of disposability builds on Marx’s stance that workers in many cases are wasted under capitalism in a comparable fashion to natural resources (Mbembe, 2011). Marx (1981), in this analysis, characterises capital production as a process that is thoroughly wasteful “with that he calls ‘human material’ just as it is with ‘material resources’”. He (1981:182) further argues that the capitalist system squanders human beings, living in labour, “squandering not flesh and blood but the nerves and the brain, life and health as well.”

It is against this backdrop that Yates expands and uses the notion of humans-as-waste. Central to Yates' (2011; 1681) argument is the claim that, "humans-as-waste is rooted in the fundamental logic of the capitalist mode of production that produces waste as an inherent by-product". Mbembe (2011) argues that humans-as-waste as a conceptual framework allows anthropologists to grapple with the drama of the human, in this case the miner in the history of South Africa. He (2011) further argues that this framework is extremely powerful as it highlights the structural forces that produce wasted bodies. He (2011) argues that the human as a waste product is at the interface of race and capitalism. It is thus evident that the wasting away of a miner's health will always be a by-product of mining and producing platinum. Thus, the body of the labourer is wasted at accelerated rates in order to secure the most profit (Yates, 2011). When the body of the laborer is wasted, it is disposed of just like trash. Exactly how "skorokoros" (Mo Athi) are disposed of.

While the disposability of miners is a contested issue in the sense that no mining company would openly admit to this practice of disposing of miners that are no longer of economic value to them as a result of ill-health, Mo Athi's usage of the "Skorokoro" metaphor is a valuable contribution to the notion of humans-as-waste theoretical conceptualisation. Popular media, alongside the narratives of many miners alluded to the fact that big mining corporations continue to be capable for the legions of miners in South Africa suffering from diseases such as TB, despite the fact that mining corporations claim that they have done everything in the power to improve the wellbeing of miners.

Amo too expressed similar sentiments. During my underground visit, Amo and I pass a wagon fully loaded with Platinum. She stops and points:

That is what I am dying for. These rocks are so valuable, this wagon will probably be worth more than three months of my salary. It is worth so much and I know the mining company must be making a killing. You would think that they would pay you a decent amount for the dangers I see underground and the damage that it does to my body. Sometimes I ask myself is it even worth it? Every day, I risk my life for this rock. I could die any moment, we could have died from that fall of ground earlier, crushed to death, I could die in a fire that I told you about. I have had TB twice. Surely that kills

you slowly. It is only fair for them to pay better. It's not fair that I risk my life and health, and when it's not even guaranteed that I will make enough to put food on the table at the end of the day. When we asked for pay increases in January 2012, 17, 000 miners were retrenched just like that. No regard for our suffering, to them it's about cutting all costs to make more money for themselves.

Amo and Mo Athi's narratives describe how miners waste away while they simultaneously transfer their value into the production of the precious metals society desires to have, thus further solidifying Yates' (2011) argument that the logic of human disposability is rooted in capitalist production (Wright, 2006).



*Photo 9: A wagon filled with Platinum Ore*



*Photo 10: Platinum Ore*



*Photo 11: A typical tunnel underground*



*Photo 12: Typical tunnel underground after fall of ground*

### **“Being sent home”: Understanding how miners are disposed**

I would like to draw on my Honours research to further demonstrate how miners perceive big mining conglomerates as discarding humans when they are no longer labour producing bodies, and juxtapose these findings along with my current observations. During my fieldwork, I wanted to investigate what the phrase “being sent home to die” meant to miners, as well as to capture the lived experiences of what happens to miners when they are wasting away.

The phrase being “sent home to die” is one that has been used in popular media to describe the scenario whereby a patient with incurable and highly infectious TB (described as ‘treatment failures’) are discharged from hospital to die at home, putting friends, family and people in their community at risk of catching the disease. For example, epidemiologist, Jonathan Smith in his 60-minute documentary *They Go to Die* (which investigates the life of former migrant gold mineworkers in southern Africa who have contracted drug-resistant tuberculosis (TB) and HIV while working at the gold mine), uses the phrase ‘sending them home to die’ as a way of describing how miners have been made redundant and disposed of when they are too sick to work (Mazotta, 2011). Jaine Roberts, in her research for the Health Systems Trust, which evaluated the functioning of the Occupational Disease in Mines and Works Act 78 of 1973 as Amended (ODMWA), assessed the current and historical monitoring of occupational lung diseases in former miners. She defines, ‘being sent home’ as a synonym for words like ‘retrenchment’ or ‘redundancy’ (Roberts 2009a). This phrase can be extended to the other occupational lung diseases such as Silicosis which cannot be cured. This can be observed in Ledwaba and Sadiki’s book *Broke and Broken, The Shameful legacy of gold mining in South Africa*. Ledwaba and Sadiki (2016) drew on Mthobeli Gangtha’s narrative, a miner who was told ‘go home and die’ to demonstrate how black bodies in a capitalist system are a mere ‘body-thing’, not even deemed as subjects but like animals. In March 2001 Mthobeli Gangtha went on leave, when he returned and underwent the mandatory fitness test he was told, “Look here, stop wasting our time...Don’t even think of trying to find work through

TEBA<sup>40</sup> because you will never be able to work again. Just go back home and wait to die” (Ledweba & Sadiki, 2016: 35).

During my honours, whilst running an errand with Loyiso, on our way back from a nearby mall, we bumped into an old acquaintance he had not seen in years. Loyiso introduced me to Alfred and told him about the nature of my research. Alfred allowed me to ask him a few questions about TB. He then went on to tell me about his brother. Alfred’s brother contracted multi-drug resistant TB, he referred to it as, “The TB that makes you die”. Alfred’s brother was admitted in Randview hospital<sup>41</sup> but after six months:

They realised that he still was not getting better. That’s when the mining company told him that it was better for him to go back home because he was too weak to work anymore. He left the mine more than a year ago. He is now staying with my parents in the Eastern Cape. He is still very sick, he can’t work.

Whilst Alfred confirmed that his brother had received a retrenchment package, the money he was paid was just enough to keep him and his family going for a few months (see Ledweba & Sadiki, 2016 for other examples). Alfred’s description of his brother’s care indicates that the compensation was insufficient in covering associated health costs leaving the family without an income stream and further impoverished from treating his occupational tuberculosis:

We spend so much money on transport taking him to the clinic and back. Transport costs are increasing these days. It’s not only one person’s transport costs that we have to worry about: it’s two people’s taxi fare, we are talking about. He is too sick to go to the clinic by himself so he needs someone to go with him. On top of that the doctor says that he needs to

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<sup>40</sup> A mining recruitment agency

<sup>41</sup> The mine hospital that deals with miners who have multi-drug resistant TB.

eat properly. We need to buy groceries every week: vegetables, yoghurt and lots of fruits. Oh! Plus, we have to buy him vitamins and iron tablets. The clinic doesn't give you those.

### **Noma**

My uncle fell sick on the mines. I know that a few months after my uncle left the mine, he got really sick. It was bad. I know he was given money but I am not sure. I am assuming it was not much because the mining company gave me his job and I still have to contribute to his medical bills...When he came back home he was not the uncle I remembered. The man I grew up to know was healthy, fit and full of life. Now I look at him he is so frail, like a living carcass. He struggles to do anything, he even struggles to plough the little vegetable garden at the back of house. He complains that his chest is heavy. You can see its killing him; it is only a matter of time. The saddest part is that after all those years on the mine he does not have enough money to pay for the medical expenses, for illnesses that you got from working in the mines. Actually, what will kill him, is not having enough money to get the fluid from his chest or lung drained. I wonder at times; will this also be my fate?

Like Noma, all my research participants expressed a fear of the possibility of 'being sent home'. Loyiso's fear was particularly poignant: "We are just like a bubble gum to the mining company. Once the flavour is gone they spit us out, there is no need for us anymore. We are only of use to them when we are healthy and can still make money for them" (Mutendi, 2014).' Loyiso uses the metaphor of the bubble gum to illustrate that the mining corporation treats miners' bodies as disposable. When the body no longer fulfils its function of being a labour-producing body it is discarded and simply replaced by another body.

### **“They spit us out like bubblegum”**

Amo, Noma and Loyiso’s statements unravel the power that mining companies have, they are perceived to have the power to dictate who dies and who may live. Foucault’s work on biopolitics offers a critical insight as how one can make sense of my research participants lived reality and concerns. Foucault’s (2008) notion of biopolitics can be simply defined as the domain of life over which power has taken control. His work on biopolitics clearly demonstrates how historically sovereign states had the right to kill, mechanisms of biopower were inscribed in the ways in which the state functioned, such as through war, public executions or placing people into concentration camps. According to him the state through the king had the sovereign right to decide who lives and dies. Man, thus gradually learns what it means to be a living species in a living world, to have a body under political rule, they are exposed to bare life. While Foucault’s notion of biopolitics defined life under political rule, my research participants notions of what is life is and what it means to live have been shaped by capitalism. Miners’ fear of being ‘sent home to die’ or losing one’s flavour not only reveals their perceptions about life, but they reveal the nuanced relationship between these labour producing bodies, violence and capital that shape the way they live. They are exposed to bare life. “The generalised instrumentalism of the human existence and material destruction”, of miners’ bodies by mining companies is not just unique to the narratives I have highlighted, but to thousands of miners that are being represented in the silicosis class action, who were send home to die after they contracted the fatal lung disease, silicosis (Mbembe, 2011). The destruction of humans substantiates my argument that mining corporations have the capacity and power to determine who lives (the labour producing bodies) and who dies (the sick miners).

It is evident from the research participants’ comments and lived experience that the mining sector has a historical legacy of treating sick miners as ‘waste’ or ‘unwanted knowables’ (Beihl, 2004). Biehl (2004) makes use of the term ‘unwanted unknowables’ in his work; *Life of mind*. In his book Biehl (2004) narrates how Brazilian society has abandoned care for its sick citizens by dropping them at Vita. Vita is described as a place where persons, are stripped



of their humanity and terminally excluded from reality. It is a place where the unwanted become unwanted unknowables. Vita is a place whereby people experience social death before biological death. Just like Vita, 'being sent home to die' is a form of social abandonment, where by mining companies evade corporate responsibility for adequately taking care of the sick. The miner's home becomes a 'zone of abandonment' where humans are discarded. The home is a place where miners are condemned to social death before biological death. I refer to social death in this case, as miners who have been expelled from the core social and economic orders of our time (Sassen, 2014). Being economically inactive as a sick miner results in social death and in turn to biological death. If you take Alfred's brother or Noma uncle's story, while they were compensated with a retrenchment package, it was not nearly enough to cover the expenses of the illness. As a result, Noma and Alfred are forced to incur debt to prevent the biological death of their loved ones.

### ***The cycle of violence***

I think Mbembe's (2015) work is of extreme importance in this context as it provides a powerful critique of the neo-liberal policies as well as demonstrating the impact neo-liberal policies have on the day-to-day reality of ordinary people who live in a capitalist world. Mbembe (2015) argues that black bodies have always been trapped in a 'bad life' as a result of neoliberal policies, such as those of the mining sector, that keep wearing them out and down. Miners opt to mine to fulfil their dreams of improving their standards of living for them and their families, to invest for their children to go to university and to build grand homes for their families, such as the goals envisioned by my research participants in the previous chapter. *Basebenza kanzima emgodini*<sup>42</sup> (They toil hard down in the mines), to achieve the latter goals. However, it is evident from the narratives I have drawn on that this is hardly this case for many. Instead of returning with loads of riches for their families they come back as broke, broken and sick, like bubble gum that has lost its flavour or like a *Skorokoro*. After working so hard and returning home too broke to even afford the illness they contracted in the mines, they have to acquire debt to cope with their illness which is a direct consequence

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<sup>42</sup> A song sung by South African miners

of working on the mines. The abundance of narratives such as Mo Athi, Loyiso, Alfred's brother and Mtbobeli highlight how black wasted bodies are trapped in a continuous cycle of poverty and debt as a result of contracting occupational lung diseases, which continues to strip away their humanity (Yates, 2011; Mbembe, 2011). It is against this background that Mbembe (2015) has critiqued neo-liberal institutions in South Africa, while the institutions he critiqued in his paper are the state and university, I think that his critique is relevant to big mining houses. Mbembe (2015) argues that over the past two decades, neo-liberal institutions have failed to bring an end to the centuries-long process of recycling black poverty.

The observations above coincide with Randall Packard's description of mine related health in the late 1980s that remain true 20 years into post-apartheid South Africa. He (1989: 9) argued that "patterns of sickness and health are linked to the emergence of specific sets of political and economic interests, operating at a local, national and international level". In his work *White Plague, Black Labour. Tuberculosis and the Political Economy of Health and Disease in South Africa* he illustrates that mining magnates were more interested in prioritising mechanisms to ensure profits than implementing adequate health frameworks to ensure the miners' health and wellbeing. Instead, miners who had contracted occupational lung diseases as a result of inhaling gases and dust particles that damage the lungs were sent home. Fetter (1993) notes that during the early stages of industrialisation, major mining firms such as the Corner House Group on the Witwatersrand and Union Minière reported soaring mortality rates among mineworkers. This was partly due to the fact that they were sent back to their rural homes without compensation for their illness. It is against this background of historical negligence and the disposal of wasted bodies over decades that Mbembe (2015) argues that neo-liberal institutions in South Africa are associated with an infernal cycle of repetition but no difference, one form of damaged life is simply replaced by another. Miners' wasted bodies are still disposed of by mining companies the very same way they were decades ago.

During my sessions with Noma I asked what her opinion of the Marikana massacre was. A couple of days later she passes a paper that she had scribbled down a quote from Joseph Mathunjwa, [The President of the Association of Mineworkers and Construction Union (AMCU)] at the time massacre. The note read:

The life of a black in Africa is so cheap. They will kill us, they will finish us and they will replace us and continue to pay us salaries that cannot change black lives. This would mean we are defeated by capitalists.

I can feel Noma's gaze on me whilst I am reading the quote. As soon as I finish she starts to speak:

Yoh Mutsa he was right. I look at my uncle and I get so angry. It is like he wasted his strength working on the mine, he doesn't have anything to show for his time working except his illness. And I worry that this too will be my fate. I will get sick and then the mining company will compensate me by asking my children to work the mines. I don't know any miner's child that managed to study medicine, they just end up in the hopeless situation we are in. I don't want that for my children. I want sooo much for them, I want them to have opportunities I never had. I don't want them to worry never about me, I don't want them to use their money to take care of me. Those things keep you back in life, imagine all money I could be using on children but I have other people to take care of. I don't want my children to worry. I want to be able to afford them nice things and it's not easy... Sometimes I put myself in danger's way to break this cycle.

## **Conclusion**

This chapter has illustrated how female mineworkers' bodies slowly waste away due to health-related problems that they acquire as a result their occupation. As illustrated in the previous chapter, miners are exposed to slow violence in the form of dust on a daily basis that has the potential to adversely affect their health in the future. In this chapter, I show how, at times, miners' bodies waste away to a point where they are discarded as waste, primarily though being 'sent home to die'. The fear of being 'sent home to die' that was expressed by research participants sits parallel to the historical meta-narrative of super-exploitation of miners' bodies within this industry. *The Leon Commission* report, the Marikana massacre and the recent silicosis class action are classic historical texts/moments that document the

narratives of miners who left their homes as healthy, ambitious youngsters and returned home broke, broken and bitter, victims of the shameful legacy of mining that has been the mainstay of the South African economy for over 100 years (Ledwaba & Sadiki, 2016). AngloGold Ashanti notes in their Report that, “it is estimated that some 1 million people have left the mining industry over the past 20 years, whether because of downscaling and retirement and ill health”. In this regard, the notion of being ‘sent home’ serves as a metaphor to express the bloodless violence that is imposed by neo-liberal greed on miners’ bodies and lives, mining companies dispose the bodies that can no longer pursue their economic agenda. Furthermore, this chapter highlights the circular nature of violence, first your body wastes until you are discarded as waste, to be replaced your children who will also waste and be replaced by their children. Lastly, in this chapter we saw how miners such as Noma begin to question the cycle of repetition and we slowly begin to see how women ‘make a plan’ to resist being discarded and condemned to a generational violence.

## **5. “Making a plan to keep to my baby”: Experiences of pregnant mineworkers.**

While there have been major advancements in making the mining industry more inclusive of women especially in terms of occupational roles, the establishment of gender equity within this sector remains one of the biggest challenges. These challenges include shift work, sexual harassment, acceptance by male workers, physical constraints and lack of adequate infrastructure facilities (toilets underground, safety equipment) (Botha & Cronjé, 2015). Women in mining are exposed to the various hazards due to the nature of their occupation. Furthermore, Hermanus (2007) points out that female mineworkers face greater risks to their safety in comparison to their male counterparts because most of the supportive infrastructure such as personal protective equipment (PPE), heavy mining machinery, tools and equipment are not designed for a woman to use. In addition, Badenhorst (2009:63) points out that the female body differs physically and biologically from that of men in the sense that the female body can fall pregnant and thus the safety of two persons—the mother and baby with very specific risks—must be considered. Pregnancy and breastfeeding are considered the two major challenges mining companies need to address when incorporating women into the mining workforce.

The aim of this chapter is to highlight some of the biggest challenges that mineworkers face pertaining to pregnancy. In this chapter, I argue that pregnant mineworkers often ‘make a plan’ by boycotting mining policies that are designed to ensure both their and their developing fetus' safety in order to secure economic security for the baby's upkeep in the future. I demonstrate that their decisions to disregard mining policies, which are meant to ensure their safety, is a reaction to broader forces and structures that constrain them. I do this by illustrating how mining policies pertaining to pregnancy, specifically the threat of ‘being sent home’, operates as form of legitimate invisible violence that is used against the miner. In an attempt to escape or cope with these legitimate forms of violence, women boycott mining policies, however, this places them in vicious cycle of invisible violence. Boycotting these mining policies exposes these women to another form of violence - slow bodily violence that could harm their babies and their children’s children. Lastly, I suggest that

'vulnerability' and 'resilience' best capture the mineworker's main concern pertaining to pregnancy.

### **Contextualising reproductive risks**

The majority of the women who are recruited to work underground throughout the platinum industry are of childbearing age (Dlamini, 2016). The proportion of such workers is not inconsiderable: Impala Platinum, for example, estimates that between 6-7% of underground female mineworkers are pregnant at any given time (Benya, 2009). Given the risk that is associated with mining (see below), mining companies are legally obligated to provide a safe working environment to women who are of reproductive age, their unborn children and all mineworkers who are breastfeeding. Pregnant female mineworkers are heavily protected by South African legislation. The South African Constitution Section 9(4) and the Employment Equity Act, Section 6 stipulate explicitly that no employee may be discriminated on the grounds of pregnancy.

A large body of literature highlights the potential effects that mining can have on the reproductive health of a female employee. Reproductive hazards are defined as agents or conditions that result in harm to the reproductive system in adults or impair development in the fetus or resulting children (Baird et al., 1993) (Best Start, 2011). For example, Badenhorst (2009) highlights that exposure to chemical substances, physical, ergonomic and biological hazards associated with the mining industry may have detrimental effects to the mother and her child. For my argument, I will primarily draw on the physical and chemical reproductive hazards that pose a threat to the health of a pregnant mineworker and her unborn child.

### **Physical Hazards**

Mine work is associated with hard physical labour, thus strenuous labour of a pregnant employee is considered to increase the risk of injury and miscarriage. In addition, long strenuous labour is combined with the fact that women have to stand for prolonged hours which can have serious health effects - potentially causing medical conditions such as deep

vein thrombosis<sup>43</sup> or varicose veins<sup>44</sup> (Dorman & Boudreau-Larivière, 2012). Furthermore, mine work also requires mineworkers to operate heavy machinery and tools that often vibrate which can cause the placenta to detach from the uterus resulting in a miscarriage or a preterm delivery (Badenhorst, 2009). According to Oshu & Okazawa (1994), the vibrations may also reduce uterine blood flow<sup>45</sup>. Exposure to these vibrations may also increase the risk of the pregnant mineworker contracting preeclampsia (Haelterman et al., 2007).

Working conditions underground expose women to extreme heat, with temperatures that range from 27 to 30 degrees Celsius. Botha and Cronje (2015) claim that constant exposure to high occupational heat loads can lead to several serious complications among pregnant women and women who are still nursing their infants. Some of the complications they (2015) note among pregnant workers are lethargy and fatigue, as well as, heat stress complications which can trigger heat strokes, which can be fatal in some instances. Extreme heat can also have negative effects on the fetus, resulting in developmental abnormalities such as a neural tube<sup>46</sup>, heart and abdominal wall defects (Dorman and Boudreau-Larivière, 2012). Prolonged exposure increases the risk of fetal distress as well as spontaneous abortion<sup>47</sup>.

## **Chemical hazards**

Various chemicals, such as carbon monoxide, lead, hydrogen sulfide, cadmium, arsenic, nitrates, nitrites, organic nitro compounds, nitrogen oxides, and nitrogen dioxide, are used to extract platinum ore, and pose a great risk to the health of the mother and her unborn child. (Dorman & Boudreau-Larivière, 2012) (Botha & Cronjé, 2015). These chemical compounds pass readily from maternal blood through the placenta to the fetus, and may result in

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<sup>43</sup> Deep vein thrombosis (DVT) occurs when a blood clot (thrombus) forms in one or more of the deep veins in your body, usually in your legs. Available at <https://www.mayoclinic.org/diseases-conditions/deep-vein-thrombosis/symptoms-causes/syc-20352557>. Accessed 10 November 2017

<sup>44</sup>Varicose veins occur when one's veins become enlarged, dilated, and overfilled with blood. Varicose veins typically appear swollen and raised, and often have a bluish-purple or red color. Available at <https://www.healthline.com/health/varicose-veins>. Accessed 10 November 2017.

<sup>45</sup> The blood that flows to the uterus.

<sup>46</sup> The cell like structures that forms that ultimately forms the brain and spinal cord. Available: <https://discovery.lifemapsc.com/in-vivo-development/neural-tube>. [2017, 10 November].

<sup>47</sup> A medical term used to describe a miscarriage.

chromosomal abnormalities, hypoxia<sup>48</sup>, reduction in fetal growth and preterm delivery (Badenhost, 2009). Furthermore, exposure to the above chemicals that are associated with mining can result in spontaneous abortion, stillbirth delivery or early postnatal death. In addition, biomedical literature on epigenetics<sup>49</sup> illustrates that exposure to hazardous or radioactive chemicals whilst pregnant can result in epimutations<sup>50</sup>. Skinner et al.'s (2014) work on epigenetics illustrates that epimutations can persist for several generations. For example, an experiment conducted on rats exposed to methoxychlor or vinclozolin (hazardous chemicals) whilst in the womb were observed to pass on epimutations to the fifth generation of rats (Skinner et al., 2014). The implications are profound: if a pregnant mineworker is exposed to hazardous or radioactive chemicals, it can result in epimutations of their children and their children's children creating a vicious cycle of generational bodily violence.

### **How mining policies materialise into the rhythms of day-to-day life**

It is thus clear from the evidence that mining presents a range of reproductive risks to the female employee. However, whilst there is extensive research on the link between mining and reproductive hazards, it is important to note that there is scientific uncertainty pertaining to the topic (Dorman & Boudreau-Larivière, 2012). The majority of research that has been conducted on occupational reproductive hazards has been toxicological and much of this knowledge comes from animal studies, thus this uncertainty makes it very difficult for mining companies to formulate regulatory policies that both ensure gender equity whilst protecting the reproductive health of female mineworkers. To accommodate for the invisible nature of harm that mining poses on the pregnant mineworker, mining policies stipulate that when a female mineworker discovers that she is pregnant, she must immediately report the pregnancy to the HR shift manager who will then look for alternative employment (Impala

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<sup>48</sup> A term used to describe the amount in the amount of oxygen reaching the tissue.

<sup>49</sup> Epigenetics is the study of heritable changes in gene expression; however, it does not involve changes to the underlying DNA sequence. Available: <https://www.whatisepigenetics.com/fundamentals/> [2017, 3 October].

<sup>50</sup> Epimutations are defined as epigenetic aberrations, typically defined as those that predispose individuals to cancer through soma-wide changes in the expression of the afflicted gene.



Pregnancy Policy), usually on the surface, where working conditions are not considered to be risky.

However, according to my research, participants alternative jobs are not always possible or available. At times, the number of women who fall pregnant exceeds the number of available alternative jobs on the surface. Many of my research participants claim that if there is no alternative employment pregnant mineworkers are sent home until they give birth, a finding supported by Benya's (2009) research. Benya (2009) observed that at times women can be sent home for close to a year and a half if they report their pregnancy during the first trimester and there is no alternative employment. According to her (2009) they stay home for eight months until they give birth; after which they stay home for a period of two to three months to breastfeed as women cannot work underground whilst breastfeeding. According to the claims of my research participants, if a woman falls pregnant and is sent home until she gives birth (given the fact there is no alternative employment) she will only be compensated for four months of maternity leave, as stipulated by the Basic Conditions of Employment Act (BCEA) of 1997, Section 25. Given the economic repercussions of being sent home until one gives birth, female mineworkers are often put in a difficult position where they have to choose between their rights to employment, economic stability, and reproductive health. I shall draw on my field notes further to illustrate the challenging position that pregnant mineworkers find themselves in:

“They [the mining company] tell you all of this gender what, what. They tell you when you get the job that you will never be discriminated for bearing life and that their polices and staff will do they best to ensure provisions for pregnant women. But I have come to learn that despite the fact this gender inclusivity nonsense, as a woman there is a time in your life, that you will be put in a disadvantaged situation in your work career because you bear life. That is just the way life works dear. If you want blame someone blame God for making you a woman.” Mo Athi pauses for a moment, deep in thought as she observes Kasime rubbing her belly. She sinks herself into the multi-colored scatter cushions on the sofa with a sudden exhaustion. I probe a little further and ask her when and how she came this realisation. To which she responds by saying, “For me, it was that moment was when I told my HR manger that I was pregnant with my first child. Do you know what he asked me? He asked me if I was

going to get an abortion.” The veins along her forehead and throat begin to bulge out as she gets infuriated.

A fuckin’ abortion, “mogopolô o wa boso” (meaning crazy idea in Setswana). At times, I want to be angry at that guy. How could he be so cold hearted and so insensitive? But the goodness in me thinks he probably asked me this question to see if I was ready for the repercussions; the possibility of ‘being sent home... I think he did me a favour by asking me that question. I thought long and hard about what he said, I was sooo excited to have my first child that I had not even thought about what would happen if I was sent home before the time to take paid maternity leave. That’s when I realised how naïve I had been to trust the mining companies and their policies to keep my baby and me safe. I realised that if I was forced to take early maternity, there was the possibility that I would not be able to afford bringing this child into the world. You see it was either having my baby or potentially giving up my paycheck. It’s a tricky situation but ultimately the choice is yours and you will have to live with that. We cannot do it all, be mothers and not suffer in the work place because of it.

The concerns that are raised by Mo Athi highlight that mine work, mining policies and pregnancy are not mutually compatible. Women who fall pregnant often fear the economic repercussions that are associated with pregnancy, like many women in different industries (Best Start, 2001). Pregnant women fear that they may ‘be sent home’ until they give birth. Again, note how in the previous chapter and this chapter the notion of ‘being sent home’ causes great anxiety amongst mineworkers. In this context, the phrase serves as a critical moment to provide insight as to how mining policies pertaining to pregnancy are comprehended by mineworkers, as well as, the implications they have in the everyday practices of a pregnant mineworker. The fear of being sent home reveals nuanced ideas of the body that have been shaped by mining policies and capital.

As noted earlier, I observe and argue that according to the miner, bodies are classified into two categories: the efficient labour producing body and the rejected body that fails to measure up to the standard of the latter category (Butchart, 1996). The rejected body consequently results in being sent home either permanently with incurable TB or temporarily

with pregnancy. In both scenarios, being sent home has serious immediate economic repercussions to the miner and their families. This is a constant theme that has emerged throughout this dissertation. It illustrates that the material consequences of policy pertaining to health, the experiences of ill health and pregnancy, often have the potential to trigger economic instability in a miner's life.

This should prompt us (scholars, policy advertisers and mining companies) to radically reshape the manner in which we understand health in relation to mining and the health behavior of mineworkers. However, in this chapter, we see how the threat of 'being sent home' is associated with invisible gendered inequalities that further disadvantage women in the mining realm. Because men do not fall pregnant, they do not face the risk of financial instability as a result of their reproductive and maternal responsibilities. The outcome of this fear results in mineworkers concealing their pregnancies in an attempt to maximise or accommodate for their economic needs. I shall draw on my field notes to demonstrate how mineworkers' experiences of pregnancy is affected by the fear of being sent home and its association with economic instability.

One day I had accompanied Kasime and her sister to the shop Baby City to do some last-minute shopping before the arrival of her baby. As we walk around the shop, she picks up a small Mickey Mouse onesie she holds it up for her sister and me to see. Her sister with excitement exclaims, "Yoh, *motho waka* (my person in Tswana) this is sooo cute, you must definitely get this. I am sure you must be soo excited" to which Kasime responds "Yoh, Chomie (Afrikaans word for my friend)", whilst smiling from ear to ear as she hugs the onesie in such a ridiculous manner, that her sister and I begin to laugh. She continues to speak, "I think that I might be a bit more excited about this baby than I was my first" to which I ask what the lowest point in her first pregnancy was. She pauses for a moment and responds:

I remember looking at the two lines on the pregnancy test wondering what the hell I am going to do with a baby. I was going to have a baby, my first child. I am still living with my parents. And how do I even tell my boyfriend then, how do I even call him to tell because I discovered that he was married and had another family. I was so disappointed

when I found out I was pregnant, that has to be the lowest point in my pregnancy. I felt stuck. There was also the possibility that if the mining company found out I was pregnant I could be sent home; I was not prepared for that. I am the only breadwinner in the family.

As a result of this potential fear, Kasime concealed her pregnancy until she was nearly five months pregnant as she was still working underground as a winch operator. One of the other ways in which she strategically concealed her pregnancy was by not taking any leave in an attempt to avoid mandatory medical examinations of miners upon arrival from leave. She wore oversized overalls and clothing to hide her pregnancy. In addition, she noted that if she needed medical attention she would go to a private physician as opposed to the mining clinic or hospital for free medical attention.

Similarly, Lerato felt the need to conceal her pregnancy in an attempt not to be made economically redundant. She worked until she was six months pregnant:

I kind of know what the risks are. I know what some of the implications are of working underground and being pregnant. But I had no choice, I can't afford not to work for more than a year and not get paid, that's why I carried on working underground even after I found out I was pregnant. I didn't tell HR. These policies are ridiculous; if I knew that I was guaranteed a job on the surface I wouldn't have done what I did. To follow the rules does not make economic sense so we have to make a plan.

Given the biomedical literature pertaining to risk that is associated with mining and pregnancy, it appears 'irrational' for women to continue working underground whilst pregnant or whilst breastfeeding. This idea of 'irrational behaviour' extends beyond biomedical discourses. For example, when presenting my findings to an urban educated audience I was asked by an exasperated man, 'But don't they know the harm they will cause to their baby?' These women have carefully thought through the implications of working

underground whilst pregnant, it is a calculated economic risk, the 'choiceless choice'. Women chose to work underground whilst pregnant to make ends meet in times of need (Ross, 2009).

Against this backdrop, I draw on the Homo Economicus theory to critically think through the female mineworker's decisions to work underground whilst pregnant. John Stewart Mill first proposed the term Homo Economicus or economic man in the 19<sup>th</sup> century (Bowels & Gintis, 1993). Writing in 1848, Mill defines an economic man as a person "who inevitably does that by which he may obtain the greatest amount of necessities, conveniences and luxuries, with the smallest quantity of labour and physical self-denial with which they can be obtained" (cited in Hinnant, 1998: 63). I argue that this theory accurately captures the motivating rationale as to why women work underground. The only difference is that pregnant women subject themselves to large quantities of labour to achieve their economic goals. I draw on a snippet of a conversation I had with Noma, as evidence to demonstrate my argument.

On this day, Lerato and I were talking about some of the challenges that pregnant women face. Lerato pointed out that one of her biggest challenges was being able to afford the best prenatal care for a baby, given the economic instability that is associated with the policies pertaining to pregnancy:

Having a baby is expensive. When you are pregnant the mining company refers you to a gynaecologist. They give you the list of three of them, the first one on the list you can go to for free the other two on the list you have to pay an additional fee, its R250 per consultation because it's a private practice. I think that price might even be subsidised by the mining company. With my first child I went to the gynaecologist what was free of charge but I learnt my lesson, never again, yho. I had to queue for the gynaecologist the whole day and on top of I was not happy with his service. His mind was all over the place, he was very unprofessional. You will also be wondering if he is all over the place, will he be the best doctor to have, will he be able to diagnose my child or me quickly if something is not okay. So, this time I have decided to go to the private doctor for better care, at least

with the private care I know that my baby would receive the best health care. This type of care does not come cheap. Imagine I was sent home and only received four months of pay, this four months' pay would not even be enough to cover my consultation never mind all the other expenses that come with having babies, diapers, wipes, Purity<sup>51</sup> and whatever. Working whilst pregnant for those few months is a small cost to pay when I thought of the bigger picture.

The economic uncertainty that is associated with pregnancy policies was not the only reason that compelled pregnant mineworker to conceal their pregnancy. Their relationship with their 'baby daddies'<sup>52</sup> often played a role. For example, whilst having a conversation with Thandi (this name has been changed for confidential reasons, given the sensitive nature of the themes I am about to discuss) she pointed out that the dynamics she had with both fathers of her children left her with no choice but to work underground whilst pregnant:

When I told my baby daddy that I was pregnant, he completely freaked out. We had only been dating for a few months. He was not interested. He asked if I was going to get an abortion. He went on to tell me that he already had seven kids and that he was not looking to incur another expense of a kid because I had been silly enough to stop taking my contraception pills. After a while I made the decision. I went to tell him that I was going to keep the baby. He was sooo angry, he hit me. He beat me sooo hard that I fell flat on the floor. It is bit of a blur, I think I must have passed out for a moment. Everything happened quickly and the next thing the neighbours had called the police and when I regained consciousness, they were all standing over me. My face was wet as if they had poured cold water on it. They didn't arrest him though, instead they drove me home, well they did ask if they should take me to the hospital but I refused. I was scared. I could not deal with the reality that I might have just lost my child. But with all the craziness and the different emotions that I was going

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<sup>51</sup> Baby food

<sup>52</sup> A colloquial term to describe the father(s) of one or more of a woman's children, especially one who is not her husband or current partner.

through, I decided. I was going to have this baby and I had deal with the fact that I am going to raise this child myself. I had to make the decision that I could not expect my 'baby daddy' to contribute financially to this baby's upkeep. I had to just accept that I was by myself and that I would make ends meet. I was not prepared to ask for the help of a man who could treat me like that. I refuse to bring up my child like that... What also makes it worse is that I didn't have the support of my other child's father, he has his own life with more important commitments. If I had that support I would not have to contemplate working underground whilst pregnant, but as a mother you got to do what you got to do and put aside your dignity to do what is a best for unborn baby and the children who are already at home.

Similarly, many of my research participants pointed out that the absence of fathers in their children's lives and the lack of financial assistance from their baby daddies forced them to work underground whilst pregnant. The decision to work underground because of "baby daddy issues"<sup>53</sup> echoes a broader fatherhood crisis that is happening in this country. Morrell & Richter (2006: 2) highlight that there are a significant number of fathers in this country who unfortunately do not want to participate in the lives of their children - or even acknowledge the existence of their own children. In a survey conducted in the early 1990s they observed that of the 22 000 children born at Chris Hani Baragwanath hospital in Johannesburg, only half had male support. These statistics, in conjunction with the narratives of many of my research participants, demonstrate the context in which fatherhood is often experienced in South Africa, and how it that translates into women 'making a plan' to conceal their pregnancy for economic gain.

### **Concluding thoughts**

Again, the notion of 'making a plan' can be used as a useful theoretical framework to conceptualise the behaviour of my research informants in this context. Ross (2009), in her book *Raw Life, New Hope; Decency, Housing and Everyday Life in Post-Apartheid Community*, argues that the tactics that are used by residents in The Park (a squatter camp in Cape Town)

to achieve a sense of prosperity are immediately responsive to socio-economic barriers that puncture the lives of the residents and subjects them to loss, violence, and abjection. Similarly, Ross's (2009) claim about how structures materialise in social life can be observed in my research. Context is an important factor that enables one to understand my research participant's actions. In the absence of decent supportive pregnancy infrastructures and the happenstance nature of economic stability, women are obliged to 'make a plan'. The structure requires that female mineworkers make these calculated risks. Pregnant mineworkers find themselves in a limited zone, where they have to choose between their reproductive health and economic stability. As Lerato states, "It's either you work or you starve. It's either you are at home with your baby or you working".



## 6. Conclusion: Resilience in the face of radical constraint

The aim of this study is to contribute to the gap in mining and health literature related to gender, particularly women, whose narratives have often been invisible and more than occasionally slip through history's pages. Little has been written on women who work underground and their experiences of TB, silicosis and reproductive health in South Africa.

Most of what has been written on 'women in mining' is found in annual reports produced by mining companies. Whilst Packard (1989) has done extensive research on mining and TB in South Africa his narratives did not take into account women in mining, and likewise, Dunbar Moodie (1994) in his classic book, *Going For Gold: Men, Mines and Migration*. It is my hope that the insights from this study will highlight the challenges that women in mining face. To take the whispered exchanges between mothers, daughters, sisters and female friends to encourage transformation within the mining industry that addresses the underlying needs of 'women in mining' so that they may make positive decisions around their bodies, their health and the future of their children. Radical transformation is needed to create sustainable policies and infrastructure that will support women in mining's right to live and work in an environment that is free from slow bodily and psychological violence.

This study has captured the invisible realities of 'women in mining' in relation to occupational health related problems. It shows 'women in mining' are situated in web of connections that exist between working underground and being care givers in their homes, and the risk of contracting or transmitting TB and acquiring reproductive health related problems. It argues that 'women in mining' are caught up in a viscous cycle of slow violence that spreads across generations.

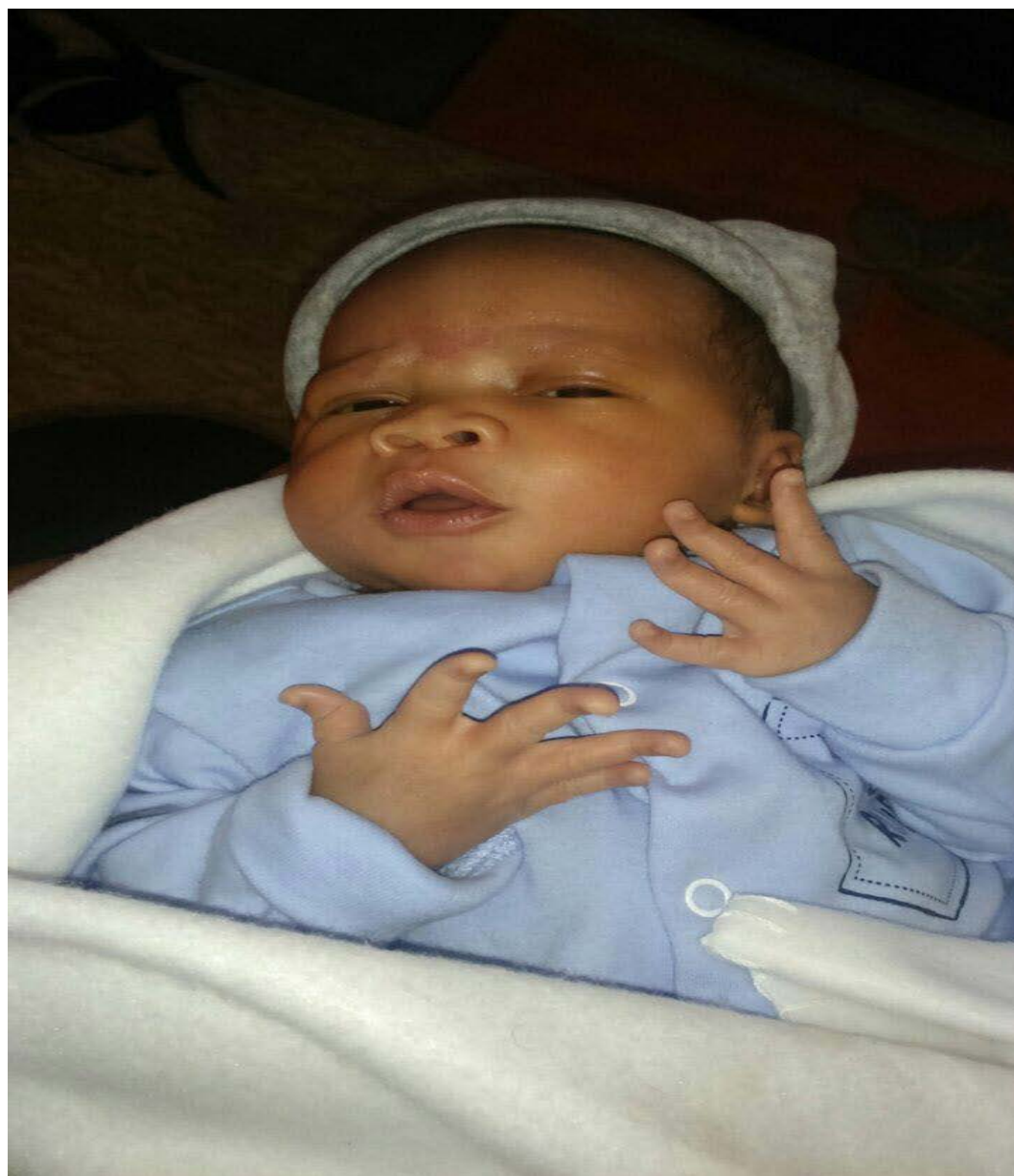
Female miners opt to maximise their financial security by avoiding the *implications* of the medical gaze (Butchart, 1996). Foucault (1997) argues that ordinary bodies, are made prominent by myriad techniques of surveillance that are primarily concerned with observing the body to the smallest detail and monitoring its activity to establish ideas of normality (what an ideal labor efficient body is). Bodies that do not measure up to the ideas of efficiency are

noted, marked and recorded in medical files. This making and categorisation of abnormal bodies in some cases can result in punishment, in this case being sent home (Butchart, 1996).

This dissertation reveals that mining health policies pertaining to health and safety often place female mineworkers in impossible situations. The wasting away of a miner's body from TB or other lung related diseases exposes the miner to other forms of structural violence such as being 'sent home', discarded as waste, a violence that stripes their dignity. It is a violence that is masked through mining policy designed with humane intentions, yet exacerbates the miner's suffering economically, thereby placing them in a cycle of debt to treat occupationally acquired illnesses. It is a slow generational violence that places the coming generation at risk such as in the case of Noma who questions whether her fate will be that of her uncle whom she replaced in the mines. Mining policies pertaining to pregnancy, which are meant to protect pregnant employees from slow bodily violence, are the very policies that put them in harm's way. It is evident that the embodied meanings that miners attach to ideas of health and ill health, as well as their experiences of ill health in relation to mine work and the choices made about their bodies intertwine with the violence of capitalism and mine work.

Lastly, this dissertation has drawn on the notion of 'making a plan', a central theme that holds this paper together to provide a counter-narrative to the super-exploitation that often runs the risk of rendering miners as powerless, vulnerable and disposable. Jensen (2008) argues that the concept of dignity overlaps with people's moral compasses. To him (2008), people's sense of morality rests on various competing aspirations. In this case, we see how 'women in mining' aspire to respectability that is based in the nurturing of their families and upbringing of their children. However, what we see is that dignity often plays a paradoxical role in the different claims and aspirations (Jensen, 2008). 'Making a plan' to achieve dignity can consequently result in adverse health effects on the miners and their families. Yet, it is evident that dignity is what these women have when everything fails. Dignity is the one thing that power and exploitive capitalist regimes cannot take away from 'women in mining'. This dissertation also tells a tale of a mother's loving spirit that will do anything to keep her children fed, clothed and happy despite the odds, and her willingness to create a better life for her child.

It was early evening and I had just finished changing baby Omps diaper. Noma was staring at her child in admiration and says to him, "I want so much for you my love. I want you to have opportunities I never had. I will work hard for you my only sunshine not to become a miner like me."



*Photo 13 : Baby Omps feeling content after his diaper has been changed*

**Appendix:**

Part I. Socio- demographic characteristics of the respondents

**(Please make up a name that we can use for research purposes)**

**Name:** \_\_\_\_\_

**Sex (circle one):** Male Female                      **Age:** \_\_\_\_\_

Part II. TB Knowledge

**1. Have you heard of tuberculosis (also known as TB)?** Yes      No

**2. Where did you get information/hear about TB? (circle as many as you like)**

Family	Friend	Doctor	Clinic	School	Media	Other: _____
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3. Have you had TB? Yes   No

4. Have you been vaccinated for TB? Yes   No   I don't know

5. Have you been involved in TB research? Yes   No

6. What causes TB? (circle one)

Bacteria/germ	cold/flu	shortage of food	smoking	Climate	sun light	Weakness	smoking	hard work
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any other \_\_\_\_\_

7. What are symptoms of TB? (circle as many as you think)

Anger	night sweats	blood when coughing	loss of appetite	weight gain	weight loss	Rash
Tired	pain in chest	stomach cramps	increased coughing	swollen hands	numb feet	Weakness

8. Is TB contagious (can you get it from another person)? Yes   No

If yes, how does the disease transfer from one person to another? (circle one)

Through blood	Air when coughing	Shaking Hands	Sharing food	Sexually transmitted	Born with it	Don't know
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any other \_\_\_\_\_

9. How can you stop TB transmission (can you stop getting it or giving it to someone)? (circle one)

avoid sharing cups	cover mouth when cough/ sneeze	avoid sharing clothes	avoid sharing food	Do not have sex	avoid body contact	Don't know
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any other \_\_\_\_\_

10. Is there a vaccination for TB? Yes No

11. How does a TB vaccination work? ( circle one answer)

It protects you from all TB all the time	It protects you some of the time	It cures you of TB	It never works	It gives you TB	Don't know
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12. Can you treat TB? Yes No

If yes, do you know how? (circle as many as you like)

Traditional medicine	Medicines from a doctor	food	rest	muthi	Don't know
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**Any other** \_\_\_\_\_

**True or False Answers (Circle one)**

- |   |   |   |
|---|---|---|
| TB is a disease of Africa   | T | F |
| Only people who live in poverty get infected with TB                  | T | F |
| Only people who are HIV positive get TB                               | T | F |
| Anyone can get infected with TB because                               | T | F |
| TB can easily be cured these days if you take your treatment          | T | F |
| If you have multi-drug resistant TB, it takes many months to be cured | T | F |

There is no cure at present for extremely drug resistant TB T F

All people with TB develop HIV/AIDS T F

13. The people who most often get TB are?

children under 5	children 5-15	adults	old people (over 60)	Male	female	All
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Any other \_\_\_\_\_

14. If you thought you had TB, what would you do? (circle one)

consult a traditional healer	consult a medical doctor or clinic	consult a religious leader	do nothing	Don't know
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15. In your community, where can someone go to be treated for TB? \_\_\_\_\_

16. If you could ask a doctor or healer any question about TB, what would your question be? \_\_\_\_\_  
\_\_\_\_\_

17. Who does research on TB? (circle as many as you like)

traditional healers	medical doctors	scientists	nobody	Don't know
drug companies	clinical trial researchers	journalists	community leaders	

18. Clinical research involves testing new (circle as many as you like)

doctors	nurses	vaccines	Medicine	Hospitals	Don't know
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19. Is there anything else you want to tell me about TB in your community?

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