The Platinum Boom in Rustenburg and the Bust of the Community:

A case study of the Natural Resource Curse in South Africa

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Abstract
The dependence on natural resources is not a new phenomenon and it has posed issues in undiversified economies. The social impact that the booming of the mining industry has on the local level is still an area in need of investigation. The case study seeks to understand how the platinum mines of the boomtown Rustenburg have impacted the local social fabrics through 22 qualitative interviews in Rustenburg. The city is situated on the North West Province Platinum Belt and produces half of the world's platinum. The boom in the platinum industry is responsible for Rustenburg's influx of people and economic growth. The analysis adopts the assumptions of the Linear Model of the Social Disruption theory and the Psychological Process of the Place Person Process Framework. The central assumption of the Linear Model is that population growth and population density leads to the informal ties of the population being weakened. Meanwhile, the psychological process assumes that groups and individuals relate to a place through psychological interaction. The study finds that the boom of the platinum industry has disrupted the social fabric through a loss in informal ties and the phenomenon of broken families has become common. The influx of people in a combination of weak institutions has led to an unhealthy society where unemployment and the crime rates are high and people are suffering from bad health conditions. It is understood that mining has changed the attitudes of the people toward Rustenburg, and has created a mining mentality. The study contributes to the understanding of the social impact of the resource curse on a local level by investigating how booms in mining industries impact the social fabric on a local level and how the impact is expressed locally. The empirical findings of the study can be beneficial for local stakeholders of Rustenburg with the purpose of improving local policies.

Keywords: Boomtown, platinum, mining, social disruption, place attachment, social impacts, Rustenburg, South Africa
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# Abbreviations

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<th>Abbreviation</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<tr>
<td>ARV</td>
<td>Antiretroviral</td>
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<tr>
<td>DSD</td>
<td>Department for Social Development</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>MDR</td>
<td>Multi-drug Resistance</td>
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<td>NGO</td>
<td>Non-governmental organization</td>
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<td>PPP</td>
<td>Person, Process, Place</td>
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<tr>
<td>RDP</td>
<td>Reconstruction and Development Programme</td>
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<td>SADEC</td>
<td>Southern African Development Community</td>
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<td>STD</td>
<td>Sexual Transmitted Diseases</td>
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<td>TB</td>
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1 Introduction

It seems a bit of a contradiction that developing countries who discover natural resources and are in the position to produce a lot of wealth leave the population worse off than before. For instance, in Angola where the resource revenues have been used for warfare (Le Billion, 2005). Although, it does not always have to be the case as we have the success story of Botswana (Sarraf and Jiwanji, 2001; Iimi, 2006). Therefore, it is very important to understand the effects of a boom in the natural resource industry on the population of developing countries. South Africa is very rich in mineral reserves, it has a high percentage of the world’s gold but it has a near monopoly situation on the platinum production, 88% of the world’s production in 2009 was from South Africa (Glaister and Mudd, 2010). Most of this comes from the city of Rustenburg in the North West Province, as it extends across a great part of the Western limb of the Bushveld Complex (Capps and Mnwana, 2015). This study will, therefore, look at the operation of the natural resource curse within the context of platinum mining in South Africa because it is a somewhat extreme case.

The large mining industry in South Africa creates new jobs and opportunities for mainly male workers within the country and in other southern African countries. In other words, it attracts both internal and international migration labor force. Due to the country's geographic location, most of the foreign workers in South Africa are from neighboring countries such as Lesotho, Swaziland, Botswana, and Mozambique. The mining workforce constitutes of many migrants who leave their families behind in rural areas or in neighboring states (Federation for a Sustainable Environment, 2018). The national mine workers are usually from rural areas in South Africa. Mine wages have been the lowest in South Africa for long but today it is among the highest in the country (Corno and de Walque, 2012).

Rustenburg qualifies as a boomtown due to its rapid population and economic growth caused by the growth in its platinum mining industry (Ntema, Marais, Cloete and Lenka, 2017). The average population growth in Rustenburg between the years 2006 and 2016 was 3.1 percent while the national average was 1.5 percent (Rustenburg LM, 2018). However, in 2012 and later on in 2014 the platinum mines in Rustenburg received worldwide attention because of the violence of the industrial action there.
The strike in 2012, widely known as the “Marikana Massacre”, saw police firing live rounds at striking mine workers, leaving 34 mine workers dead. The incident highlighted many important social issues, such as the way migrant mine workers have to stay away from their families for long periods of time and many live in informal settlements. This incident was followed by the five-month strike in 2014 (Chinguno, 2013). As a consequence of the strikes in 2012 and 2014, the local economy of Rustenburg suffered and the platinum production dropped causing almost 80 percent of the locally owned businesses to break down and a high unemployment rate (Eunomix, 2016). The unemployment rate increased by approximately 4 percent after the strikes in 2014 (Rustenburg LM, 2018). Rustenburg is a mining city that lacks economic diversification and most of the locally owned businesses are mine related businesses (Eunomix, 2016).

1.1 Research problem and relevance

The resource curse theory argues that natural resources have negative impacts on the development and economic growth of a country and that it rarely reduces poverty. Most of the work done by using the resource curse has been implemented on the national level in different countries. The local level of the resource curse, however, has not been used or focused on when studying the Global South (Eduful and Hooper, 2015). Haslam-McKenzie (2013) argues that the curse caused by a dependence on resources can be visible differently on a local level. She highlights the importance to analyze the resource curse on a local level. This is not common in analyses of social impacts. The consequences of the resource curse are visible through informal housing, poor infrastructure, failing service provision, a sudden influx of people, and local businesses that mainly support the resource industry. In the long run, these factors could lead to struggles within the community in terms of diversification of the economy, public and basic services. It is argued that the natural resource curse lacks the perspective of the social impacts on the local level but manages the economic impacts on both the local and national level (Haslam McKenzie, 2013).

This study aims to respond to the research gap in the natural resource curse outlined above. The research provides an opportunity to explore the issue of the social impacts of the mine on the community more in-depth. Not only the physical landscape is transformed by large mining operations but the local economy and the socio-political
landscape are also impacted. Local inequities and social deficiencies are often aggravated by the mining industry and the environmental damage is so extensive it lasts for long after the closing of a mine (Farrell, Hamann and Mackres, 2012).

Research that tries to look at the social and environmental impact of mines in a comprehensive and holistic way has been done. One example is the Mining, Minerals, and Sustainable Development (MMSD) project carried out by the International Institute for Environment and Development with a closing in 2002 (IIED, n.d). Half of the world's platinum is produced in the city of Rustenburg, which is located in the North West Province Platinum Belt and holds the largest platinum mine (Ntema, 2019). Moreover, it has been identified that Rustenburg needs further qualitative research to provide the government and mining corporations with better strategies for sustainable social development. The focus should be put on the living conditions and social relations between the workers and the community (Eunomix, 2016). A study on Rustenburg is vital for a thorough understanding of the social impacts of platinum mining. The city of Rustenburg holds the characteristics of a boomtown as it is a place where there is rapid population and economic growth due to resource exploitation (Ntema, 2019).

1.2 Objective and Research Questions

The objective of the study is to increase the understanding of how a boom, based in the mining industries could impact the social fabric on a local level and how the impact is expressed locally by the inhabitants. Rustenburg will be used as a case study to answer the overarching research question: How has the boom in the platinum mining industry impacted the social fabric of a boomtown?

In order to answer this question the following sub-questions are to be answered:

- *How is the social fabric disrupted?*
- *What does mining contribute to people’s attitude to where they live?*

If answered, the research question will contribute to a further understanding of the local social impacts caused by the natural resource curse.
1.3 Analytical Framework

The social disruption theory and the concept of Place Attachment are two well-known multidisciplinary theories used in research regarding social impacts on boompowns (Gillmore and Duff, 1975; Gillmore, 1976). In order to comprehend and analyze the data collected in this study, these two theories will be used.

Social Disruption theory

The social disruption theory describes how social ties and community services can break down when there is a rapid demographic change that is associated with booming of a natural resource industry which can cause a psychological and social dislocation of the community (Smith, Krannich, and Hunter, 2001). The linear model is one branch of the social disruption theory.

According to England and Albrecht (1984) social disruption occurs under specific times:

- When a society is transitioning from a traditional rural lifestyle community to a more urbanized and industrialized community;
- When individuals have to unlearn their rural lifestyle and learn a new lifestyle;
- When there is a higher demand for infrastructure;
- During adaptation to the heterogeneity of a new population in the community, after eg. rapid population growth.

The linear model

From the Social Disruption theory, the linear model will be used since it is the relevant branch from the theory suitable for this study. The linear model assumes that population growth and population density can lead to a lower level of significance in the community, and the primary ties are weakened (England and Albrecht, 1984).

The linear model explains two concepts of communities, Gesellschaft and Gemeinschaft. Gemeinschaft stands for an organic community and Gesellschaft stands for a mechanic society (Tönnies, 1925). The transition from an organic community to a mechanic society is considered to disrupt formal and informal ties in the society and the community services. This model argues that the facilities that encourage informal ties are weakened during social disruption. The level and depth
of the disruption are grounded in the past experience of the community towards modernity and urbanization (England and Albrecht, 1984).

The Concept of Place Attachment

The concept of place attachment is multi-disciplinary and multi-faceted and portrays a generally positive relationship between people and places (Mihaylov and Perkins, 2014).

The Psychological Process of the Person Process Place Framework

This framework finds place attachment to be a bond between individuals and groups and their place. Place attachment differs depending on the degree of specificity, spatial level and physical or social features of the place. The PPP framework contains three dimensions, they are the following: person, psychological process and place. This study will adopt the second dimension, psychological process as it explains how groups and individuals relate to a place through psychological interaction. The process is divided into three parts: affect, cognition, and behavior (Scannell and Gifford, 2010). Affect declare that people often have an emotional connection to a place (Scannell and Gifford, 2010). Cognition explains the memory of a place creates the personal importance of the place (Fullilove, 1996). Behavior interprets the behavioral part of the psychological process indicated that attachment is expressed through actions. When there is a positive bond to a place, the main aim is to maintain closeness to the place (Scannell and Gifford, 2010).

1.4 Methodology

The methodology for the study is a qualitative case study approach as it allows for an examination of social constructions through a study of its participants. Following, semi-structured interviews were conducted with various stakeholders and community members of Rustenburg. Semi-structured interviews follow an interview guide with topics to be covered but with quite open-ended questions where the interviewer is free to ask questions arising on the interviewee's replies. This way of interviewing makes the outcome of each interview unique and different as well as the information is more in-depth (Bryman, 2016). The interviewees were selected through purposive sampling using a snowballing approach and thus selected due to their relevance of the research questions and topic of the study (Bryman, 2016). The study includes 22
semi-structured interviews in Rustenburg. These interviews were conducted with people from various sectors of society: the municipality, NGOs, health, education, and community members. Rustenburg justifies as being an excellent case as it is a boomtown dependent on the platinum mining industry in South Africa (Ntema et al., 2017).

Moreover, the study takes on a constructionist ontological position as well as an interpretivist epistemological position. Hence, the study lies on the premise that the social landscape is the result of human interaction which should be understood by studying interpretations of its participants (Bryman, 2016). The relationship between theory and research is abductive as the result is analyzed through an analytical framework consisting of the Social Disruption Theory and the Place Attachment Framework (Bryman, 2016; Danermark, Ekström, Jakobsen, and Karlsson, 2002).

1.5 Disposition
The paper consists of seven chapters, of which the introduction is included. The second chapter, Literature Review, portrays the current debate of the resource curse in a combination with local social impacts of mining and mining in South Africa. The third chapter, Analytical Framework, presents the Social Disruption theory with an emphasis on its Linear model followed by an explanation of the Person, Process, Place Framework within the concept of Place Attachment. The fourth chapter, Methodology, explains the chosen methodology more in-depth and justifies Rustenburg as a suitable case study. The fifth chapter, Rustenburg: a case study of the natural resource curse, presents the data collected in the field study by categorizing it into the main components of the social fabric. The sixth chapter, Analysis, analyzes the data presented in findings through the Linear Model and the Psychological Process of the Person, Process, Place Framework. The research questions will be answered in the sixth chapter as well. The seventh and last chapter, Conclusion, summarizes the findings of the analysis and presents possible future research topics.
2 Literature Review

The resource curse theory argues that natural resources have negative impacts on the development and economic growth of a country and that it rarely reduces poverty. The theory states that the short-term benefits of resource extraction hinder the economic diversification of resource-dependent economies (Stedman, Parkins, and Beckley, 2004). This leads to non-mining enterprises being displaced by the availability of natural resources. The export of resources can also negatively affect the economy by causing an inappropriate appreciation of the local currency leading to a fall in the export of manufactured goods and an increase in imports and a further difficulty of diversifying the economy leading to the Dutch Disease (Stedman et al., 2004). The phenomenon of Dutch disease emerged from the bad effects that the oil industry boom in the Netherlands had on the Dutch economy. This phenomenon occurs when the exchange rate rises due to mining, leading to the inflow of labor and capital in the country. Overall, when a country is experiencing the Dutch disease the economy in the country is under high involvement of the government. The long-run outcome of the effects from the Dutch disease are increased costs in production, decreased competition of locally produced goods and services on the global market followed by high wages. Due to negative effects from the Dutch disease, social issues tend to rise and they usually have to do with the rising of local prices for goods and services and housing. The rising of the local prices could lead to forced relocation or social exclusion from the community. Unemployment is also associated with this phenomenon, when the competitiveness decreases among other businesses than the mining industry, people lose their jobs (Marais et al., 2018).

Furthermore, there are a number of political factors such as mismanagement, corruption, and weak political institutions, which are also associated with the resource curse in resource-dependent economies (Hammond, 2011; Langton and Mazel, 2008). Indeed, the resource curse is argued to have less impact in high-income countries specifically because of their strong institutions and well-designed public policies that were established before their discovery of natural resources (Haslam McKenzie, 2013). Further, the resource curse has been taken beyond just political and economic factors but it is argued that mining has implications on social institutions as well. The resource curse theory has mainly been applied to countries on a national level in its analysis, and there has been little focus on the countries in the Global South (Marais et al., 2018). Flemming, Meashan, and Paredes (2015)
conducted a study on the resource curse and how it is played out in Australia due to the mining of various minerals and fossil fuel extraction on a national level and on the local economy but excluding the local social impacts. Although in the original analysis of the resource curse, it is looking at the national and local economy, Haslam McKenzie (2013) argues that an extensive amount of the actual social impacts are localized. The resource curse has a significant effect on the local level due to the pressures mining areas are facing, creating a research gap in the resource curse theory due to the lack of analysis on the local level. Mining-dependent areas often experience slow economic growth due to the uneven economic and social benefits, marginalization of minority groups, unstable institutional systems, and the deterioration of the environment (Haslam McKenzie, 2013). When the basic services fail to be provided for the community tensions will begin to rise (Farrell et al., 2012). The arguments mentioned by the previous literature (Marais et al., 2018; Haslam McKenzie, 2013; Farrell et al., 2012) justify the need for an analysis on the local level in order to better understand the social issues that the national resource curse lacks.

There is often a sudden influx of people to the mining communities due to the job opportunities, this puts pressure on the economy in terms of housing and service provision. In the long run, these implications can cause detrimental social damage experienced by the local community. The understanding of the depth of the local social issues is deprived due to the lack of analysis on the local level. Hence, the understanding of the social issues emerging from the influx of people in mining communities varies depending on if the analysis is conducted through a local or national perspective. Addressing or analyzing the social issues on a national level can mislead the analysis from the actual issues. The root causes of social issues are experienced and expressed on a local level. Therefore, in order to understand and analyze these issues, a local study is vital (Haslam McKenzie, 2013).

2.1 Mining in South Africa

In 2012 South Africa received a lot of attention and was world news when the strike in Marikana took place and many people were shot by the police. This event was an outcome of the social issues that were locally expressed and experienced in Marikana (Chinguno, 2013). The negative economic impacts on the regional level received
extensive attention globally. Businesses broke down and people lost their jobs which led to the city going into debt (Eunomix, 2016).

Several scholars have identified a need for further research on the resource curse on a local level. Such as, Haslam McKenzie (2013) and Ntema et al. (2017) argue that social issues arise in the local communities in mining towns due to their sudden influx of people in combination with a shortage of social infrastructure. Hence, the shortage of services will not be acknowledged nationally if a localized analysis is not conducted. Furthermore, Eunomix (2016) identifies that there is a gap in the social research made in the past on the local level in Rustenburg. The social infrastructure needs further research in order to create a better development strategy, social cohesion strategy and economic growth strategy for Rustenburg’s future (Eunomix, 2016). However, similar studies and analyses have been made and applied in different mining towns in South Africa such as mining towns in the gold-mining industry in the Free State (Marais and Nel, 2016). Research has also been conducted in North West (Van Rooyen and Lenka, 2016), on diamond mining (Marais et al., 2005), on iron-ore mining in Khathu (Marais and Cloete, 2013) and on platinum and coal mining in Mpumalanga (Campbell et al., 2016). However, there is still a need for further mining-town research in Rustenburg on platinum mining. Furthermore, it has also been identified that mining companies must pay attention to the relational and representational, and cultural aspects and social institutions and not only the technical aspects when dealing with local communities (Farell et al., 2012; Ololade and Annegarn, 2013). This justifies the impact the mining industry and its companies have on the local communities.

The mining industry still plays a crucial role in the South African economy even though it is no longer dependent on mining (Marais et al., 2018). The industry has shifted to the periphery of the country over the last 20 years. This has caused the societal issues stemming from the mining in the peripheral areas not being given adequate attention from the larger universities being situated in the metropolitan cities of South Africa (Marais et al., 2018).
3 Analytical Framework

This chapter will present the analytical framework selected for this case study. The two theories presented in this chapter are The Social Disruption theory of which the Linear model will be elaborated on as well as the concept of Place Attachment of which the Person, Process, Place framework will be elaborated on. The analytical framework will be used to distinguish the important traits of the disruption of the social fabrics in Rustenburg. The use and the choice of the analytical framework will be justified by an evaluation of the theories. Moreover, the social disruption theory has been used to conceptualize the social implications of boomtowns in relation to the extraction of resources (Ennis and Finlayson, 2017; Ntema et al., 2017).

3.1 Social Disruption

In order to understand the causes and consequences of booming, the Social Disruption theory can be used (Park and Stokowski, 2009). When there is a rapid demographic change that can be associated with the booming in a community it can lead to the point where structures of social ties and community services break down. This has an effect of dislocating the community psychologically and socially which can also lead to isolation (Smith, Krannich, and Hunter, 2001).

According to the research conducted by England and Albrecht (1984), communities lose their traditional and cultural routines and attitudes when they experience rapid population growth. When this happens, the community has entered a period of crisis due to the rapid demographic change (England and Albrecht, 1984). Individuals and the community get hurt by this, social relationships get disrupted and so does the mental health of the inhabitants of the community. Rural communities suffer from a breakdown of social structures such as failing to provide services when rapid industrialization and rapid demographic change occurs as a consequence of discovering natural resources (England and Albrecht, 1984).

Earlier studies argue for the negative consequences of development often being more than the positive consequences. The negative consequences that come out of the positive ones (higher employment and local tax revenues) put pressure on the community's physical infrastructure, the housing availability and the allocation of social services. This in combination with the social disruption as an outcome of the
high and rapid influx of people and the degradation of the environment creates dissatisfaction in the community (Anderson and Theodori 2009). However, some of the longitudinal studies have come to the conclusion that communities will stabilize after the rapid population growth in time along with development, this is called the "boom-bust-recovery" cycle (Brown et al., 2005; Rolston 2013).

According to England and Albrecht (1984) social disruption occurs during specific circumstances in a society. These include the following:

- When a society is under a transition of going from a traditional rural lifestyle community to a more urbanized and industrialized community;
- When individuals have to unlearn their rural lifestyle and learn a new lifestyle;
- When there is a higher demand for infrastructure;
- During adaptation to the heterogeneity of a new population in the community, after eg. rapid population growth.

Scholars argue that there are two major determinants of disruption (England and Albrecht, 1984).

1. The boomtown phenomenon; Rapid population growth and industrialization in a community are the major elements of social disruption.

2. The past experience of the community’s inhabitants to industrialization and urbanization and modernity; The more past experience and exposure should make it easier to scale down the level and depth of disruption in the community.

3.1.1 Linear Model Social Fabrics

The linear model assumes that population growth and population density leads to lower significance in the community and that the primary ties get weak. When analyzing the social boomtown consequences along with the linear model, it is assumed that some fabric of the community such as ties to the community and its residents, attachment to the community and the quality of the community will decrease along with further development of the boomtown. The individuals of the
boomtown are expected to have lost their informal ties to the community and have been forced to form formal ties instead (England and Albrecht, 1984).

**Gesellschaft and Gemeinschaft**

According to the assumptions from the linear model, boomtowns result in two types of communities/societies. They are "Gesellschaft" and "Gemeinschaft". Gemeinschaft stands for an organic community and Gesellschaft stands for a mechanic society (Tönnies, 1925). After the shift from Gemeinschaft to Gesellschaft the informal ties in the community dissolves and leads to rejection within the community. The process of shifting from informal ties to formal ties is different due to the individuals' perception and understanding of modernity, urbanism, and industrialism (England and Albrecht, 1984). The definition of modernity in this study is defined by Inkeles and Smith (1974 in England and Albrecht, 1984) as following "A set of personal values, which are associated with modern production technologies and which raise the issue of efficiency and effectiveness". Further on when discussing "value modern" it is referred to as the effect where a decrease in the value of family appears along with the informal ties to the community. This is expected to happen when a community is becoming more modern (England and Albrecht, 1984).

**Effectiveness of Facilities that Encourage Informal Ties**

When analyzing the community services according to the assumptions in the linear model it is noted that all community services get disrupted by boomtowns except for the economic sector. The informal ties do not get disrupted by the boomtown. However, boomtowns damage the effectiveness of the facilities that encourage informal ties. The support from those facilities encourages friendliness and community spirit in communities.

3.2 The Concept of Place Attachment

The concept of place attachment is multi-disciplinary and multi-faceted and portrays a generally positive relationship between people and places (Mihaylov and Perkins, 2014). Place attachment contains a number of positive characteristics. It promotes stability and survival, assists in creating a sense of belonging, as well as it enhances the development of personal aspiration and self-esteem and promotes identity (Scannell and Gifford, 2010). Place attachment is more significant in low-income households because it is harder for them to move somewhere else (Manzo, 2014).
Moreover, issues in mining towns are often related to place attachment and disruption. The mining has an impact on place attachment through its land use and its impact on local cultures (Jaquet and Stedman, 2014). Furthermore, the Social Disruption theory argues that place attachment, along with local cultures and structures, is eroded by booms (Ennis et al., 2014). Employees and local residents of mining towns experience place attachment more often due to their professional skills being connected to the mining. They are therefore more vulnerable to a change in the mining industry (Lawrie, Tonts and Plummer, 2011).

3.2.1 The Psychological Process of the Person Process Place Framework

Furthermore, Scannell and Gifford (2010) have developed a framework of place attachment named the PPP (Person- Process- Place) framework. According to this framework place attachment is a bond between individuals and groups and their place which differ depending on the degree of specificity, spatial level, and physical or social features of the place. The framework is constructed by incorporating classic and recent empirical findings and models. The PPP framework consists of three dimensions: person, psychological process and place. This study will adopt the second dimension, psychological process, which explains how people and groups relate to a place through psychological interaction in environments of importance to them. This dimension is of importance as it explains the process of attitudes being created toward a place. The process is divided into three parts: affect, cognition, and behavior (Scannell and Gifford, 2010).

Cognition

The memory of a place creates the personal importance of the place. Individuals connect to a place in the sense that it represents who they are. Furthermore, Fullilove (1996) argues that to be attached to a place is to know and organize details of the environment.

Affect

People often have an emotional connection to a place. Displacement results in feelings of sadness and longing and therefore place attachment is primarily based in affect. However, emotions to a place can be both negative and positive and people maintain closeness in an attempt to experience positive emotions (Scannell and Gifford, 2010).
Behavior

Moreover, the behavioral part of the psychological process indicated that attachment is expressed through actions. When there is a positive bond to a place, the main aim is to maintain closeness to the place. However, place attachment can become dysfunctional when someone with a strong bond to a place is reluctant to leave it. This can result in a person missing good opportunities or simply facing a situation of despair for the sake of staying. Place attachment also results in people relocating to similar places even though they were flawed (Scannell and Gifford, 2010).

3.3 Use of Framework

This study adopts the assumption of the Social Disruption theory which argues that boomtowns disrupt the social fabric and considers the social impact in detail and the response of the population using the lens of place attachment, in particular the psychological process of the Person-Process-Place Framework (England and Albrecht, 1984; Scannell and Gifford, 2010). The framework will be used to illuminate the disruption of the social fabric caused by the boom in the mining industry and why people choose to stay in Rustenburg despite the social issues. The analytical framework will, therefore, identify factors of relevance to the study by contributing to the design of interviews. Furthermore, the Linear model of the Social Disruption theory and the Psychological Process of the Place Attachment framework will be used to analyze and interpret data derived from the semi-structured interviews. The models will also function to categorize the findings in line with their assumptions.

The Linear model will be used to explain the consequences of the boom in the mining industry on the social fabric while the psychological process of place attachment will be used to explain why people stay in Rustenburg despite the social issues. The frameworks will help to identify and emphasize factors that motivate and challenge the disruption of the social fabric and why people stay in Rustenburg. This will be done by categorizing the experiences described by the community of Rustenburg, in line with the Linear model and the psychological process of place attachment. Furthermore, these categories include the move from Gesellschaft to Gemeinschaft and the effectiveness of facilities that encourage informal ties to describe the social disruption of the linear model, and the factors of affect, cognition, and behavior of
the psychological process of the place attachment concept. These will be examined to assess how the boom of the platinum mining industry in Rustenburg has impacted the social fabric in terms of social disruption and why people choose to stay.

Moreover, the selection of interviewees has been in line with the linear model and the psychological process of place attachment to represent their characteristics. Interviewees from the social sector have been selected to illustrate a bird's eye view of the service provision, community members have been selected to represent the individual perspective, and people living close to the mines have been selected to illustrate why people stay. The areas close to the mines are also remote areas which experience the consequences of the mining the most.

3.4 Choice of Framework

Social disruption theory and the concept of place attachment are well known multidisciplinary theories used in similar research historically (Gillmore and Duff, 1975; Gillmore, 1976). The Social disruption theory argues about what the consequences of boomtowns are and how the boomtown leads to social disruption. By using this theory, this study will be able to analyze and understand the findings collected from interviews. Hence, the overarching question of the research is ‘how has the boom in the platinum mining industry impacted the social fabric of a boomtown?’ which the Social Disruption theory will be used for answering this question by breaking it down into a deeper understanding. In order to understand the first sub-question ‘how is the social fabric disrupted?’ the Social Disruption theory was used to bring out the underlying expressions and experiences that emerged in the community.

The psychological process of the PPP Framework will be used to understand the attitudes people create through their attachment to the place (Scannell and Gifford, 2010). This concept is justified as mining does not only disrupt the social fabrics but it impacts the people on a more psychological level as well. The concept of the psychological process will be used to answer the sub-question ‘what does mining contribute to people’s attitude toward where they live?’ Furthermore, it is argued that the Place Attachment framework is well suited together with the social disruption theory due to the fact that the social disruption theory does not go into depth on
people’s relation to their place (Smith et al., 2001; Ennis et al., 2014; Ntema et al., 2017).

Rustenburg is a city that has faced a rapid influx of people from different countries and areas of South Africa. Hence the choice of framework is justified in the sense that it is argued that it is applicable in not only boomtowns but also in societies that face rapid population growth, social disruption, and place attachment (England and Albrecht, 1984). It is argued that issues concerning place attachment and disruption are not unusual in mining communities. There is existing research that states how mining influences place attachment (Jacquet and Stedman, 2014). Research has been made in mining cities where social disruption theory has been used to explain the consequences of mining development in remote and communities in the United States (Gilmore and Duff, 1975; Gilmore, 1976).

The Social Disruption theory has been criticized heavily in the 1980s in terms of its methodology, assumptions about communities and its applicability to mining towns (Wilkinson, Thompson, Renyolds and Ostresh, 1982). It was argued that communities are more dynamic and complex than regarded for and that there is an adaptation to the disruption over time. Hence, the social disruption model needs to include both the characteristics of the individuals of the communities as well as the boomtown phenomenon (England and Albrecht, 1984). Moreover, the interactive forces of communities and their ability to respond to external impacts vary depending on the location and their experience of booming. However, the disruption theory has been applied to a number of studies and it has come to the point where it is concluded that there are some social disruptions related to boomtowns but depending on the location the impact and disruption will also differ (Ennis and Finlayson, 2014).

Although, the Social Disruption theory is criticized as unspecific and very general (Ennis and Finlayson, 2014), its generality is part of what made it attractive for this study. It has been applied to different places (England and Albrecht, 1984; Ntema et al., 2017; Smith, Kranich, and Hunter, 2009) and therefore it makes it easier to compare the results for this study within a more generalized context of boomtowns. Hence, this study will use the theory for analysis on an individual level as well as on a community level. This will give a broader and more local understanding of the dynamics and complexity of the community Rustenburg and be more community
based than it would be if the theory would be other than general. When using Social Disruption theory and complementing it with place attachment concept, the study receives a customized framework that will be applicable for the collected data. The generality of the theory makes the analysis comparable to similar analyses in other places.
4 Methodology

This chapter will explain and justify the methodology used for the case study of the social fabric in the mining town Rustenburg. The first two sections explain the significance of Rustenburg as a case study, the chosen epistemological and ontological positions and how the abductive approach is adopted. The following sections explain how the snowballing-sampling is conducted, how the semi-structured interviews are carried out, and the validation of the sources. The chapter is concluded with a description of the limitations and delimitations as well as the crucial ethical considerations.

4.1 Qualitative Case Study: Rustenburg

This research is conducted as a qualitative field study of the social impact of the mines in Rustenburg as it allows for an examination of social constructions through a study of its participants. The qualitative case study approach is also argued to be applicable to problems on which little research has been done (Bless et al., 2013). Moreover, conducting a case study is also argued for as it allows for an understanding of the problem in the area (Bless et al., 2013). Rustenburg is justified to be a case as it fulfills the criteria of being a ‘unique’ (Bryman, 2016) case of a boomtown in terms of the rapid population growth of the city. It has become one of Africa’s fastest growing cities due to its boom in the platinum mining industry (Ntema, 2019).

The case study approach was performed in order to achieve the following aspects which Farquhar (2014) argues should be used in order to:

1. perforce a phenomenon being studied in the primary setting and relevant theory as an outcome of perceptions collected through actual practice;
2. to allow the open ended questions like “how” and “why” to be answered with understanding of the origin and in context of the whole phenomenon.

The case study is conducted with a constructionist ontological position as it lies on the premise that the social fabric of Rustenburg is impacted as a result of the boom in the platinum industry which is caused by human interactions (Bryman, 2016). The study also takes on the interpretive epistemological position as it seeks to understand the impact the boom in the mining has had on the city by bringing forth the perception
of its inhabitants (Bryman, 2016). The use of the positions outlined above enables the research to be conducted using abductive reasoning (Bryman, 2016).

4.2 Abductive Reasoning
This study takes on an abductive relationship to theory and will thereby adopt a new conceptual framework to observe and interpret the results of the study. The abductive approach is of strength as it guides the interpretation of the data and ascribes it meaning in a larger context (Danermark et al., 2002). Deductive reasoning, following a clear logic sequence of reasoning, is not justified to be the most suitable approach to this study as it fits quantitative studies best (Bryman, 2016). The inductive approach is not suitable for this study either as it can never be empirically or analytically certain. It is restricted to conclusions at the empirical level (Danermark et al., 2002).

The adoption of the Linear Model and the Psychological Process will influence the conclusion of the study as a result of the abductive approach. Hence, the conclusion will not be definite (Bryman, 2016). The theories will be used to examine and understand the data collected and will thereby provide a broader understanding of the theories and their applicability to the world. The former theory, the Linear Model, examines the data to understand how the social fabric of Rustenburg has been disrupted by the boom in the platinum mining industry. Meanwhile, the latter theory, the Psychological Process, examines the data to understand people’s attitudes to Rustenburg as a mining town. Both theories have been argued to be applicable to boomtowns and this study deepens that argument (Ntema, 2017).

4.3 Sampling
There were two interviews planned before the initiation of the field research. One interview with an NGO involved in the private sector of the community (H1) and one interview with a government official (G1) involved in the public sector of the community in Rustenburg. Further on, the snowballing approach led the study to 22 interviews with a total of 28 participants. The choice of the two first interviews was planned in order to reach the community members through the NGO and to reach the governing authorities in Rustenburg through the government official. This was done with the purpose to represent the different actors and layers of the community.
22 semi-structured interviews were conducted in total (see Appendix 1). As presented in appendix 1, coding has been done the basis of the different sectors of the community. Most participants were found in the remote and in informal settlements as those are the areas where the social impacts of the boomtown are visualized and experienced the most (Farell et al., 2012). Starting with the Health sector (H) a total of 12 participants contributed where eight were females (F) and four males (M), they are all based in different health clinics in remote areas in Rustenburg and actively involved in the community on a grassroot level. Moving on to the Community sector (C), a total of five participants were interviewed where three were males (M) and two were females (F). Most of them lived in informal settlements and remote areas in Rustenburg. Further on, in the Education sector (E) one male (M) participant was interviewed. He is the principal of a school in Rustenburg. Later on, in the Government sector (G) a total of seven participants were interviewed where three were females (F) and four were males (M). At last, in the Business sector, a total of three participants took part in the interviews, where one was female (F) and two were males (M). In this category, there is one small business owner, one former head of HR department of one of the biggest mine companies in Rustenburg and one mine consultant who has been consulting with the mines in Rustenburg for years.

All of the interviewees are currently active in the community and involved in the social fabric of Rustenburg on different levels. In order to preserve the safety and security of the interviewees, identities have been anonymized in this study.

4.4 Interview Approach

This research was designed in line with a bigger project, the interview schedule was carefully discussed and shaped with the project managers and the field assistant to ensure that all the data required for the wider study was covered and that everything needed for this research was included as well. The study made use of the field assistant, who has a part of the broader project. The field assistant asked the questions for the research in order not complicate the interviews for the interviewees. With respect to people talking different languages in Rustenburg the field assistant would be able to lead the interview forward even if the participants replied in another language than English. This would make the interview go on in a smooth paste and
not interrupt the interviewee with linguistic complications by asking follow up questions.

The interviews were conducted using a semi-structured interview approach (appendix 2). The method of unstructured interviewing is extremely helpful in case studies (Bryman, 2016). The questions were formed to be open-ended in order to go further and deeper into the context and to not only collect descriptive “what” responses (Bryman, 2016). The formation of questions was made consciously and specifically for Rustenburg, in order to get a broad understanding of the community.

The study used three focus groups (see appendix 1). Considering the sensitivity of questions asked focus groups were formed with caution. Sensitive questions regarding the norms of the community, stigmatized topics such as HIV and TB could lead the participants to answer in accordance with with the community norms, religion, cultures and societal dynamics (Bryman, 2016). However, the focus groups used in this study were formed with caution of this knowledge. The participants knew each other from before the interview and the questions asked were not formed personally but more generally regarding the community. Since the questions were not personal the level of validity is high and there is no need to doubt the interviewees' voices due to stigmatization, religious and cultural expectations within the dynamics of the society (Bryman, 2016).

4.5 Analytical Approach
All the data collected from Rustenburg were primary data that were transcribed, structured into categories, and coded in order to preserve the participants' safety and anonymity. The categorization was done in a specific way, where actors of the community with the same perspective are put in the same category in order to receive a wider and more diversified collection of data.

The Social Disruption theory and the concept of Place Attachment were used as a guide in the form of an analytical framework to abductively understand the collected data and not to lead the data. The categories (government, health, business, community, and education) were chosen in connection to the relevance of
involvement in the community’s social fabrics as well as they are relevant for the topic of the research (Bryman, 2016).

Reviewing and analyzing the data, both primary sources (interviews) and secondary sources (academic literature) leads to an objective understanding of how the booming in the platinum mining industry in Rustenburg affected the social fabrics in the community (Bryman, 2016).

The triangulation method was used in order to achieve multiple viewpoints that will increase accuracy and validate the voice of the community. Triangulation enabled a more credible study because of the different point of views. In order to avoid predetermined ideas, triangulation was used in the study. The use of this method contributed to the abductive approach by not unconsciously turning the abductive study into a deductive study. (Bryman, 2016). In the context of Rustenburg, triangulation was used in order to add credibility and objectiveness to the study by diversifying the interviews to different sectors of the community and viewing the disruption of social fabrics in Rustenburg from different points of views and understandings. This gives a less biased research and a wider view of the phenomenon of the issue (Bryman, 2016).

4.6 Limitations
The study has limitations that impact the depth and length of the study. The constraint of time limits the amount of data collected. Furthermore, people reserve the right to decline the inquiry of being an interviewee which can limit the variation of informants. Contact was made with the mining companies in Rustenburg but they declined the request of being interviewed. The national elections serve as a limitation to the study as well since they took place one month after the interviews have been concluded. Challenges that emerged while collecting the data were the ability to reach the ruling authorities in Rustenburg. This was due to the country's government elections, participants hesitated to involve much in interviews and some spoke more generally about the community and not from a personal point of view. Due to what participants understand as corruption it was hard to find statistics regarding the social issues. The elections limit the availability of the municipality and make people hesitant to speak freely about the prevailing social issues due to possible uprisings and tensions.
4.7 Delimitations

The main delimitation of this study is that it focuses on the boom in the platinum mines of Rustenburg. Another delimitation is that the study will focus on the impact the boom has had on the social fabric of the city and not on the economy or environment. The research gap identified, focused on the social fabric the community and how it has been disrupted. This led to more attention paid to the more disadvantaged areas around Rustenburg. Moreover, the number of interviews (22) is a delimitation due to the time limitation.

4.8 Ethical Consideration

The most basic principle in research is that the research project is not harming the participants. This can occur both intentionally and unintentionally and therefore the researcher has to be aware of the possible events and topics that can be of harm (Bless et al., 2013). There are four issues that should be considered: whether there is harm to participants, whether there is a lack of informed consent, whether there is an invasion of privacy, and whether deception is involved (Bryman, 2016). In order to prevent harm to be done all interviews are voluntary and the interviewees will be granted anonymity, the principles of research ethics for humanities- and social science will be followed, the aim of the interviews will be presented as well.

In order to prevent the collection of sensitive information and data in an unethical way, we prepared ourselves with information about the near and far history of South Africa and Rustenburg. The questions prepared for the interviews could bring up possible emotional disturbances for the people being interviewed as many people live under harsh circumstances. The interviews pose some sensitive questions related to apartheid, inequality, crime, the violent strike in Rustenburg in 2012 and the relationship between migrant and local workers. Apartheid related questions were asked when collecting data about inequalities among the migrant workers from neighboring countries and the local workers that are white. Since the strike in Rustenburg was so violent and people lost their lives, it could be sensitive for some of the people being interviewed to bring that up.

Interviews were conducted a month ahead of the parliamentary elections to take place in May 2019 and could have been a sensitive issue during the interviews, particularly
if participants had to bring up questions that could be angled in a political way. However, no issues regarding the elections were brought up during the interviews but people were expecting a bit of unrest closer to the voting day. This was the case regardless of the ones being interviewed were workers, members of the community, or international/ national stakeholders.
This chapter will present the empirical findings of the case study in Rustenburg compiled of interviews with various stakeholders along with secondary literature. The findings of the study are divided into the main components of the social fabrics in Rustenburg. It begins with the contextualization of Rustenburg and is followed by sections of the social fabric of the area.

5.1 Contextualization
The South African economy has been dominated by mining since the mid-20th century, especially the local mining economies. Half of the world's platinum is produced in the city of Rustenburg, which is located in the North West Province Platinum Belt and has the largest platinum mine. The boom in the platinum industry has caused its economy to be dominated by platinum mining and it has become one of Africa's fastest growing cities (Ntema, 2019). However, the boom is argued to have both positive and negative implications for the local community (Ennis and Finlayson, 2014) and the remote mining areas are argued to receive most of the negative consequences (Farrell et al., 2012).

Moreover, studies show that growth in the mining industry can lead to increased employment opportunities and local economic benefits (Marais et al., 2018). However, it can cause new inequalities and tensions between the members of the community, this was realized in Rustenburg during the strikes of 2012 and 2014 (Mpofu-Walsh, 2017; Cairncross and Kisting, 2016). In 2012 the strikes of Marikana took place in the North West province of South Africa. The main reason for the strikes was the low wages that the employees of the mines had along with a general dissent of the working conditions. The mine workers in Marikana noticed that the wages differed in different mining areas. Therefore, they started a massive strike and everyone living in the area had to strike along with them. The strike was violent and it included blockings of big roads that made it hard for non-strikers to get to work. This made the strike more extensive than previous strikes in Rustenburg and was obviously not accepted by the mines nor the police. The results of the strikes in Marikana ended up in what many refer to as a massacre (Cairncross and Kisting, 2016). Furthermore, in 2014 a very long strike took place in Rustenburg that lasted for five months. This was not as violent as the Marikana strike although it damaged
the economy of Rustenburg in the long run (Cairncross and Kisting, 2016). As a consequence of the strikes, during 2012 and 2014 the local economy of Rustenburg suffered due to an extensive amount of platinum production was put on halt and almost 80 percent of the locally owned businesses that were mine related broke down. The city went into high debt causing economic tensions and the social issues were aggravated (Eunomix, 2016).

5.2 Voices of the community

‘Northwest is not good anymore. Because there is a high population of crime, HIV and AIDS, drugs, alcohol abuse, teenage pregnancies, it is too much’. - H6

At the beginning of the study, community members were asked questions regarding their general understanding and experience within in the area of Rustenburg, this section will elaborate further on this. Rustenburg is known for its platinum and became one of the fastest growing economies because of booming in the platinum mining industry (B3; G7). The booming of the mine industry resulted in a massive influx of people which has caused social detriment (B1; B3; H3; H7). Rustenburg is now in a general bad condition (C1; C3; B1; G2; H1; H2; H3; H4; H5). The city is regarded as a one sector economy where everything has become related and dependent on the mining. Due to the institutional weaknesses, all other businesses struggle to survive as the platinum mining down scales and people have a hard time differentiating due to their skills being restricted to mining (G1; G2; G3; H1; H2; H7; E1; C1; C3; B1).

Moreover, Rustenburg has a phenomena identified as the ‘mining mentality’ which gives the illusion of the city being well off in terms of socio-economic stability and job opportunities (H1; H7). People migrate from afar to get jobs and the prices are high as businesses assume there is money because it is labeled as a mining town (H2; G5). However, there are more people coming searching for jobs than there are jobs available. This has resulted in Rustenburg facing massive unemployment (B1; B3; C3; C4; G1; G2; G4; G5; G7; H1; H2; H5; H6). The high unemployment is the root cause of many of the social issues and people resort to unreliable day-jobs to put food on their table (B3; C1; C3; G5; G7). Moreover, most people in Rustenburg live by the day and when people are retrenched they end up being extremely poor as there are no savings or pensions (H2).
The poverty in Rustenburg is widespread (H1; H2; H6; C2; G6; G7). Although, it is a diverse society with both the richest and the poorest of the poor due to the mining industry (H2; C1).

5.3 Local Governance

‘Mines are making profit while people are starving’ - G6

The four significant stakeholders that the city of Rustenburg relies heavily on are the government, municipality, tribal leaders, and the mines. Moreover, there is a general distrust in the municipality and government expressed by the population (H1; H2; H3; H4; B1; C2; C3). People do not experience the government and municipality doing anything to improve the living standards of the population and their communication with the community is lacking (H2; H4). There is a widespread perception of a high level of corruption prevailing in the government and municipality which sets the ground for the general dissatisfaction and skepticisms (H1; H3; H5; H7; B1; C2). However, the municipality acknowledges the dissatisfaction of the population but argues that the government has been put under pressure by the influx of people and does not have sufficient resources to provide services. The fact that many people live in informal settlements makes it difficult to provide water and electricity (G4; G3). G4, a municipal official, argues that people do not pay their service costs either and that many people in informal settlements make illegal connections to get water and power (G4). Moreover, the Department of Social Development (DSD) is responsible for the provision of protection, social development, and welfare services. The community of Rustenburg expresses an extensive dissatisfaction with them as they are not present in the informal settlements as well as they do not give funding or support to the NGOs (H1; H2; H3; G2). However, a school principal of a well-resourced school explains that they get assistance from both the DSD and the police (E1).

The mines play a significant role in Rustenburg’s society. They contribute to the wellbeing by providing schools and health clinics, and some services to the informal settlements (H7; G3; G7). However, a government official argues that there is a lack of communication between the mines and the community and therefore they fail to see the needs of the community (G1). Both a community member (C2) and a home
base carer (H6) revealed that people have to buy the jobs at the mines due to the desperation and high unemployment rate in the informal settlements. According to one participant (H6) in the community ‘Even if you have qualification and know, they will not hire you because they want money. You have to buy the job’. Moreover, as one of the participants explain the community’s experience of the mines she said: ‘Mines are making a profit while the people are starving’ (G6). The mines have also changed their attitude since the Marikana protest in 2012 and the five-month strike in 2014, today they hire more contractors and do not provide housing, schooling for the children, or medical aid as they used to. They also had good HR departments that dealt with alcohol abuse (H2). The collaboration between the mines and the municipality is not synchronized. A counselor (G1), tells the story of how the mine built a health clinic but the municipality did not employ people and it ended up being shut down. However, the unemployed people express trust in the mines that they will start employing people once they are in a better financial situation (H1; H6; C2; C3; C4; G1; B1; E1).

5.4 Demography

The mines employ people from the near area within a specific radius, and 99 percent of the people working on the mines are not from Rustenburg. Most of the unskilled labor being men between the age of 20 and 40 mostly come from SADEC countries (H7) and the northern cape. This left the population with more men than women (G7; B2). The influx of people started around 1994 when there was a freedom of movement in the country. People came to Rustenburg mainly to work on the mines, others came to start a business close to the mines since they believed that there will be a demand for other goods and services due to the increase in population (G5; C3). The change of population has triggered many social issues as the community experience it (G5). People came to Rustenburg looking for jobs but there were not enough jobs for all of them. This led to a high rate of unemployment that enhanced other social issues as the community describes it.

There were families who came to Rustenburg during the influx, who then got deported and some of them left their children behind for better living conditions (C2; H2). Some women still come to Rustenburg from neighboring countries and give birth in the hospitals and leave the baby behind since many believe that Rustenburg has better hospitals than other cities (H1; H2). Some women came to Rustenburg to work but when they could not get a job. This led to some women getting pregnant in
order to get grants from the government. However, many mothers end up not getting a grant because they did not have a South African identification. Some mothers could not afford going back to the country they migrated from (H2). The community experiences that the integration of the people moving to Rustenburg was not handled sufficiently and that led to tensions rising between groups in the community (B1; B2; C3). Much of the tension is experienced to be resource and employment-related, which has erupted into violence and conflict between groups (C1; H7). The trust in the community is believed to be lost according to young community members in a remote area (H7).

5.5 Major events in the past decade

'We did not have any electricity and technology. Now some people have it and some do not, so it creates tensions. Parents feel fake security and do not have the same eye on the children as before and then a lot of unsafe things happen to the child’ - H7

Rustenburg has gone from an agricultural community to a more urbanized city during the 1980s as the platinum industry boomed (C3; H7; G1; G5). This boom is seen responsible for the end of the agricultural sector in Rustenburg (H7). With the help of technology, it was made possible to extract the second layer of ore, that extended the lifetime of the platinum mining in Rustenburg (G1).

During the 1990s mines came, and the influx of people started which overpopulated the villages and put pressure on public services (C1). This happened at the same time as the freedom of movement was established in South Africa in 1994 (C3).

Not very far from Rustenburg, which is known as the ‘Marikana Massacre’ occurred in 2012. The Marikana massacre took place after mine workers were striking for higher wages. Interviewees experienced the Marikana effects in Rustenburg as an influx of people coming to Rustenburg. During the Marikana strike, violence rose in informal settlements in Rustenburg, especially in Freedom Park. A health NGO, H3, told the story of how 13 people were murdered in Freedom Park. Mine workers made people strike and march alongside with them in order to have a bigger strike. The ones not willing to strike and march alongside the mine workers were forced to strip
down naked and march. This made the whole community scared of the mine workers, hence they marched with them (H3).

What happened in 2012 and the five months strike in 2014 had a great impact on the community. One community member (C3) describes the effect in his community as following: ‘They stopped people from going to work and people lost their jobs’. People did not pay school fees and public services such as electricity and water. The people had to borrow money, and some people are still in high debt (G5). The strike of 2014 was the longest and biggest strike that shook the community badly. During the strikes, it was not only the mines that suffered, everyone struggled. Schools, shops and clinics were closed (H7).

5.6 Housing

‘The existing houses are cracking due to the mining going on underground.’ - H2

Ever since the platinum mining became less profitable joblessness and homelessness has been an issue in Rustenburg (H2; G2; G6). Many RDP houses are occupied by foreigners while squatter camps are mushrooming and every mine has a squatter camp next to it (H6; B1; B2). The mine employees left the mine hostels and got a grant and moved into shacks in order to save money or send remittances (H6). Due to the long way to the mines and the lack of public transportation, many mine workers moved to shacks near the mines which has led to many overpopulated informal settlements (B2; C1). Some of the people that built shacks near the mines did it in hope of getting a job on the mines (G6).

Due to the instant and rapid influx and building of shacks, the municipality finds it hard to cope with providing basic services for those areas. It is not uncommon that squatter camps appear overnight in Rustenburg (G5). The shacks are built in informal settlements that the municipality does not have any plan for, in terms of water, electricity, and security (G5). When the people do not have basic public services the community in the informal settlements experience dissatisfaction that they express by protesting (G7).
5.7 Health and Sanitation

‘They are too many affected people here with HIV, they are sleeping around not using condoms’ - H6

Rustenburg is not considered to be a healthy community by locals (H1; H2; H3; H4; H5; H6; H7; C1; C2; C3; E1; G1; G2; G5; G6; B1; B2; B3). There are many teenage pregnancies, since the government hands out grants of 300 ZAR (20 USD) per month to the mothers (H7; H5; H4). In an informal settlement in Rustenburg called “Freedom Park”, approximately 50 percent of the pregnant women tested HIV positive in the early years of 2000 (H3). There is a high prevalence and growth of HIV, TB and MDR (C2; H7; H4; H5). One participant in the health sector (H6) explained the growth of TB and HIV as the mine workers are crowded in small places and infect each other. Sick people do not take their medicines since they can not do it in secret while living with many people in one small room. This has to do with the stigmatization of HIV and TB. Around 95 percent of the patients in one of the remote areas in Rustenburg are not from South Africa, but from neighboring countries (H4). One of the biggest issues historically in Rustenburg has been the neglect of HIV, the government said that HIV is a conspiracy (H3). One of the home based carers explained the unhealthy community by explaining how there is no water or food and they see people die of hunger in their homes (H5).

According to some of the health personnel in Rustenburg (H1; H4; H5), HIV came to Rustenburg with the mine workers during the influx of people. The clinic in one remote area in Rustenburg tested positive on 1 in 4 people back in the early years of 2000 (H3). The understanding of HIV and protection is very different among different groups, hence one way of informing people to protect themselves is not sufficient. This is believed to be one of the reasons why HIV is still increasing (C1; H7; H4; H5; C3; G5). Another reason why HIV is growing according to health personnel is the traditional healers, they make people neglect real medicine. They give people traditional medicine (beetroot or garlic), and people die when neglecting ARV medicine (H5; H4). When asking people about the statistics about the HIV rate some of them said that the statistics that emerge from the results from the clinics are not to be trusted (H5; H4; C2). The statistics that the health clinics report are not reliable due to a common phenomenon in Rustenburg. People count as they are defaulting because they do not report to their clinic when they are moving to another
area. In the clinic’s system this looks like a default, and they start their treatment all over again in another area (H4; H5; H6). The HIV rates went up after the Marikana strikes when people became unemployed, the medical aid disappeared and therefore people quit their treatments (G2). The spreading of HIV is believed to be connected to the influx of single men who came to Rustenburg and had sexual intercourse with women here. The influx of men attracted an influx of prostitutes who had sex with multiple men in informal settlements. This increased the spreading of STDs and HIV (G2; H4; H6). There are some young girls that have “blessers”, a blesser is a man who pays a girl to stay with him in his home and have a sexual relationship with him (G2) this is seen as a form of prostitution spreading HIV.

When talking to people about the mental health of Rustenburg, most of the interviewees stated that they do not consider Rustenburg to be a healthy community (H1; H2; H3; H4; H5; H6; H7; C1; C2; C3; E1; G1; G2; G5; G6; B1; B2; B3), and the public health is not doing well (H7; H3). Talking to some of the health personnel working in the clinics in remote areas, they seem to have the same problem when it comes to overcrowded clinics. They share the same opinion about the government hospitals being overcrowded and patients sleeping on the floor since they lack space and beds (H1; H7). Other than HIV and teenage pregnancies, rape is a big problem in the area according to nurses in Rustenburg. Being six years behind on the DNA analysis it makes it hard for rape victims to hold the rapist accountable for their crime (G2).

5.8 Education

‘With the bad education youth become unemployed and unemployable’ - G1

With a lack of schools and the ghost teacher phenomenon (teachers not showing up for classes), education in Rustenburg has poor quality (G1). The local schools are overcrowded and one class can contain up to 65 students and they usually sit on the floor (C3; G2). The education system fails to manage the influx of people (G2). It is explained that there is only one primary school for the whole area of Kroondal in Rustenburg (C3). An interviewee from one of the schools said ‘Another big problem in this area is that people cannot pay the school fees’ (E1). This being one of the
reasons for the insufficient education (G2). Many interviewees explained that the area of the Royal Bafokeng has a better living standard than the rest of Rustenburg. An interviewee from an NGO, H1, said ‘There is good education here, but that is schools that are ruled by the Bafokeng tribe. It is a school for them, by them. We cannot go there because we are not Bafokeng’.

Another problem with education in Rustenburg is children missing birth certificates (H6). When a child does not have a birth certificate, they cannot attend school. Many of children coming here, are here illegally and they do not get birth certificates meaning they cannot register to go to school (C2; H6). Further on, H2 explains the process of paperwork for one of the children under her care, and how long it took for the child to be able to go to school.

Some children and youth do not have the mindset of studying since they take for granted that they will grow up and work on the mines, this is a part of the ‘mining mentality’ that people refer to (C1; H7). This type of mentality contributes to the neglect of education by children and youths (H7). According to H7, some of the youth do not continue their studies since the universities in Rustenburg mostly have had mine related education. This pushes the youth unemployment since there are less jobs on the mines, and the youth do not have good education or any education (H7). Moreover, the education level among people coming to South Africa for work is higher than that of the locals in the mining areas (G1).

5.9 Crime and Substance Abuse

‘Yes, gun! And you know I do not want to lie, I did not lie. It was in front of here and the people opened the door and the man shot the gun and he raped me on the street on these stones. People were watching and others were passing’ - C4

The crime and substance abuse have escalated in Rustenburg and it is spiraling down in age due to the high unemployment rates. The most common crimes are burglaries, theft, robbery, drugs, rape, domestic violence, child abuse, and murder (H1; H2; H3; H4; H5; H7; C1; C2; C3; C4; E1; G1; G2; G5; G7). One participant among the interviewees explains the crime as follows: ‘They are stealing, there is a high crime here. Because of a lack of jobs around here. And there are mines around but people
are not working, so they usually steal in shops and take money from people and they kill people mostly’ (H6).

Two health clinics in the informal settlements report that they receive many rape victims every week (H4; H5). Many youths are abusing both drugs and alcohol resulting in school dropouts (H4; H5; H7; C1; C2; B1; G5). A drug that is relatively cheap is the KAT and has become increasingly prevalent among the youths (H2; C4). Substance abuse also leads to a higher crime rate as well as prostitution (H2). C1, and C3, a tribal leader and a community member of an informal settlement, explain that several people die every weekend in the settlements due to the heavy drinking problems. Girls and women resort to prostitution in order for them to be able to sustain their drug addiction (B1; H2). Moreover, Nigerians are in many cases drug dealers and pimps (C1; C2; C3; C4; H1; H3; G5; G7). Due to their abundance of drugs, they get women addicted to drugs to then pay them in drugs instead of money for pimping them out to men (H1).

Gangsterism is a widespread issue in the settlements and is related to crime. Boys join gangs and get exposed to violence at a young age (H7). The community expresses distrust due to the absence of the police (H1; H3; C3). The police are reluctant to enter some settlements due to the violence (H3). However, despite the dissatisfaction the community expresses, the police itself argues that they are well resourced and have a good presence in the informal settlements. At the same time, the police argue it is difficult to involve the poorer areas due to the different groups of people. Moreover, the police also argue that Rustenburg is a strong and healthy community with strong structures put in place to deal with issues, such as the ‘social crime prevention projects’ (G7).

5.10 Broken Families

‘The men here they are not staying here, they are here for work so they get another girlfriend here and their wives are home, and they are not using a condom with their wife and their girlfriend’ - H6

Many households in Rustenburg have faced the so-called ‘family disorganization’ (H4). There are two types of broken families that have emerged along with the boom
of the platinum mining: the ‘rich neglect’ of children and the influx of men establishing families (H1; H6; B2; G5).

The ‘rich neglect’ of children points to situations where the family is better off economically and simply neglect their children due to a lot of work. Many children are then put in boarding schools and do not see their parents often. The absence of parents results in the children staying out late and being exposed to drugs and alcohol at an early age (H1; H2).

The influx of men to Rustenburg to work on the mines created a new family structure where the man would have one family back home and create a new one in Rustenburg. Because many men are reluctant to the use of condoms many children are created. However, once the men have finished their work or are retrenched many of them go back to their original families and they leave the woman alone with the children in Rustenburg. Hence, she is left with no income or even worse, both women are left with no income if the man becomes unemployed (H1; H6; B2).

The issue of domestic violence in Rustenburg has also caused broken families. As the husband is often the breadwinner the woman becomes financially dependent on the man. When violence is exercised in the home the woman has nowhere to go and it becomes a dysfunctional family (H1; G7).

A new form of prostitution also emerged along with the boom of platinum mining industry. Young girls referred to as Nyatsi’ move in with the mine worker in exchange for money or food. These arrangements result in teenage pregnancies and school dropouts (H6; H7; G5). The traditional form of prostitution is also highly present in Rustenburg (H6; G5; G7; C3). One participant working in a health clinic explained how prostitution is growing in their township as ‘People are suffering, they do not have food so young children sell their bodies to men so that they can get some money to buy some food, some of them are 14 years old’ (H6). Due to the widespread poverty and unemployment girls sell themselves to be able to buy food for themselves and their families (C3; C4). Some girls are as young as 14 years old but most of them are in the age of 17-21 years old (H6; C3). However, the money they get for intercourse is not sufficient. It can be as little as 50 ZAR (3.5 USD) (C2).
6 Analysis

The following analysis adopts assumptions of the Linear Model of the Social Disruption Theory and the Psychological Process of the Place Person Process Framework. The central assumption of the Linear Model is that population growth and population density leads to a weakening of the informal ties of the population (England and Albrecht, 1984). Meanwhile, the psychological process assumes that groups and individuals relate to a place through psychological interaction (Scannell and Gifford, 2010).

The disruption of the social fabric is assumed to be caused by the shift from Gesellschaft to gemeinschaft: the shift from an agricultural community to a mining town, and the effectiveness of facilities that encourage informal ties: weak institutions (England and Albrecht, 1984). People's attitude and attachment toward the place they live is assumed to be caused by cognition; the identification of a place, affect; whether people have negative or positive bonds, and behavior; the action people take to express their attachment to the place (Scannell and Gifford, 2010).

The analysis will answer the sub-research questions ‘How is the social fabric disrupted?’ and ‘What does mining contribute to people’s attitude toward where they live?’ These answers will contribute to the answering of the main research question ‘How has the boom in the platinum mining industry impacted the social fabric of Rustenburg?’.

6.1 Social Fabrics of the Linear Model

The Linear model, in regard to boomtowns, assumes that ties to the community and its residents, the quality of the community, and attachment to the community will diminish as the boomtown develops. Eventually, the residents are expected to have lost their informal ties and instead have formed formal ties (England and Albrecht, 1984). The two main traits of the Linear Model, ‘Gesellschaft to gemeinschaft’ and the ‘effectiveness of facilities that encourage informal ties’ will be discussed below.
6.1.1 Gesellschaft to Gemeinschaft
The shift from Gesellschaft to gemeinschaft implies a shift from a more remote and organic society to a more industrialized one (Tönnies, 1925). However, the informal ties in the community are dissolved and formal ties are formed. Along with the resolution of the informal ties, a decrease in the value of family is evident (England and Albrecht, 1984). Rustenburg was an agricultural community before the platinum was discovered. The agricultural sector started to diminish in the 1980s and the city started to become more urbanized. With the help of technology, it became possible to extract the second layer of the ore which extended the lifetime of the platinum mining. During the 1990s more mining companies were established in Rustenburg and the influx of people, mainly men, started in 1994 along with the freedom of movement being introduced. The booming of the mining industry has resulted in Rustenburg becoming a one sector economy where everything is dependent on mining. There are more people moving to Rustenburg than there are available jobs, leading to a high level of unemployment. The unemployment has resulted in an increased level of crime and substance abuse, which breaks many informal ties and the psyche of the community is deteriorated. The increased crime rates also signify a decrease in the value of family in the sense that there is a loss of respect to people. The dissolution of informal ties and the decrease of family value is mainly evident in the prevailing phenomenon of broken families in Rustenburg. The booming of the mining industry has caused both poverty and wealth which have both contributed to the breaking of families. Children get neglected by their parents both because they are wealthy enough to send them to boarding schools and because they do not have the resources to care for them. Another indicator of decreased family value is the new families that the men migrating to Rustenburg for work created. This implies that the family back home was left behind and the women in Rustenburg are then also left behind with children when the man moves back to his original family. The formal ties to the mining are taking over the informal ties that have been destroyed due to the fast transition to a mining town which has resulted in an over-dependence on mining and increased unemployment rates. The most evident outcome from the loss in informal ties is the phenomenon of broken families.

6.1.2 Effectiveness of Facilities that Encourage Informal Ties
According to the linear model, all community services except for the economic sector are disrupted by the boomtown phenomenon. As well as, the effectiveness of
facilities that encourage informal ties being disrupted by the boomtown phenomenon (England and Albrecht, 1984). The respondents express a general dissatisfaction of the governance and service provision in Rustenburg. The government argues that the influx of people has put too much pressure on the services and that they cannot provide water and electricity to many people due to the housing situation where many people stay in informal settlements and many are homeless. The community argues that the DSD is lacking presence in the informal settlements where they are needed the most and the NGOs lack their support as well. The crime rates have escalated and rape and burglaries are not uncommon. The HIV rate has increased since the booming of the mining industry and along with the influx the health clinics are overcrowded, there are people lying on the floors in the government hospitals due to lack of space. Moreover, education is not of good quality and the influx of people has caused the schools to be overcrowded as well. There are cases where there are 65 children per class and they have to sit on the floor due to lack of space and resources. The service provision of the mines was better before the strikes of 2012 and 2014 as they provided schooling for the children of the mining households, and the miners had medical aid. Today the mines mostly hire contractors who do not enjoy these benefits as they are not permanently employed. However, the collaboration between the municipality and the mines is poor and the lack of service provision has led to people suffering. In the case of Rustenburg, it is evident that the mines play a big role in providing services that the government and municipality usually do. The facilities and institutions mentioned above determine the health of the community in many ways and when they are not functioning the community will suffer. Hence, informal ties have been ruined along with the increased despair of the community.

6.2 The Psychological Process of the Place Attachment Concept

As argued in chapter 3, Place Attachment is more significant in low-income households (Farrell et al., 2012). The psychological process of the place attachment is applicable to the community of Rustenburg and facilitates the understanding of people’s attitudes to the city. Further on, attachment toward the place people live in is assumed to be caused by cognition; the identification of a place, affect; whether people have negative or positive bonds, and behavior; the action people take to express their attachment to the place.
Cognition

According to the concept of place attachment, cognition is when people identify themselves with the place and feel that the place represents them which creates personal importance to it. Many of the interviewees in Rustenburg refer to a phenomenon expressed as the ‘mining mentality’. Rustenburg is referred to as a mining community and the participants identify themselves with the mines. There is no diversification of the economy in Rustenburg hence, all businesses are mine related and mining is all people know in the remote areas close to the mines. Rustenburg as a mining town is not only mine related in terms of the economy but also in terms of education, health and housing.

According to the community members in one of the remote areas in Rustenburg, the higher education in Rustenburg is also mine related. In order to prepare the people for working on the mines, the education system is not diversified from other than mining education. The bursaries in schools are mine related as well, participants experience that they belong to the mines and that people are expected to work on the mines since they are from a mining town. This makes it hard for the local population to move from Rustenburg since the mines are all they know so they get locked in a place where they feel represented and feel like home. This forms a strong attachment to Rustenburg.

Affect

The concept of place attachment refers to Affect as the part where people recognize some form of negative or positive emotional connection to the place, in this case, the community. This develops a form of sadness if the person is to be removed from that place. Hence, they stay close to that place in the hope of positive emotion. All of the participants in Rustenburg still had some hope about a positive change in the community. The hope had a lot to do with the mines starting to hire people again and that the unemployment in the community would fall. Participants in a health clinic in a remote area were asked why they stay in Rustenburg despite the dissatisfaction that was expressed from their side during the interview. Participants replied that this is their home and they want to stay and make it better and help people. Some of the participants replied to that question by asking the interviewers where else they should go, and that this is their home. It can be noted that many participants feel some positive emotions associated with the community hence they stay and feel hope. The
reason behind why people still choose to stay is because they hope to feel a positive emotion toward the place again. The hope is still there with the people of Rustenburg. It is shown by how people express their dissent with the community but still talk about the future of Rustenburg as a bright one.

Behavior
This part of the psychological process explains how attachment is expressed through actions. When there is a positive bond to a place, the main aim is to maintain closeness to the place. Place attachment can become dysfunctional when someone with a strong bond to a place is reluctant to leave it. In Rustenburg, all of the community members and the health sector personnel express their dissatisfaction by saying that Rustenburg is not a healthy community, psychologically nor physically. According to the concept, it can be argued that most of the interviewees in Rustenburg are affected by feeling attachment to the community and many miss chances of opportunities to grow and have a better life somewhere else since they stay in the shacks and remote areas. This was very visible in the townships while some interviewees said that people are moving into shacks in their area from the other side looking for jobs. The concept explain that people with this kind of attachment to a place show it by moving to other similar places even though they are not satisfied with it.

In Rustenburg the aspects of cognition, affect and behavior exist linearly within the community. Cognition explains the mining mentality that is expressed as people’s attitude toward the community, as an explanation of their attachment to Rustenburg. With guidance from the psychological process of the PPP-framework it is concluded that the people of Rustenburg have a mining mentality and they identify themselves with the community. They have a positive feeling to the community and a lot of hope for a change. This can be shown in their behavior, people do not leave Rustenburg and inhabitants from all different sectors are striving for positive change in the community by working as home based careers, volunteering in health clinics, running orphanages for homeless children and being politically involved on a local level. The attachment and sense of belonging seem to be more important than the standard of living.
7 Conclusion

This thesis sought to increase the understanding of how a boom in mining industries could impact the social fabric of a boomtown and how the impact is expressed locally by the inhabitants. This thesis was based on research questions that focused on the social impacts of the platinum boom in Rustenburg, this being located within the general field of the natural resource curse focusing on the social impact of the local level in relation to the existing literature. The study was conducted as a qualitative case study of the boomtown Rustenburg. The social disruption theory along with the concept of place attachment was adopted through an abductive approach to guide the analysis. The field study finds that the main social issues are visible through the poor housing situation, the lack in health and sanitation, poor education, crime and substance abuse, broken families, and insufficient local governance. The study also identifies that the underlying issues are unemployment and weak institutions.

The following research question ‘how has the boom in the platinum mining industry impacted the social fabric of a boomtown?’ has been answered as following; the boom of the platinum mining industry has disrupted the social fabric in the way that the informal ties have been broken and the phenomenon of broken families have become more common (see section 6.1.1). The booming of Rustenburg has led to weak institutions not managing the higher demand for basic services (see section 6.1.2). Resulting in an unhealthy society where unemployment is high, people are suffering from bad health and crime is high (see section 6.1.2). It is understood that the people in Rustenburg still have hope for a future with better living standards and opportunities, this is the main reason why the participants choose to stay in Rustenburg despite the challenges they face with the social issues within the community that is related to the booming. As stated in the last paragraph of section 6.2, cognition explains the ‘mining mentality’ that is expressed as people’s attitude toward the community, as an explanation of their attachment to Rustenburg. The attachment and sense of belonging seem to be more important than the standard of living.

This study discovered the need for further research on the three stepping stones of a mining area and how to incorporate the community in its development. Firstly, there
is a need for further research on how to shift from an agricultural society to an industrialized society in a smooth way to avoid the social disruption. Secondly, it is not easy to sustain the boom and to damper the bust, therefore there is a need for further research on how to make the boom of the mining industry sustainable. Lastly, the preparation for the bust and downscaling of the mining industry is in need of research as well due to the fact that minerals are a depletable resource. The involvement of the community is crucial for its sustainability, ‘engage the hearts of the people of Rustenburg’ (B2).
References


## Appendix

### Appendix 1. List of Interviewees

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Appendix 2: Interview Questions

1. How would you describe the Rustenburg community? What major events in the past decades impacted on the community? (composition, major historical events, social issues, relationships, demography, well-being and standard of living)

2. To what extent have the mining industry and mining companies contributed to this situation - negative and positive? In other words: how has mining impacted on the above situation?

3. How would you describe the relationship between the major actors in Rustenburg? What are the major sources of conflict and support in the mining-community relations?

4. What community structures are in place to negotiate the community’s case with the mines? What is the status of these structures within the community and by the mining companies? (Types of community trusts; consultation with the community or serving own/specific interests; conflict)

5. What message could you give to the mines if they want to support the Rustenburg community better? (Consider: consultation, social plans, social ills, historical exclusion/exploitation, cultural differences-mines’ responsibility?)

6. Would there be significant downscaling in or closure of mines, how would the Rustenburg community be affected and what is in place to limit possible negative results? (Social, economic, education, developmental, service provision, infrastructure).

7. Do you think Rustenburg is a healthy community? Do you think mining has contributed to this state? Explain your answer. (Physical/environmental, social, racial relations, quality of life, recreation, level of hope, opportunities).