On ‘dirty’ rats, ‘dirty’ spaces and slow violence in Site C, Khayelitsha:
An interdisciplinary ethnography of the everyday, living in a rat-infested area

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List of Acronyms

ANC – African National Congress

BH – Billy Hattingh

CBD – Central Business District

CCID – Central City Improvement District

DA – Democratic Alliance

DAFF - Department of Agriculture, Forestry and Fisheries

EH – Environmental Health

EHA – Environmental Health Assistant

EHP – Environmental Health Practitioner

IPM – Integrated Pest Management

KRS – Khayelitsha Rodent Study

NP – National Party

NSPCA – National Council for Societies for the Prevention of Cruelty to Animals

PWP - Public Works Programme

SAPS – South African Police Service

SJC – Social Justice Coalition

SPCA – Society for the Prevention of Cruelty to Animals

USA – United Stated of America

Abstract

Rats are predominantly viewed and understood as pests, vermin and a risk to human health. Yet little is known about rats in the urban space and the entangled relationships they have with humans and the environment. This dissertation elaborates on the multiple identities that are connotated to rats as well as the complex relationships they have with people residing in Site C, Khayelitsha, Cape Town, South Africa – an African township comprising formal and informal housing areas on the outskirts of the city. Through locating these complex relationships and engaging with stories and experiences of people living in close proximity to rats, an image of the rat emerged, mirror-like, reflecting the realities of inequality and slow violence in the lives of people residing in Site C. To illustrate the nuances related to inequality and slow violence, this dissertation analyses the manner in which rats are controlled in the city of Cape Town and by whom, the polluted river in 'Island' – an informal area in Site C, and how people negotiate living alongside rats, witchcraft and violence in the everyday. This dissertation argues that instead of focusing on rats as vermin, pests or a risk to human health, through 'following' them and the complex entanglements they have with us as humans, we are able to learn about the realities that many people face; realities which are characterised by inequality and slow violence. The dissertation ultimately contributes to an ongoing debate about rat control policies in the city of Cape Town and suggests considerations which need to be made in order to address the violence against the rat and the violence against people residing in spaces such as Site C.

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Preface

Researching rodents in Cape Town and examining the social, economic and political life they hold alongside their human counterparts is not something I would have imagined doing in my academic career. Reflecting on this now, I am ever thankful for choosing to do this since I have discovered that rodents tell us so much about ourselves as humans. From the outset of my research, I studied how rats in particular are perceived socially and culturally in Cape Town among different population groups, how they are controlled and managed by different stakeholders, the politics thereof and what possible health impacts they have on humans. This focus area was arrived at after being appointed as a research consultant by Dr. Jamie Lorimer and Dr. Thomas Cousins from the University of Oxford as part of the Urban Animals ongoing research project. While conducting this research, I became more intrigued by the topic and soon collaborated with other researchers who are working on the same topic in Cape Town. Among these was Prof. Nicoli Nattrass at the University of Cape Town whose work under the umbrella of the Khayelitsha Rodent Study (KRS) was of interest to me. Shortly thereafter, I was enrolled in this research master's programme in order to build on the fieldwork I had conducted as part of the Urban Animals research project and to merge this with new research and existing quantitative and qualitative data from the KRS survey of Site C in Khayelitsha, Cape Town's largest African township.

In many respects, this research stems from contestation over rodent control (see also Nattrass, Stephens & Loubser, 2018) that took place in 2014/15 and this discord forms a departure point for understanding what is to follow in the rest of this dissertation. The dispute arose when the Khayelitsha Environmental Health (EH) department of the City of Cape Town decided to embark on a public works programme (PWP) to manage rats in a poison-free manner. The programme sought to create jobs in this context of high unemployment, to assist poor households (especially in informal areas) in combatting rat infestations in ways that were more ecologically friendly than conventional poison block-baiting methods. PWP workers set cage traps in people's homes, and the captured rats were subsequently drowned (either by the residents or later by the PWP workers) in a bucket of water. This method of killing rats proved popular among residents and was touted by City officials as humane. However, when Senior Wildlife Inspector Alwyn Marais from the NSPCA (National Council for Societies for the Prevention of Cruelty to Animals) heard the cage trapping and drowning project being described as humane by a City official on a radio talk show (as communicated to me in an interview), he filed a complaint of animal cruelty to the City of Cape Town's EH department

on behalf of the NSPCA. The NSPCA's stance was that they wanted the drowning method to be stopped immediately as they felt it was an inhumane manner to kill rats. The SPCA Act no. 169 of 1993 outlines that the NSPCA is the legislated authority in the position to enforce the Animals Protection Act no. 71 of 1962. With legal threats facing the PWP, the Khayelitsha EH department stopped the use of the drowning method and returned to using poisons again.

The above-mentioned episode points to the politics at play in relation to the control and management of rats in the city of Cape Town. One prominent aspect was the friction evident between different stakeholders as well as the communities affected by rats (see Nattrass, Stephens & Loubser, 2018). The question of human rights and animal rights collided. Was drowning a better death for a rat than poisoning? In whose interests was the outcome? Using survey data from Site C, Khayelitsha, Nattrass and her colleagues argued that a majority of the local population strongly supported the programme and that the NSPCA was "imposing bourgeois values on a poor community with a serious rodent problem" (2018: 18). The implication was that at the core of this debate was the failure to take into consideration the lived experiences within a context of poverty and inequality.

With this in mind, I set out to understand why and how rats were currently controlled in the city of Cape Town by both the local government and private pest control companies as the research consultant for the Urban Animals project. What was also of interest was trying to probe how rats were viewed among different communities in the city and whether they pose health risks to humans. The challenge I faced at this point was gaining access to City of Cape Town officials and the NSPCA as they were hesitant to speak to me because of the attention created by the paper published earlier in the year by Nattrass, Stephens and Loubser's (2018). Both parties did not appreciate how they were portrayed in the paper and did not want to risk another 'exposé' which could arise from conveying more information to another researcher. When I managed to gain access to the city's epidemiologist in the City Health offices, I was told that "rats are a very sensitive topic at the moment" and that the city of Cape Town does not need more "bad publicity". Along these lines, I was told that the City would oversee my research process and that they would coordinate whom I get to interview and when. These actions became indicative of a research field that is fractured and driven by politics to maintain a particular reputation of the City of Cape Town being a well-run metropolitan, often described as 'the best in South Africa'.

Nattrass and her colleagues (2018) drew on data from the Khayelitsha Rodent Study, a representative survey of Site C, Khayelitsha. It was overwhelmingly quantitative (in the sense of being based on pre-coded questions that were then statistically analysed). However, there was also a strong qualitative dimension in that field researchers made extensive notes on the margins of the questionnaires, all of which were captured in a separate Word document at the data input stage. These notes related to experiences as relayed by respondents or observations that the fieldworkers had made during the administration of the survey. With the research team being mostly sociologists, economists and statisticians, the need arose for someone with an anthropology background to engage with the qualitative material, while simultaneously using the quantitative data to help paint a picture of the general context. I was approached by Prof. Nattrass to join the research project and to serve as an anthropologist with the task of analysing the qualitative data as well as conducting ethnographic field work in the Site C area. My angle of approach therefore stands as an anthropological critique to the survey as a singular research method, and this study intends to better contextualise some of the findings from the survey.

Chapter 1: Introduction

In Fritha Langerman's art installation 'R-A-T' – an associative ordering' (2012) she represents the brown rat, *Rattus norvegicus,* as a ubiquitous urban creature that is abhorred within the city and accordingly excluded from our museums and everyday understanding of the species (2012). Langerman placed traces of brown rats in odd spaces of the Iziko South African Museum in Cape Town where she exhibited the installation – the odd spaces included disused corners and cabinets, the forgotten spaces of the museum. In a follow-up conversation with Langerman, she noted that this placement is exactly how she understands the social and political positioning of the rat in the South African society – found overwhelmingly in the "forgotten", "disused" spaces. She went on to say that she sees rats as creatures that hold up a mirror to us as humans – reflecting the realities of those who live in spaces that are infested with rats, in the "forgotten" and "disused" spaces. What Langerman refers to here is the manner in which rats in the urban South African context can indicate the ongoing inequalities in our society. Following this, it is by locating rats that one will find those people who live on the periphery of society – in the forgotten and disused spaces, living in dire circumstances where rats normally thrive. This analogy is one that frames the core of this dissertation and which I will keep in mind in the coming chapters

In Chapter 2, I provide an overview of the field site – Khayelitsha, Site C within the wider South African context. By doing this, I aim to provide an understanding of present-day inequalities in South African but moreover, that of Site C and its political-economic history. Framing the social, economic, political and geographical space, I build a foundation that is useful to contextualise what follows in the rest of the dissertation. This section also includes a literature review. In order to expand on the political ecology of Site C, Khayelitsha, in Chapter 3 I discuss the river in 'Island', an informal settlement. The river (which for most of the year is a polluted stream) is indicative of the ongoing slow violence in the everyday life of people residing close to the river. Through looking at slow violence, I examine the lack of service delivery and corruption as well as environmental degradation. The river is a contested space – one that is intimately associated with the source of the rats, according to residents, and therefore also a space that most people do not want in the area. The notion of dirt is also discussed here together with waste, where I draw parallels between dirty spaces, dirty rats and humans as waste, in order to showcase the intricacies of poverty and inequality in the lives of people in Island. Alongside the river, I also explore how trees are perceived as objects that enable violence and moreover, how the absence of trees is viewed as violence in itself. With this

paradox in mind, I offer an insight that broadens the discourse around environmental redress and inequality in Cape Town.

Chapter 4 discusses the biological elements of both *Rattus norvegicus* (brown rat) and *Rattus rattus* (black rat) in order to provide necessary context, notably discussing how fast they can reproduce, where they are most likely to be found and why, what they need to survive and why they are so successful at surviving. Building on this literature review, I then discuss the historical significance of rats in relation to bubonic plague – for which they are notoriously known, and following this I proceed to discuss the context of Cape Town. With this I illustrate the connections between bubonic plague in the city and race relations, with a discussion on how rats ultimately shaped the first forced removals of black Africans and Coloured[1] people. This discussion contextualises what follows in the rest of this dissertation and provides a backdrop to understand the interplay of history in contemporary South African society and more specifically, in Site C.

The manner in which rats are controlled in the City of Cape Town by both the private and public sector is discussed in Chapter 5. In this chapter, I point to the various reasons rats are controlled in the first place, why and by what means they are controlled and how the location influences the methods of control. I argue that there is unequal access to rat control and that management strategies differ depending on the area. This disparity is especially notable in relation to the use of poison in poor informal settlements like Site C as opposed to newer and safer technologies that are used for wealthier areas elsewhere in the city.

As opposed to the literature on rat biology, which is prevalent, very little is known about the different ways in which rats are socially and culturally perceived among different groups of people. I address this in Chapter 6 by looking at how the rat is framed in Site C, Khayelitsha. By illustrating the complex social relationships and perceptions that residents in Site C have toward rats, I demonstrate that there is not 'one-way' in which people live alongside rats – some hate them, some tolerate them, some believe they should suffer, some believe they are dirty and others believe you should respect them. This points to the fact that we cannot simply take the dominant narrative of hate toward the rat or war on the rat as the only 'social phenomenon' or understanding of human-rat relations.

[1] I elaborate on the racial category 'coloured' in Chapter 2.

Building on the social and cultural perceptions of rats, I dedicate Chapter 7 to zooming in on one particular element – witchcraft. Through looking at the ways in which rats, cats and owls are believed to be related to witchcraft, I point to the complexity in everyday social life and people's relations with these animals. I argue that witchcraft is an element of social life that is very intimate to the lives of people in Site C regardless of whether they believe in it or not, and that it relates to the notion of slow violence that unfolds in the everyday – both toward people and animals. I then take both Chapters 4 and 5 into consideration when adding a section on care and discussing how care collides with feelings such as hate and fear.

Continuing with the thread of slow violence throughout the dissertation, I return to the notion of positionality and locatedness in my own research and revisit the day I was involved in a robbery while conducting research. Chapter 8 delves into the violence of everyday life in Site C and makes the point that Langerman wants us to see – rats reflecting our realities back to us. Focusing on violence in the everyday, I also explore the manner in which people negotiate their movements in the Site C area in order to avoid being robbed or harmed in any way, which I then link to the notion of necropolitics. This chapter argues that this dissertation is not necessarily *about* rats but rather *of* rats – understanding 'of' as expressing the relationship between a part and a whole. Rats are only one part of the ongoing slow violence in the lives of people who reside in Site C and spaces similar to Site C. Because we as humans share intimate spaces with these creatures, if they are 'followed' like I have done in my research, rats can tell us a lot about the socio-political life in a city such as Cape Town and the persisting inequalities and violence which is prevalent in many peoples' lives who find themselves in spaces such as Site C.

Theoretical Approach

Rob Nixon's *Slow Violence and the Environmentalism of the Poor* (2011) is a text that I draw upon throughout this dissertation. In his book, Nixon coins the term 'slow violence' which he outlines as "a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all." (2011: 2). The author builds his theory on the theories by Rachel Carson (1962) and Johan Galtung (1969) who have both written about notions of violence that are not always directly visible. In *Silent Spring* (1962), Carson writes about "death by indirection" (1962: 32) as she traces the adverse effects on the environment, humans and animals caused by pesticides that were used in an unregulated manner and unquestioned by the United States government in the 1950s and 1960s. What Carson highlights when she writes about 'death by indirection' is the indirect ways in which the use of pesticides act as a slow killer to humans and the effected environments – "a shadow that is no less ominous because it is formless and obscure" (1962: 238). Galtung on the other hand coined the term 'indirect or structural violence' (1969) which he saw as "the vast structures that can give rise to acts of personal violence and constitute forms of violence in and of themselves" (cited in Nixon, 2011: 10) such as racism and a commodified health care system. Galtung views particular occurrences such as someone contracting tuberculosis today and dying from it, or someone living in poverty, as indirect or structural violence because governments could intervene and prevent this, but they choose not to do so. Galtung also placed the notion of agency at the core of his theory. Through this, he made the point that those who are prevented from achieving their full potential due to institutionalised discrimination are not passive in any way, but rather that they are constantly negotiating in order to survive a system that seeks to exclude them – in other words, they have agency.

Building on these theories and writing in line with them, Nixon problematises the manner in which violence is predominantly understood and argues that it is "customarily conceived as an event or action that is immediate in time, explosive and spectacular in space, and as erupting into instant sensational visibility" (2011: 2). Nixon urges us to engage with the notion of violence differently – to shift from privileging "the explosive and spectacular" such as wars, bombings, etc., and to question "conventional assumptions about violence as a highly visible act that is newsworthy because it is event focused, time bound, and body bound" (2011: 3). As opposed to the casualties of war that are 'counted', Nixon contends that "casualties of slow violence become lightweight, disposable casualties" (2011: 12). The theorist illustrates how this operates intricately through the example of Lawrence Summers, the former president of

the World Bank, who advocated for the dumping of toxic waste into countries in Africa who are considered 'under' or 'least developed' (Nixon, 2011). Through this example, Nixon notes that this consideration by Summers will not be considered a conventional form of violence such as an armed invasion of African countries. The effects of dumping toxic waste anywhere does not only lead to environmental degradation and ecological disturbance, but also to severe health implications for humans and animals. What the theory of slow violence brings to the foreground are questions of time, movement, and change, however gradual. This can be seen in the above example as well where the toxic waste would presumably not be dumped all at once, but rather gradually over time. Considering this, the impact would also not be immediate but more gradual and it would start to surface in things like water contamination, which leads to health implications for both humans and non-humans, perhaps less food production, higher rates of poverty and various other outcomes that are anything but beneficial.

This example is what sets Nixon's slow violence apart from that of structural violence which is a concept that emerged out of an era of structuralist thinking and static determinism. Galtung himself further defined structural violence as "silent, it does not show—it is essentially static, it is the tranquil waters" (1969: 238). In opposition to the understanding of structural violence as an analytical tool, Nixon states the following:

> "Slow violence, by contrast, might well include forms of structural violence, but has a wider descriptive range in calling attention, not simply to questions of agency, but to broader, more complex descriptive categories of violence enacted slowly over time." (2011: 11)

Similar to Nixon, I want to privilege the everyday forms of violence – that which is often missed and taken for granted – by focussing on the "forms of delay, deferral, attrition, and accumulation whose ordinariness is their violence" (Ahmann, 2018: 144). I do this through one example I provide in my discussion on the river in Island (Chapter 3). The river symbolises a space that pulls together the forms of delay and deferral – a non-functioning waste removal system that constantly delays and defers the removal of waste which corresponds to government delaying and deferring action in the community with respect to preventing crime, providing humane housing, sanitation and several other elements. In terms of attrition and accumulation, I point to the constant dumping of waste in the river and how this waste, alongside the dumping of waste elsewhere in the community and the inefficient waste containers, allows for an accumulation in the rat population. This in turn causes more risk and problems in the community. The ordinariness of these elements in the everyday lives of those

living in Site C, as Nixon observes, is a situated violence that may not be conventionally viewed as violence. In Chapter 2 of my discussion, I also include a focus on dispossession – a process stemming from colonisation and apartheid (and the ongoing implications) – and this is something which underpins many of these elements that enact violence on a daily basis.

The different forms of delay, deferral, attrition and accumulation that have become a part of the 'ordinary' landscape of Site C represent *assemblages* interlinked with one another. Assemblage theory which derives from philosophers, Gilles Deleuze and Félix Guattari in their book *A Thousand Plateaus* (2004) is another theoretical approach that I utilise alongside that of Nixon's slow violence in order to emphasise the interconnectedness of several elements I discuss in this dissertation. Deleuze and Guattari conceptualised assemblages or *agencement*[2] in French as the need to focus on relations and patterns and not on content or concepts per se. The reasoning behind this was to move away from producing thought about social life that is static and non-changing, and to rather shift to a way of thinking that would produce understandings of social life as heterogenous, dynamic and everchanging but moreover as consisting of 'assemblages' that create lived realities. It is important to note that Deleuze and Guattari do not see the elements (subjects or objects) as homogenous but also as fluid and complex. An assemblage is "composed of a basic structure including a condition, elements, and agents" (Nail, 2017: 24). A condition is comprised of "the network of specific external relations that holds the elements together" (2017: 24). We could think about the river, as discussed above, as a condition that is made out of a network which could illustrate to us why and how it has come to be this way. Elements such as plastic bags, waste, rats, water, soil and so on, that are complex within themselves – or heterogenous – are what "appears within the relations of distribution" (2017: 26). In other words, elements in an assemblage are the material things in social life and beyond that always function in relation to one another although they might be distributed in a manner that seems like they are unrelated. Agents, which form part of the basic structure of an assemblage, are "the mobile operators that connect the concrete elements together according to their abstract relations" (2017: 27). What Deleuze and Guattari imply by positioning agents as imminent in an assemblage, is that human and non-human actors or agents are both shaping and being shaped by elements and conditions. What assemblage theory offers is a framework of analysis and thinking that emphasises multiplicity,

[2] The difference between agencement and assemblage is that agencement means "a construction, an arrangement, or a layout" whereas assemblage means "to arrange, to lay out, to piece together" (Nail, 2017). The first is a noun and the latter is a verb. The difference should then be marked and taken into consideration as it points to how assemblage theory is both a way of thinking but also an analytical tool to view what is already in the world (Dewsbury, 2011).

exchangeability, fluidity and complexity in order to make sense of various objects, subjects and conditions in relation to one another and various structures. In the final chapter of this dissertation I illustrate how the notion of assemblages can assist the process of research and how employing this theory can bring new findings to the surface.

Achille Mbembe's concept of necropolitics and necropower (2003) is one that I argue needs to be read together with that of Nixon's slow violence in order to form a wider understanding of the 'unseen power' that I discuss in this dissertation. Mbembe introduces necropolitics as both a critique and an extension of Michel Foucault's theory of biopolitics in *The History of Sexuality* (1978). Biopolitics refers to the use of socio-political power by a sovereign body such as the state, in order to control people's lives. 'Socio-political power' indicates a form of power comprised of both the social and political that is utilised in a strategic manner to either constrain something or someone or to enable something or someone. An example of how socio-political power is utilised is through social welfare policies as set out by the state where political actors manage and determine the welfare (pension, medical care, housing, financial support for the unemployed, etc.) of citizens in a given context. This shapes the social lives of the citizens which demonstrates how socio-political power is deployed. Through the concept of biopolitics, Foucault looks into the intersection of biology and politics which is utilised through different technologies "to ensure, sustain, and multiply life" (1978: 138). Foucault delves deeper into the meaning of this by stating that the biopolitical and biopower is:

> "a set of processes such as the ratio of births to deaths, the rate of reproduction, the fertility of a population, and so on. It is these processes—the birth rate, the mortality rate, longevity, and so on—together with a whole series of related economic and political problems which, in the second half of the eighteenth century, became biopolitics' first objects of knowledge and the targets it seeks to control." (1997: 243)

The examples that Foucault provides above highlight the biological elements of humans and recognise how governments can collect information about those biological elements in order to regulate and manage human populations. Foucault outlines this as the politics and dictations of "who may live and who must die" (cited in Mbembe, 2003: 11) and how a sovereign state can assert forms of biopower onto its most vulnerable and powerful citizens. Mbembe extends this idea through his concept of necropolitics, as he urges us to look beyond "who may live and who must die" and to acknowledge he right that sovereigns come to occupy in particular contexts – which is the right to expose people, including a country's own citizens, to death. Mbembe goes on to characterize necropolitics as a theory of "the walking dead" through which

he means to illustrate the point that necropower, as utilised by the state, is deployed over the body to render some people's lives to a precarious state of being where they are neither flourishing nor aware of the different forms of exposure they face in their everyday realities. Through this analysis, Mbembe offers an insight that is applicable to the South African context, and more specifically to Site C, which I examine in different ways throughout this dissertation. In particular, he uses the example of South African townships to illustrate the applicability of necropolitics.

Townships are spaces in the South African landscape which originated from colonial occupation and the rule of the Apartheid regime and they were created to serve as spaces to be occupied by black Africans and coloured people. During these time periods "the township was a peculiar spatial institution scientifically planned for the purposes of control" (Mbembe, 2003: 26) over the bodies of those assigned to live in townships. The process of subjectification is highlighted in Mbembe's theory. The theorist argues that by placing black people and coloured people in township areas, the colonizers rendered "the colonized into a third zone between subjecthood and objecthood" (2003: 26). Using the township as an example and looking at how it came to be through the necropolitical, Mbembe makes the point that "sovereignty [state power] means the capacity to define who matters and who does not, who is *disposable* and who is not" (2003: 27).

Thinking through Mbembe's theoretical approach to understanding township spaces and the forms of power that create and maintain these spaces, Angela Storey's (2016) ethnographic fieldwork in Khayelitsha gives further insight into the forms of violence in the everyday. Storey's long-term research in the Khayelitsha area focuses on informal technologies that are used daily by residents; for example, for either building their homes out of wooden crates or gaining access to water through buckets and communal taps. What the researcher argues is that these informal technologies point to a form of violence that is systematic – both in the present day and historically. Storey states that what partly constitutes day-to-day life in Khayelitsha is the "everyday reliance upon extended or make-shift technologies [and] still-unfulfilled promises of resource redistribution [in] post-Apartheid [South Africa]" (2016). Through these daily objects, which Storey defines as makeshift or informal technologies, the researcher draws a parallel between how people use informal technologies to make homes, to make environments that are often not suitable for human dwelling and are barely 'liveable' and how neoliberal policies are intertwined in all of this. Storey is critical of the neoliberal approach that South African policy makers and politicians took on with the transition to a post-Apartheid

South Africa. The new government at the time "began to adopt neoliberal economic policies based around full cost recovery mechanisms, intent upon increasing competition, attracting global capital, and producing an efficient government (Siwisa 2008 in Storey, 2016: 406). What this meant for public services such as water supply, housing, waste management and the like, was that of commercialization, commodification and privatization of services where ownership, management, and regulation of systems were out of public control (Storey, 2016: 406). Although there were public service programs labeled as "participatory governance programmes" (in Chapter 3 I outline one which was called the Billy Hattingh Scheme), Storey argues that citizen engagement and neoliberal policies sit at odds in practice as it "allows service providers to distance themselves from the management of individual access" (2016: 406), leaving vulnerable population groups with further service insecurity.

In a similar way to my theoretical approach, Thom Davies (2018) makes use of Mbembe's notion of necropolitics, specifically 'the necropolitics of place' in conversation with Nixon's concept of slow violence in order to point out the devastating social effects of environmental degradation caused by toxic pollution in a small town in Louisiana, USA. The author uses an ethnographic research approach that includes interviews with residents of the particular town in order to "reveal how unjust exposure to toxic chemicals creates contemporary "death-worlds" that are experienced in temporally uncertain and constricting ways" (Davies, 2018: 1537). Davies connects the factors of racism and governmental neglect, examining how the US government chooses to ignore the toxic waste that is being dumped in towns that are well represented by black communities, resulting in health issues such as cancer. Mbembe's and Nixon's respective concepts that are applied in this case study not only accentuate the politics at play, but also offer a critical theoretical and practical perspective to view the situation in a more holistic manner that connects it to a wider network of assemblages.

A note to the reader on reading this thesis

Upon engaging with this thesis, I urge the reader to peruse it in light of what it is – an inter-disciplinary ethnography that makes use of both ecological anthropology and political ecology approaches, and which draws on survey data when appropriate. Due to this, I refrain from calling it a multispecies ethnography or political ecology ethnography since it does not fit either of these fields of enquiry. Instead, it falls into the 'cracks' of the disciplinary friction that is constantly emerging through discussions around the decolonisation of knowledge production. This ethnography stands as an attempt to draw from different forms of data, research methods and knowledge frameworks in order to produce a dynamic insight into what is a complex research topic. I invite the reader into my personal experiences through my ethnographic accounts and analysis of the qualitative and quantitative data collected through the KRS to illustrate the entanglements that are present in everyday life for humans and rodents in Cape Town and Site C, Khayelitsha, South Africa. More specifically, these entanglements can be seen as "the unfolding, often incidental attachments and affinities, antagonisms and animosities that bring people, non-human animals and things into each other's worlds" (Nading, 2014: 11).

Moreover, the style of writing that I intermittently make use of is a mode of storytelling which is inherently ethnographic. In *Children of a Bitter Harvest* (2013), Susan Levine uses the style of 'flash ethnography' and outlines it as "adapting the genre of flash fiction – which challenges writers to tell stories in 1000 words or less – to non-fiction in order to provide 'snapshots' of large themes in easily accessible and digestible forms…" (Levine, 2013: xxv). Throughout the paper I introduce readers to 'flashes' from my fieldwork, which are told in the present tense. It is therefore not a grammatical error but rather a mode of storytelling to invite the reader along to see what I have seen. I borrow Thom Van Dooren's notion of storytelling which he utilizes in *Flight Ways* (2014) when he expresses his understanding of storytelling as follows:

> "Storytelling [is] a dynamic act of 'storying' the world, utterly inseparable from lived experience and a vital contributor to the emergence of 'what is'. Stories arise from the world, and they are at home in the world." As Haraway (forthcoming) notes, "'World' is a verb, and so stories are 'of the world, not in the world. Worlds are not containers, they're patternings, risky co-makings, speculative fabulations." (2014: 10)

This dissertation relays stories of 'what is' and places this in conversation with the broader knowledge framework available to us and which I employ. It is through making these connections that a new understanding emerges and more questions arise. They are not "simply

descriptive: we live by stories, and so they are inevitably powerful contributors to the shaping of our shared worlds" (Van Dooren, 2014: 10). What I do through this mode of writing is to draw new connections between stories which now beg us to reconsider particular understandings and to keep in mind that "telling stories has consequences: one of which is that we will inevitably be drawn into new connections, and with them new accountabilities and obligations" (Van Dooren, 2014: 10).

Methodology

Research methods are of great value and importance to every researcher, and each academic field favours a particular approach. The problem often arises when a field becomes blurry and interdisciplinary works starts to evolve. Over the past decade, many scholars have called for more interdisciplinary work in order to produce knowledge that is more nuanced, dynamic and inclusive to aid our understandings of complex situations we are faced with in society. But what does interdisciplinary work look like and how does one go about it? Interdisciplinary research inevitably struggles to find ways of operating within academic structures which are often rigid and bounded, making it difficult to transgress disciplinary lines. Not only is the integrity of the research questioned when researchers push their methods beyond one field of research, but research methods and styles of writing can be contested within schools of thought.

As noted above, my research draws, inter alia, on data collected by the KRS, its main objective being to collect "socio-economic information as well as [to] probe people's experience of rats, attitudes towards them and to various forms of rodent control" (Centre for Social Science Research & iCWild, 2018: 5) of individuals residing in Site C, Khayelitsha, South Africa. The research was mainly conducted using a questionnaire (Appendix 1) administered according to a stratified two-stage cluster complex survey design (see Table 1 and Figure 1 and 2 below). Two Xhosa-speaking fieldworkers living in the area posed the questions, and they spoke to the first person who came to the door in sampled households. In the process of filling in the survey, the fieldworker also wrote down comments that the participant made and with their consent took photographs of household items or anything else that was relevant to the research. I make use of the 221 surveys that were administered from 08-08-2017 and 26-11-2017 in Site C. The two-stage stratified random sample was drawn by first stratifying the 'small areas' (a census classification) of Site C according to whether they are formal or informal housing areas. Four formal and seven informal small areas were randomly drawn, thereafter approximately 15 to 20 dwellings from each area were randomly selected to be surveyed. Below is a table describing the sample:

Small Area	Strata	Total Dwellings	Sampled	Sample Percentage
1992319	informal	130	22	16.9
1994914	formal	288	19	6.6
1994741	formal	256	29	11.3
1994089	informal	293	23	7.8
1992991	formal	153	18	11.8
1992324	informal	211	20	9.5
1991913	informal	230	23	10.0
1991350	informal	218	14	6.4
1991106	informal	181	18	9.9
1991945	formal	148	18	12.2
1991464	informal	172	17	9.9

Table 1: Sampling Table (Centre for Social Science Research & iCWild, 2018)

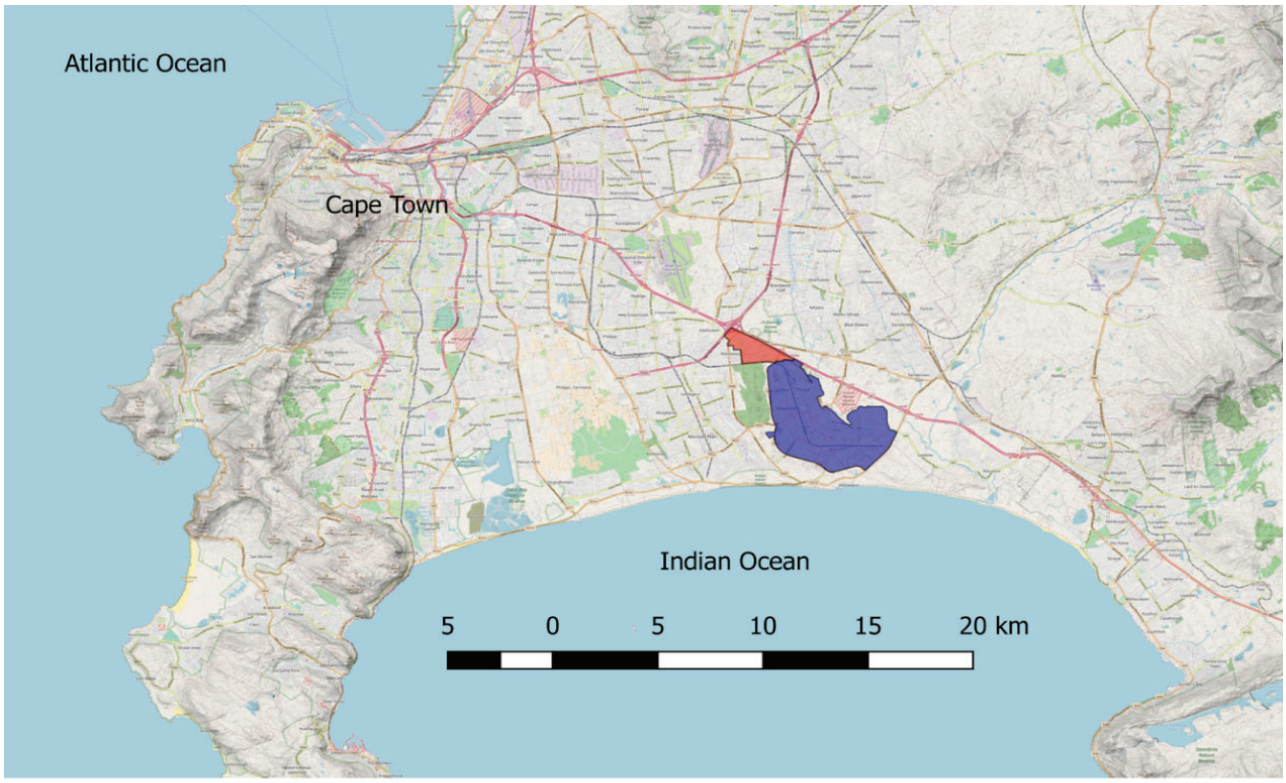

Figure 1: Map of Cape Town with Khayelitsha and Site C outlined (Nattrass, Stephens & Loubser, 2018)

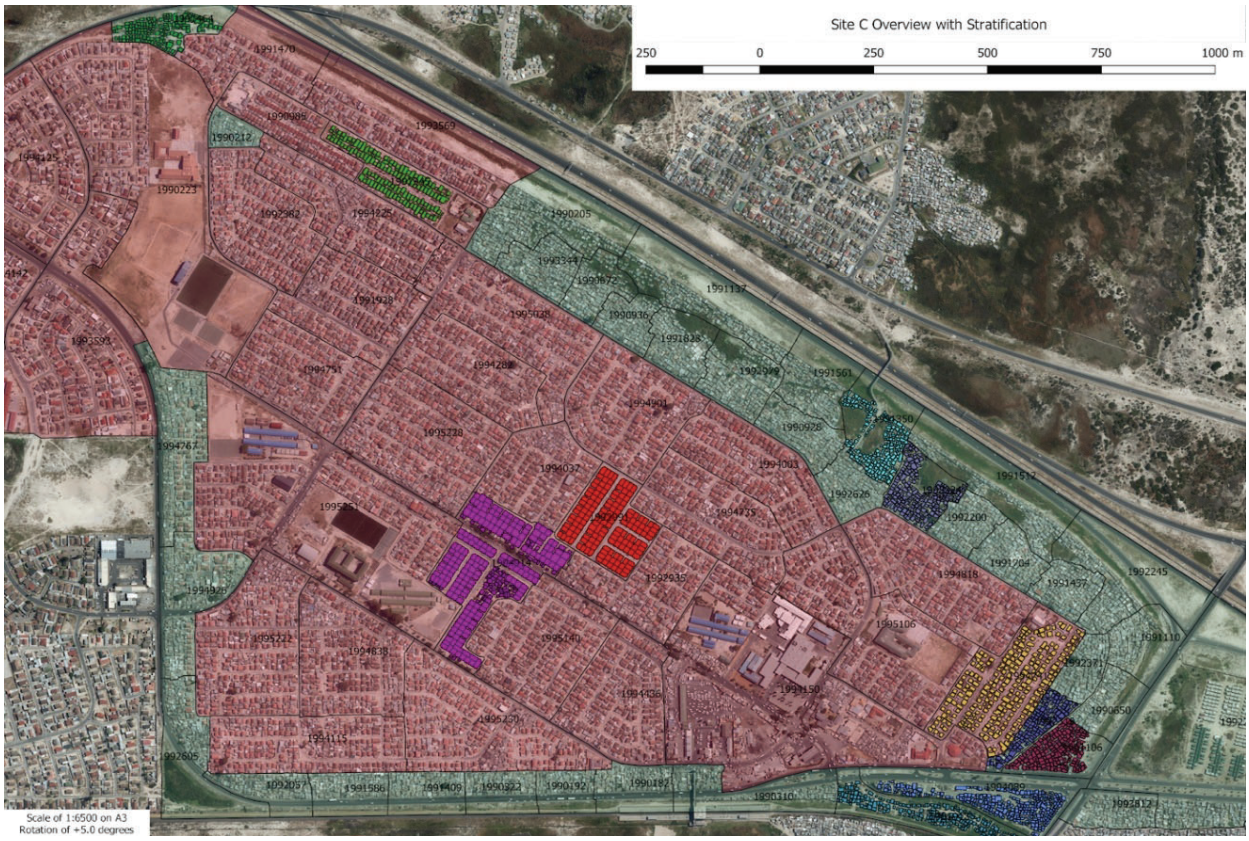

Figure 2: Map of Surveyed Site C (Ikhwezi Park) Areas with Stratification. Map produced by Jed Stephens.

The aim of my thesis then, from a methodological point of view, was to analyse the qualitative data from the survey and place it in conversation with the quantitative data that was collected, together with my own ethnography as a complementary method.

Drawing on my training in social anthropology, I approached this research topic with a strong anthropological angle but soon realised that a more interdisciplinary approach was needed, making use of economics, ecology, sociology and geography. Through this, I embarked on a mixed-method approach that made use of both qualitative and quantitative methods. The primary qualitative methods I employed were ethnography and consulting hand-written notes from interviews conducted by fieldwork researchers. Ethnography can be defined as the practice of spending time in a particular place of interest, having conversations with individuals and conducting interviews. However, the practice extends this, as ethnography urges the researcher to immerse themselves in the context they are studying and to "gather observational data, take field notes to record the participants' verbal and nonverbal behaviour and the context in which these behaviours take place, as well as the researcher's own thoughts, feelings, impressions, and insights" (Maharaj, 2016: 114). This method is thus subjective in nature with its own limitations and ethical demands. Rayna Rapp defines the practice of ethnography as "hands-on research that is open-ended, and locates the researcher as far into the experiences of

the people whose lives are touched by the topic" (2004: 2). Alongside this, as I mentioned, I make use of the written notes on the surveys that are comments by participants themselves and recorded observations by the fieldworker who administered the survey. These notes are insightful since they offer more nuance and narrative, especially in some cases where participants answered a question related to their attitude toward something or a topic that required elaboration.

In some sections I refer to a focus group that was held on 23 June 2018 at the Centre for Social Science Research at the University of Cape Town. The focus group was attended by seven residents from Site C – three women and four men. The focus group was run by Thobani Ncapai and Fazeka Lephaila in isiXhosa and English. Myself and other members of the KRS research team attended the focus group in order to discuss our preliminary findings, pose questions to the participants and have more in-depth conversations about data we wanted to interpret with their input. The entire focus group conversation was recorded, and some parts of the conversation were transcribed and translated. The quantitative data that was collected was processed through the use of Stata version 15, a computer application that generates statistics.

Anthropology and multispecies ethnography

With the emergence of contemporary anthropology, the discipline shifted from how it was characterised several decades ago as 'the handmaiden of colonialism' (Lewis, 1973). More specifically, it changed from a discipline that sought to study the exotic and 'the other' from an ethnocentric perspective to a discipline seeking to produce forms of radical alterity. Since the 1960s, anthropologists have challenged the norms and boundaries of the discipline and radicalised it to take a political stance, intending to highlight the political and economic processes and outcomes that are implicated in marginalisation. For example, the work of Elizabeth Povinelli (2002) on aboriginal communities in Australia challenges systemic oppression and land dispossession; Paul Farmer (1996) introduced the notion of systemic violence when discussing his work in Haiti with Doctors without Borders; and Francis Nyamnjoh (2012; 2015) pioneered and pushed for anthropology and its research methods to be transformed and shaped for the African context to negate reproducing racist and ethnocentric ideologies.

Within the canon of emergent anthropologies across the globe, we have seen the formation of, to mention a few, queer feminist anthropology, medical anthropology and ecological anthropology. Ecological anthropology, which is of particular interest here, is a field of inquiry that contextualises how "human beings and other organisms are bound in webs of life" (Ingold, 2012: 428). Anthropology as a discipline is understood as being human-centred or anthropocentric but this is not necessarily the case, as ecological anthropology illustrates. Seeing the need to expand on nonhuman elements – such as animals, the environment, bacteria etc. – that shape and are shaped by humans, several anthropologists, such as Donna Haraway in her ethnography *When Species Meet* (2008), have shed light on the usefulness of including non-human subjects when engaging with questions of social and cultural life. Haraway looks at designer pets, from lab animals up to trained therapy dogs, and she points to these non-human subjects as being more than just domestic animals living in close proximity to humans, arguing that they are companion species entangled in social life as "socially active partners". The theorist takes this approach in order to illustrate the problematic nature of remaining within the thought process of humans and animals as separate from one another and always functioning within a binary. Furthermore, what Haraway seeks to do is to demonstrate the agency non-humans have and the different and intimate ways in which they shape our lives as humans.

The field of ecological anthropology typically produces multispecies ethnographies seeking to capture the entanglements between human and non-human lives and to comment on how socio-political dynamics affect more than just human life. It is about looking at indistinction, or the "shared, exposed embodiment among humans and animals" (Kopnina, 2017). In *Accessing orangutans' perspectives* (2015), Palmer and her colleagues illustrate what this field of study might look like with all of its opportunities and challenges. The researchers set out to understand the manner in which people and orangutans interact with one another and among themselves in Auckland Zoo, Auckland, New Zealand. Through a multispecies approach that drew on both ethnography and ethnology as a research practice, Palmer and her colleagues point to the importance of moving away from solely focusing on the human and rather embracing non-human life as well. This is evident in their findings which highlight how much is left out in writing about the discourse of reality when it is done entirely through the point of view of humans. What the authors urge for is to make use of anecdotes and empathy in order to capture the daily lives of both the human and non-human in this particular setting. They argue that through doing this, one can represent non-human others in a more ethical and representative manner where they have agency.

Both Haraway's text and the article by Palmer et al. emphasise the importance of representing non-humans with the same agency, although slightly differently and with more restrictions, as anthropologists would hopefully choose to do with humans. On the surface level this might not look like a challenge but in reality, when politics and ethics intersect with the type of representation that both human and non-human actors require, such as in Site C, it becomes apparent that attempting to include the non-human's perspective can be difficult and uncomfortable.

The discomfort of a multispecies approach

Multispecies ethnography was an inspiration for thinking about rats and their entanglements with humans, but I was faced with several discomforts when applying this approach. Similar to Bron Taylor (2017), a researcher in environmental studies and ethics, I believe that erasing the human-animal dichotomy can raise uncomfortable ethical questions. Taylor illustrates this through his discussion of the case of the gorilla named Harambe that was killed after a child fell into its 'cage' at a zoo in Cincinnati (USA). The child was not harmed in the incident and yet people felt like the child's life was more valuable and threatened at the time. Others argued that Harambe's life was more valuable than that of the child's since the gorilla is an endangered species. Such debates are not resolvable, they simply display opposing values. In the case of rodent control in poor communities, a strong argument can be made that both humans and animals are being violated/oppressed – raising difficult questions about whose rights to privilege. Should preference be given to the rights of the rat (as assumed by the NSPCA) or the rights of the community to decide on their own rodent control according to the values they hold about animal treatment? Taking the stance of multispecies ethnography can be useful in thinking about the forms of violence involved and how they affect non-human others. But this does not necessarily provide the tools needed to grapple with such ethical questions about contrasting rights.

In conducting this research, I found myself asking whether a multispecies approach can be applied to both the cases of (slow) violence against humans and against rats (poisoning and trapping) in Khayelitsha, Site C. In the chapters that follow, and taking into consideration my discussion on the history of Site C, it is possible to see why this is a challenging task. The rat-drowning case study in Site C where the SPCA intervened speaks to the core of the discomfort that is present in this realm of research. Similar to the residents of Site C, I want to take the position that their livelihoods need to be given serious consideration when it comes to the impact that rat infestations have on them and that through this, it is possible to justify why rats should be killed through a method such a drowning. On the other hand, the SPCA's stance of trying to understand things from the rat's perspective and to 'speak for the rat' is in some ways what a multispecies approach advocates. Yet there are significant problems here. Given that the SPCA's actions did not stop the City from killing rats, but rather forced them to return to poison, questions can be raised as to whether the rat, if asked, would have preferred to be drowned or poisoned. If the SPCA was seeking to nudge society towards an animal rights perspective – to understand the rat as having an equal right to life and a purpose for existence,

just as humans have been understood to have, then other challenges emerge. Should I take this approach, it requires the removal of the human-animal dichotomy, representing both species as equal. But as I have already stated above, this brings about a certain discomfort as I am faced with the ethical question of whether this approach will result in forsaking the struggles faced by people in Site C and taking a stance that is grounded in 'bourgeois values' (Nattrass, Stephens & Loubser, 2018). This concern is especially valid in the South African context where animal rights have been historically prioritised above those who are not white through actions such as conservation efforts where black people among others have been dispossessed from their land in order to protect animals and the environment, which is deemed to be more important (Khan, 1994).

Furthermore, taking my positionality in this research into consideration, as an educated middle-class white male, I am far removed from the realities of rat infestations faced by people living in Site C and by virtue of this it would be easy to take the stance that the rat's life is just as important as that of the human's life, since this reality is not something I have experienced. At the same time, I do recognise the value of representing a narrative that extends beyond the human, realising how this could provide a more nuanced understanding of contested realities. The discomfort comes to the fore when trying to construct a narrative where a story can be told about the effects on both humans and rats in Site C, without making one the victim and the other the destructive character. In the majority of the literature produced on rat infestations among humans, especially in the realm of public health (Roomaney et al., 2012; Jassat et al., 2013; Mngadi, 2016), rats are almost overwhelmingly portrayed as destructive (even malicious), a nuisance and diseased without probing people's understandings and perceptions of the animals.

Throughout this dissertation, I grapple (implicitly and explicitly) with which narrative to privilege and I attempt to merge these accounts in order to tell a story that can mobilize various realms of politics. In doing so, I turn to Eduardo Kohn's *How Forests Think: Toward an Anthropology Beyond the Human* (2013) in which the anthropologist advocates for a multispecies approach or an 'anthropology beyond the human' approach that seeks to illustrate and showcase "how the human is both distinct from and continuous with that which lies beyond it" (2013: 9). What the author relays is that the human-animal binary does not necessarily have to be erased but rather addressed and explored to come to an understanding of what exactly we mean by the notion of human. Kohn continues by stating:

> "Attending to our relations with those beings that exist in some way beyond the human forces us to question our tidy answers about the human. The goal here is neither to do away with the human nor to reinscribe it but to open it. In rethinking the human we must also rethink the kind of anthropology that would be adequate to this task." (2013:6)

Considering this, the manner in which I continue this dissertation is by delving into the various contestations and occasional contradictions between rats, humans and the environment to understand what lies 'beyond the human' and what this could tell us about particular bodies in relation to others. When I refer to that which lies beyond the human, I refer to methodology and analysis that does not seek to solely focus on the human but rather to examine the human in a particular setting as continuous with various other non-human actors, looking at how they both shape and are shaped by humans. On that note, I seek to respond to the following statement by Kopnina, through this dissertation, when the author states: "Integrating ethnography with both qualitative and quantitative descriptions of animal behaviour can be useful for representing both species' daily lives and for comparing interpretations obtained from different research methods" (Kopnina, 2017).

Ethics

This research received ethical clearance from the Commerce Faculty Ethics Board (REC 2018/004/023) (see appendix 2). In an earlier stage of the research, I also obtained ethical clearance from the City of Cape Town (Ref. 7963).

Like most research projects, this one took ethics of research very seriously and seeks to maintain good ethical standards before, during and after the research has been conducted. I align what I have produced here and my research practices to the UCT Commerce Faculty Research handbook[3], the UCT Commerce Faculty research ethics policies[4] as well as the Anthropology Southern Africa ethical guidelines[5].

I am confident that this research project did not cause any harm either psychologically or physically to any participants during and after the research process. All participants were given a consent form (see Appendix 3) that outlined the research objectives, why I asked them to participate in the study, what would happen to some of the things they tell me and how and for what it will be used. All consent was obtained by myself verbally and through the consent form. No minors were included as participants in this study. All participants had the right to withdraw from the research process at any time, as it was outlined for them in the consent form. Also indicated on the consent form was that their data will be anonymous and confidential, however, should they want it to be public they had that option. In order to keep data confidential and anonymous it was stored on my personal computer in a file that requires a password to access the data. The names, addresses and contact numbers of participants were removed from the document with data related to them and compiled in another document which links a number to their personal information.

The ethics of representation is a field that is often filled with contestations around how researchers should write about people or places they are studying. When I refer to ethics or ethical practices here, I am referring to ever-shifting moral principles and ideals. These are used to reflect upon what is harmful or unjust in various forms toward humans and non-humans. This is done through a feminist approach that strives for justice through equity and dignity across the lines of race, gender, class, ability, sexuality and several other intersecting

[3] http://www.commerce.uct.ac.za/Downloads/Commerce%20Ethics%20in%20Research%20Handbook%202018.pdf
[4] http://www.commerce.uct.ac.za/Downloads/Faculty%20Ethics%20in%20Research%20Policy.PDF
[5] http://www.humanities.uct.ac.za/sites/default/files/image_tool/images/306/Research/Researchethics/Anthropology%20Southern%20Africa%2005%20Ethical%20guidelines%20and%20principles%20of%20conduct.pdf

social and cultural identifiers. Feminist philosopher Linda Alcoff addresses the ethics of representation through pointing to the researcher first. In 'The Problem of Speaking for Others' (1991: 7) she states that two things are vital to engage with critically when doing and writing up research; firstly, the researcher's location which is "epistemologically significant" and secondly, "that certain privileged locations are discursively dangerous" in the sense that they could result in increasing the oppression of a particular group of people. When Alcoff speaks about location, Adrienne Rich's 'The Politics of Location' (1987) comes to mind through which the author makes the argument that who you are, where you come from, and what you are read as or signify in particular contexts, matters deeply. What this concept describes is the politics of location which is highly contextualised and places the individual at the core of its understanding, viewing their body as a signifier that is constructed through social norms and hegemonic ideologies. The body – an individual in this case - finds themselves located within particular realities that shapes one's life. The importance of engaging with the "layered self-produced through difference" (Minh-Ha, 1989: 94) and putting that into conversation with what or whom you are writing about, forms a discourse of representation and brings to light the power dynamics at play. If we were not to engage with the location from which we are writing and also to admit the privilege that comes with some specific locations in relation to researched subjects, we as researchers end up feeding into what Trinh T. Minh-ha (1989) warns against when the author states that anthropology, for example, is:

> "mainly a conversation of 'us' with 'us' about 'them,' of the white man with the white man about the primitive- nature man ... in which 'them' is silenced. 'Them' always stands on the other side of the hill, naked and speechless. 'them' is only admitted among 'us,' the discussing subjects, when accompanied or introduced by an 'us' ..." (as cited in Alcoff, 1991, 65-67)

Politics of location

After studying rats in New York City for a whole year, Robert Sullivan noted:

> "To know the rat is to know its habitat, and to know the habitat of the rat is to know the city." (2008: 14)

These words by Sullivan have stuck with me since I first read them. What Sullivan points to is the fact that one comes to learn some key characteristics of a city when looking at where rats are concentrated. In the case of New York, it is usually run-down areas that are quiet and unoccupied, such as alleyways where trash piles up – abandoned spaces that are forgotten. I do not seek to draw a parallel between New York and Cape Town in this instance but what resonates here is the notion of 'knowing'. Sullivan was a native New Yorker at the time, knowing the ins and outs of the city and where to locate areas that rats would thrive. In my case, Cape Town's quiet city centre alleyways also serve as flourish zones for rats but where they mostly thrive are in areas that people who look like me and who have my historical background are not generally exposed to. I have lived in Cape Town for almost five years now and up until I embarked on the research for this project I realized that I did not 'know' 'the city'.

Having knowledge about a place extends beyond knowing which road leads to where, how far one place is from another, where to find the best restaurants or naming the different suburbs. The knowledge that you have about the place where you live is embodied and is read through a social code. Fiona Ross (2004) writes exactly about this as she reflects about her fieldwork in an informal settlement in the Western Cape. During her fieldwork she attempted a cartographic exercise inspired by Michel de Certeau's notion of mapping social space alongside physical space (1988), with one of her interlocutors. Ross points out through her reading of de Certeau, "that understanding - 'reading' - a space has much to do with one's own position in it: the views from 'above' and those from 'on the move' differ in important ways" (2004: 35). Through this, she points to the importance of understanding that we as people embody spaces and they embody us as it is a constant shaping process between the two. Viewing a space, or trying to make sense of it from above, as Ross points out, does not necessarily convey the everyday sensual and lived experience of that space. Rather, it is the built-up knowledge through the senses and experiences of a space through which you come to understand it – it's rules of engagement, behavior, norms and so on. This is to come to an

understanding of the social code which we often comply to. Should you deviate from the common social code in a given setting, you could be read as an outsider with several social and political attachments. In my case, I was not familiar with the everyday life in Khayelitsha as well as several other places in the city of Cape Town since I embody a different set of social norms and understandings. Ross also points to this when she states:

> "coming to know a space [is] not the product solely of a visual relation with a landscape but an embodied one. The experience [in a particular space] speaks to changes in emotional and intersubjective experience over time, to an interrupted sense of bodily placement in relation to features in a landscape, and to a cognitive puzzle about the relation of the senses to the means, modes and products of categorisation and classification." (2004: 37).

Cape Town is a city that is extremely segregated along the lines of race due to South Africa's colonial and Apartheid history (discussed in Chapter 2). Because of this segregation, life experiences are vastly different among racial groups in the city. I would go so far as to say that polar opposite worlds exist in this place we call Cape Town; worlds that have their own laws and social contracts. What this means is that crossing between those worlds requires a shifting in one's habitus, negotiating and demanding different social and cultural capitals (see Bourdieu, 1986), and the reality of this is that it is not always possible. Terrence Turner (1980) uses the term 'social skin' to refer to the way we are perceived by others, but also how we perceive ourselves through viewing the surface of the body. Turner urges us to understand that we shape our perceptions of one another visually, at times through presumptions of what we already know about a given context and in this way, we shape an understanding about who someone is, where they come from and what their socioeconomic standing might be. As a white man in South Africa and Cape Town in particular, I wear a social skin that represents and carries an entire history of settler colonialism and Afrikaner Apartheid rule, making me a beneficiary of an unjust past in an extremely unequal democratic South Africa. Self-reflexivity is what provides this insight – to know what I am read as – and through various moments in the field work I conducted, I was told what my social skin was showing. It is therefore vital that this thesis be read in between the lines of my social skin – both from the emic (insider) and etic (outsider) perspective and that it be contextualized in this manner.

Chapter 2: Contextualizing Site C, Khayelitsha

"the past is never dead. It is not even past." (Faulkner, 1951: 17, cited in Nixon, 2011)

Living in an age where moments are labelled per era, as 'post-colonial', 'post-war', 'post-apartheid', there is a tendency to think about a past that is finished, over and unrelated to contemporary societies. However, as Faulkner's quote above suggests, "the past is never dead. It is not even past". I argue that the 'post' in post-colonial and post-apartheid South Africa is not something of the past – it is not dead. When South Africa was declared a democratic state in 1994, claiming that all who live within the country are free and equal, this created a genuine 'post' moment with respect to politics, but failed to put an end to many of the structural processes (with roots in colonial and apartheid rule) that continued to generate ongoing slow violence. Understanding the history of South Africa, but more importantly Site C Khayelitsha, is of importance since the past holds keys to understanding the present-day realities of inequality, poverty and violence.

Khayelitsha, 25 kilometres south-east from Cape Town, meaning 'new home' in isiXhosa was established in 1983 by the National Party[6] in order to accommodate the growing numbers of black Africans migrating predominantly from the Eastern Cape to Cape Town in search of employment. It was envisioned that this area would serve as a residential space for 'legal' black African migrants working in the Cape Town area and it was a way for P.W Botha, who was Prime Minister at the time, to illustrate what he meant by "promising fair treatment for black people who resided in urban areas" (Cole, 2014). Gugulethu (a small formal African settlement) and Crossroads (an informal area) had become heavily overcrowded with shack dwellers, and the formation of Khayelitsha served to alleviate the 'problem' whilst extending control over the people residing in the area by having an established police force present. In this way, black Africans were moved further away from the city and the government was able to control economic activities in the area (Cole, 2014). In 1985, the first residents were already living in the Site C area which had small newly-built brick houses. For black Africans to be able to reside in Khayelitsha they needed to have legal status, which meant they must have lived in the area for about 10 years and if they were not 'legal', they would be removed and taken back to the homeland area, which was most likely located in the Eastern Cape or Transkei (SA History, 2013). In 1984, approximately 100 000 people were removed. "By 1986, some

[6] Political party founded in South Africa in 1914 by Afrikaner nationalist in order to promote the interests of the Afrikaner ethnic group derivative from the Dutch.

8300 people had occupied 4150 site and service plots at Site C, site and service mains demarcated plots, each with a tap and toilet" (SA History, 2013).

The Apartheid government's policies – such as the Urban Areas Act of 1945 – sought to control the influx of black Africans migrating to the Cape area and in many ways, Khayelitsha's formation was built on the premise of this policy. When the National Party came to power in 1948, it promised to keep the interests of the white Afrikaner population at heart and thus, seven year later, introduced the Coloured Labour Preference Policy of 1955. This was implemented through the Black Labour Regulation act of 1953 and Urban Areas Act of 1945. A line was geographically drawn, "roughly [in a] southeasterly direction through what was then the Cape Province, [it] demarcated the area of operation of this policy and came to be known as the 'Eiselen line'" (Khayelitsha Commission Report, 2014: 31) as enforced by Dr. Eiselen, the Secretary of Native Affairs at the time. The point of this was that the areas to the West and South of the Eiselen line were to be areas where coloured people would be given preference in the labour market in order to improve their social status relative to black Africans and to discourage further in-migration of Africans (Khayelitsha Commission Report, 2014).

In the present-day South African context, the racial category 'Coloured' does not mean the same as it is understood elsewhere, such as in the USA or in some parts of Europe, where it derogatorily refers to black people or people of mixed racial background. Coloured as a racial category was strategically deployed by the Apartheid government to categorise people who are speculatively descendants of Khoi and San people or of mixed racial make-up. This is however too limited of an outline as Zimitri Erasmus (2001) illustrates in her argument, where she states that coloured identity is not about race mixture but rather about cultural hybridity. She continues that it is a negotiated identity category in the contemporary South African context and that it is made and remade by those ascribing to the category, therefore making it a social identity (Adhikari, 2004). However, through the creation of the category 'coloured', the Apartheid government created a racial hierarchy which placed black Africans at the bottom and white Europeans at the top while 'rating' coloureds as being above black Africans. The Coloured Labour Preference Policy (year?) placed limitations on the number of black Africans who could be employed in particular industries and areas, and who could have access to housing, land and education. It is also important to keep in mind the gendered element to this policy as Cole (2014) argues "it specifically targeted black African women because, as Dr Eiselen argued, allowing women to live in the urban areas was a key driver for consolidating the presence of a settled and permanent black African urban population" (2014: 8). Black

Africans already established in the city of Cape Town had to abide by the Groups Areas Act of 1950 where they had to live in areas such as Langa, Gugulethu and Khayelitsha. The Apartheid government failed to provide sufficient housing in existing townships, resulting in the steady growth of informal settlements.

Khayelitsha's emergence as an Apartheid project is important for understanding the historical and structural forces that shaped the poverty and inequality which is still evident in the area today. In an opinion piece published in the *Cape Argus* in 1983, David Dewar and Vanessa Watson argued that Khayelitsha "is a recipe for a social and economic disaster" (1983). They went on to argue that people would face high transport costs with lengthy and enforced daily commutes to the city, inadequate social and recreational facilities and isolation from the rest of the city. This argument was grounded in the notion that the people who had to live in Khayelitsha were already experiencing severe social and economic problems. Its geographic isolation from the city centre remains an obvious ongoing source of disadvantage for people living in Khayelitsha.

According to the latest census data that was collected in 2011, there were 391,749 people living in Khayelitsha, 98.6% of which were black Africans. The area comprises a mix of formal and informal settlements[7] and is characterised by a high population density. In 2011, "approximately one half of whom lived in formal houses and one half in shacks, mostly in informal settlements rather than backyards" (Seekings, 2013: 1). 10% of the population group had no access to a toilet while 6.6% made use of a bucket toilet. Alongside this, 18.8% (70 514 people) had no income while the average annual income per household was R20 000, meaning that half of the population falls into the poorest income quintile for the whole of Cape Town (Seekings, 2013). While these social and economic markers are telling of Khayelitsha, it is important to keep in mind what Seekings reiterates when he states that:

> "Khayelitsha is not homogeneous, however. Unemployment and poverty are more pervasive in informal settlements, and in the northern (and oldest) and southern (and youngest) parts of Khayelitsha than in the central part. Khayelitsha is differentiated economically." (2013: 1)

[7] "An unplanned settlement on land which has not been surveyed or proclaimed as residential, consisting mainly of informal dwellings (shacks)." (Source? Same as below?)
Definition of an informal dwelling: "A makeshift structure not approved by a local authority and not intended as a permanent dwelling" (Housing Development Agency, 2013: 6).

During the Apartheid era, African townships received inferior services to white areas – and this inequality in service provision remains an issue today. In 2013, the Social Justice Coalition (SJC) compiled a report titled: *Wasteful Expenditure: Report of the Khayelitsha Refuse Removal and Area Cleaning Social Audit* (2013) in which the collective investigators described the inefficient and corrupt waste removal system in Khayelitsha. The investigation was sparked by service delivery protests in Khayelitsha in August 2012 when community members from the BM section in Khayelitsha took to the streets "to protest over houses and sanitation, forcing the closure of a section of the N2 highway" (Mail & Guardian, 2012). In Chapter 3, I delve deeper into the SJC report and its findings in relation to the contemporary service delivery issues in the Site C community.

Concern was also raised about crime in the area and failures in local policing by local community and politicians. This sparked the Commission of Inquiry into Policing established in 2012. In 2015, it was reported that there were 7962 violent crimes committed in Khayelitsha[8] which includes aggravated robbery, murder, common assault and rape (Western Cape Government, 2015). The Khayelitsha area had a claim of 41.2% of all crimes committed in the Western Cape province during this time. On a larger scale, the Western Cape accounted for 27.99% of all crimes committed in South Africa. In the latest statistical report produced by the South African Police Service (2018), which records all documented crimes committed between April 2017 to March 2018, the Western Cape had 10 police stations in the top 30[9] police stations with the highest number of reported murders. Khayelitsha ranked number 6 (192 reported cases) in the whole of South Africa. In line with the top 30 rankings in the report, Khayelitsha also ranked number 11 for common assault and number 4 for robbery with aggravating circumstances in the whole of South Africa.

The physical geography of Khayelitsha is another important consideration because the area is prone to flooding and parts of it fall within the False Bay Conservation Park – as outlined in a report by the city of Cape Town in 1982 (Rebelo et al., 2011). The wetlands in Khayelitsha form part of the Kuils River catchment that runs from the False Bay area to the Tygerberg Hills (Mathenjwa, 2017). Khayelitsha was built on land once referred to as the Kuils River dune-slack wetland system (Brown and Magoba, 2009). This "was lost when the dune slack was bulldozed into the Kuils River wetland system to create space for low-income housing" (Mathenjwa, 2017: 17) in Khayelitsha. Goodness and Anderson (2013) argue that because of

[8] Consisting of the precincts of Khayelitsha, Harare and Lingelethu West.
[9] The top 30 accounted for 20% of all murders committed in South Africa

this, residents in Khayelitsha and other parts of the Cape Flats experience seasonal flooding due to the elevated slack water table which causes damage to several livelihoods, especially for those living in informal settlements. They also experience strong winds due to the landscape being flattened when the area was bulldozed and built upon. This means that Khayelitsha residents have to endure physical hardship with regard to seasonal flooding and wind, often resulting in accumulations of sand, litter and, of course, rats.

Chapter 3: The River

The sky is filled with clouds and I am sure it will rain at some point today. It has been so dry with the ongoing drought. The road is busy with people walking everywhere, loud music is coming from stalls selling food and furniture lies next to the path on which we are walking. There is an occasional dog running across the street toward the side where taxis are lined up next to the road where a long black pipe is laying, holes in it and water running out of it. As we cross the road, Thobani, a local from Khayelitsha and the KRS interviewer who joined me today, tells me that the taxi owners wash their taxis there and that the water is running the entire day. He does not seem happy about that. Thobani lives in a formal house in Site C where they need to abide by the water restrictions as prescribed by the city. As we reach the other side called Island, several greetings come our way "Molweni! Unjani?"[10]. I utter the basic isiXhosa that I know "Ndiphilile, unjani?"[11], "All right, sala kakuhle!"[12], while the men and young boys laugh at my strange pronunciation as they wash the taxis. I exchange an awkward smile. All of this is awkward as eyes turn my way and I become a sort of curiosity. There is no longer any sidewalk or road to walk on and instead, we are walking on moist sandy textured ground strewn with the elements of human presence such as bottle caps, straws, sweet wrappers and bits of unidentifiable commodities morphing into the soil. The houses that are made out of tin roof pieces, milk crates and other materials stand very close to one another and do not follow any particular line or row. In between a few houses, there are rows of toilet stalls built on concrete with locks on the doors. As we pass a few houses the air becomes thicker with a smell that can only be described as a mixture of animal dung, a full garbage bin that has been standing in the sunlight over a weekend and that will only be emptied on Monday morning and that of the sewage 'farm' we used to drive past where I grew up. It is the river that is nestled between the dense houses, although it looks more like a ditch. The river is filled with a muddier version of the ground we are walking on, food waste, used baby diapers, blue refuse bags filled with trash and a few pigs snuffling for any food they can find.

A man named Elliot, who is in his late forties and has lived in Island for 21 years, comes up to me and introduces himself, asking if I am back to ask more questions about rats. He goes on to tell me that the river was cleaned about three weeks ago and that it looks relatively clean right now as opposed to the way it usually looks. Elliot walks me toward his house and tells me how he phoned the environmental health offices throughout the past week, but no one has

[10] Hallo, how are you?
[11] I am well and you?
[12] Farewell/Goodbye.

responded to him yet. He has been sitting with rat problems for many years now, he tells me, and he points to the river you can barely see from where he lives – tucked away between other houses, almost on the train track. "That *vrot*[13] river is the problem here, all the rats live and eat there and then they want to come and play in our houses," he goes on. Elliot does not like rats much or the river full of garbage, but as he says, it is not like he or others living close to the river have another choice but to throw waste into the river. "We get one bag for the whole week, this blue bag, and then when it is full you must take it to that green waste containers there on the corner," he points out, "and then that is it, no other bags, no trash bins, just one bag for one week and sometimes that container is closed for the entire day".

Elliot takes me into his house where I am greeted by a small kitchen in the front with flowery tiles and a vegetable stand filled with onions. In the next room is his and his wife's bedroom. As I walk into the bedroom Elliot is looking for something in the corner close to the television which is flashing images. His wife awkwardly greets me from the bed and he introduces me as "the rat researcher". She laughs, introduces herself as Maria and tells me that if I am looking for rats, I came to the right place. Elliot finds what he was looking for and sits down at the foot of the bed in front of Maria. He holds up an open book and in the middle, there is a flat yellow sticky object which he explains to be his rat trap (a glue trap). "The rats want to eat the book that I put in this corner and when we sleep they climb onto it, get stuck and then they just sit there until I come to throw them away". He goes on to tell me that he does not really enjoy doing this and that he feels bad for the rats and mice he catches, but he has no other choice because they will harm him, his wife and their belongings. Elliot shows me out of his house, and we walk back to the river a few meters away. Looking at the pigs, dirt and thinking about Elliot's story, I cannot stop seeing the abundant hope in his eyes as he holds the number of the environmental health unit on a piece of paper in his hand. I reassure him that they will probably pay him a visit in the next week, while knowing well that many people like Elliot are also waiting to be paid a visit for the rat problem that will most likely be recurring for as long as they live there.

[13] Rotten or dirty in the Afrikaans language.

Figure 3: The River in Island, Site C. Photo by Pieter du Plessis.

Figure 4: The river in Island, Site C, from a different angle. Photo by Pieter du Plessis.

The above piece of 'flash ethnography' points to several realities in the life of Elliot, who resides in Island, Site C, Khayelitsha. It provides an insight into the negotiations required for living in an area infested with rats but moreover, the 'sense-scapes' (Ross, 2004) that are entangled in the everyday life and that shape lived experiences. Fiona Ross (2004) defines sense-scapes as the ability to make use of one's senses – smell, touch, sight, hearing, taste – in order to understand a physical and social scape or in other words, space. The author states that "an understanding that takes seriously the ways that we engage in and with space/place, filling it with activity, relations, sensual engagements, interpretive activity, emotions and experience over time" (2004: 41) is important as it relays the ordinary lives and actions of people – not only the surface that can be observed. The manner in which Ross wrote up her fieldwork done in an informal settlement in the Western Cape illustrates the manner in which sense-scapes emerge as a useful ethnographic tool. She writes the following where she describes smell in the area and what it indicates about time and movement, but also physical space:

> "Early winter mornings with their smoky smell as the gallyblikke are heated. Wafts of weak coffee - the morning's staple intake - and the scent of left-over food from the day before being warmed for breakfast. Mid-morning: the scent of green soap as women wash their laundry. Midday, the smell of inadequate waste disposal systems begins to waft in the heat. Evening: the smell of food preparation; samp and beans in the poorer section, cabbage and greens in the areas inhabited by Rastafari, meat simmering in the shacks of those who received government grant payouts or wages this week. The smell-scape would reveal rhythms of the day and also of the week and time of year: at different times different foods are prepared, different activities take place outdoors. Midwinter: the smell of damp clothes, carpets and floor linings, the smell of rusting and soggy cardboard, the smell of wetness as the water table rises. High summer: the smell of dust and sweat and damp ground where the laundry water is thrown. These accounts reveal not only the surface - shacks, paths, natural features - and the social - commensality, etc - but also the three-dimensionality of space: a rising and falling water table, heating and cooling air temperatures, and so on." (Ross, 2004: 41)

It is with Ross's notion of sense-scapes that I approach the way in which one could make sense of a place such as Island and its everyday reality.

In this chapter, I explore the river that Elliot refers to by locating the political ecology, providing the necessary insight to understand everyday social life in a space such as Island within Khayelitsha. Political ecology is a field of research that can be understood as exploring the "interrelations between human societies and their respective biophysical environments and political economy's analyses of the structural power relations occurring between these societies" (Little, 2007: 85). I make use of the river as a lens to illustrate that although I

embarked on understanding the experiences of living among rats in Island, what emerged is a story that is not only about rats but also about slow violence (Nixon, 2011). I do this by discussing the environmental degradation, service delivery, and violence, all as elements that shape the political ecology of Island. The river stands as a contentious space, one where not only the rats emerge, according to the residents in the area, but also a site that is imagined and in actuality, abject – dirty and smelly. In order to place the different elements that I will discuss in this chapter in relation to one another, I argue that neoliberal practices, employed in post-apartheid South Africa and specifically in the city of Cape Town, reside partly at the core of what we can observe in the slow violence that has become the ordinary and everyday reality for some residents in Site C.

In *Reigning the River: Urban Ecologies and Political Transformation in Kathmandu* (2011), anthropologist Anne Rademacher provides an ethnographic account of the Bagmati and Bishnumati rivers of Kathmandu, the capital of Nepal. I turn to this piece of literature since it partially informs my understanding of political ecology and how I want to foreground the rest of this discussion about the river in Island. *Reigning the River* (2011) tells the story of the two rivers during the political upheavals which occurred between 1997 and 2008, using a political ecology lens. With the growth of a housing demand, which resulted in the proliferation of informal settlements throughout the city of Kathmandu, both the Bishnumati and Bagmati rivers' sand flats in the riparian zone became common living sites for people seeking residential land and the exposed riverbed corridors turned into informal settlements. What followed was excessive pollution, which Rademacher traces through her engagement with the political economic variables, such as the Nepalese state failing to provide adequate housing for those living close to the river bank, poor and restricted access to health and education services and land dispossession. The overarching discussion in Rademacher's ethnography makes sense of different forms of intervention – or a lack thereof – by the state, activists and those directly affected by the environment – all clashing through competing visions, meanings and political aspirations about how to restore the river and the core reasons for this pollution. One of the cornerstone features that Rademacher takes into account is the concept of urban ecology. She argues that urban ecology is not only responsible for "biophysical transformations that take place in and with cities. It is also to recognize that these transformations are produced through and together with social and political orders". Urban ecology, she goes on, "must be defined against the stresses of a population that has been destabilized by violence and the vagaries of power [within the context of Nepal]". Rademacher's case study illustrates the interconnectedness that neoliberal policies – the privatisation and commodification of water

removal, water provision and provision of housing - have within people's livelihoods and the natural environment that gets shaped and shapes those livelihoods. The author's approach resonates with my argument in this chapter about the contentious river and how, as a space in Island, it can be telling of the political ecology. Rademacher's manner of defining urban ecology is also of great importance in this chapter as it serves as a backdrop for how I utilize political ecology as an analytical tool. Similar to Rademacher, I seek to highlight various forms of violence that are entangled in several elements (systems) within and around the river.

Since I have already pointed to the fact that I will look at neoliberalism and neoliberal practices related to the river, a discussion about what exactly I mean by these concepts should also form part of the backdrop for the rest of the analysis in this chapter. In *Rethinking the South African Crisis: Nationalism, Populism, and Hegemony* (2013) Gillian Hart provides a compelling outline of and beyond neoliberalism within the post-Apartheid South African context. Hart (2013) showcases the impact and emergence of neoliberalism and neoliberal practices throughout the process of de-nationalisation (the fall of the Apartheid nationalist party and state) toward re-nationalisation (the building of the new democratic South Africa and state). Hart's main aim in the text is to provide an analysis in order "to grasp the devastating dynamics of South Africa's racial capitalist order" (2013: 22). She takes issue with the fact that many poor black South Africans have remained within the same dire circumstances 19 years after Apartheid, and calls out the hegemony that the African National Congress (ANC) government has over economic practices and reformation in the country – not completely taking to heart the interests of the very people for whom the party fought, namely, economic and socially disadvantaged black Africans and other marginalised groups. The author points to neoliberalism as being often "understood as a class project and manifestation of global economic forces [at the local level], as well as a rationality of rule [and governmentality]" (2013: 6). Furthermore, Hart points out that the concept is usually used to refer to a simultaneously local and global economic system in which 'free markets' are encouraged and extended to all parts of public and personal life. Neoliberalism emphasises the role of the market, including the creation of markets where they did not previously exist through privatisation in areas such as health care, sanitation services, etc. (Harvey, 2005). Hart acknowledges that the concept of neoliberalism is useful for understanding local economic practices, and specifically contradictions of local government in South African towns and cities, as it makes it possible to view what is happening at the local level in combination with global economic formations and shifts. She states that "local government has become the impossible terrain of official efforts to manage poverty and deprivation in a racially inflected

capitalist society marked by massive inequalities and increasingly precarious livelihoods for the large majority of the population" (2013: 5). The manner in which local governments in South Africa can apply policies differently and make use of private companies to fulfil service delivery duties such as waste removal, means that there will be differing outcomes. In the case of Site C, it is evident that the local government is not able to monitor and ensure effectivity whilst tax monies go to waste and the literal build up and mismanagement of waste remains a problem – all while they are able to simply blame the private tendered companies and not take responsibility themselves.

Through Hart's research in South African towns such as New Castle and Ladysmith in the KwaZulu-Natal province, she illustrates how local municipalities were allotted new resources and more responsibilities in the post-Apartheid era in order to provide adequate but basic services such as waste removal. However, at the same time, these local municipalities were also subjected to austerity measures as well as surveillance and control by the national government. This friction resulted in the commodification of basic services, as I will also illustrate through my discussion on waste removal in Site C, which derailed pro-poor policies, popular democracy, and government-civilian relations. Through this, Hart seeks to demonstrate the usefulness of neoliberalism as an analytical tool, while also noting that we need to think about the frictions between de-nationalisation and re-nationalisation as an ongoing project in the post-Apartheid South African context. This discussion not only outlines what I understand and mean by neoliberalism, but also calls attention to that which lies beyond an analysis of neoliberalism, is important to keep in mind specifically in relation to the manner in which waste is removed in Island, Site C. Even though I continue to use the terminology – neoliberalism and neoliberal practices – I also aim to showcase what lies beyond this analysis – within the frictions and contradictions.

Waste (mis)management

When it comes to waste removal, the City of Cape Town's policies relate to the ways that slow violence manifests through those forms of 'delay and accumulation' – waste accumulating due to a delay in service delivery, which in return results in attrition. Notably, this means that the environment suffers under the pressures of an ecological system out of balance. It is important, however, to look at the system pertaining to waste removal in Khayelitsha Site C's informal areas such as Island and how it is one that continuously fails to provide a dignified service to residents. In the formal areas of Site C, residents are provided with 240 litre 'wheelie bins' which are serviced at least once a week by refuge removal contractors, contracted by the city of Cape Town (Green 2018a). However, residents in informal areas have to make use of a 'door-to-door' black bag collection system since the same infrastructure – such as roads – is not in place in these areas. In this section, I will discuss the formation of the current waste removal system and I will illustrate its failure as well as how it is a product of neoliberal practices that continuously neglect poor black South Africans in informal township spaces.

Figure 5: Masiqhame Trading 729 CC cleaners using a wheelie bin to remove garbage bags from informal areas and taking this bin to one of the containers. Photo by: Emma Green (2018).

Faranak Miraftab (2004) writes specifically from the Khayelitsha context in 2000-2001 when a somewhat different waste removal system was in place. At the time, there were three waste collection strategies in operation in Khayelitsha. "These include[d] a partnership scheme that relies on the private sector hiring non-unionized, unemployed local men and women, known

as the Billy Hattingh (BH) scheme; an exclusively women's scheme that relies on local women as casual workers (known as the Masicoce Campaign); and several all-women volunteer groups (promoted through the Waste-wise Campaign)" (Miraftab, 2004: 6). The City of Cape Town did not engage in the hiring or handling of the labour in any of the strategies mentioned above and rather relied on private firms or individuals to be responsible for labour recruitment, supervision, and payment. The BH scheme was already adopted in the 1990s and was proposed to the city of Cape Town by Billy Hattingh and Associates, a private company promoting small enterprise development. The scheme was adopted because it was viewed as a cheaper way of collecting rubbish and also held the promise that it would empower local entrepreneurs who would employ local unemployed people. Furthermore, it was opted for due to complaints by both City managers and local residents about the lack of productivity of waste collection workers (Qotole and Xali, 2001: 11-12). The local unemployed people who were working under local entrepreneurs as rubbish collectors would have the task to hand out garbage bags, collect them again once a week and dispose of them in a skip. The BH scheme came to an end in 2005 in favor of a new approach. The current solid waste removal system in Khayelitsha was initiated in 2006 by the City of Cape Town solid waste removal department. It was utilized to function in informal and some formal areas as:

> "a door-to-door black bag[14] system for which Khayelitsha has been divided into six easily manageable areas. Some residents will be employed to distribute and collect black bags from the households as well as for area cleaning on a boundary-to-boundary basis in the informal settlements. The storage of the collected bags will be changed from skips to lockable shipping containers[15], which will be placed in key sites throughout the settlements." (Western Cape Government, 2006)

In Island, the sub-contracted cleaning service is Masiqhame Trading 729 CC, "which employs workers to collect two refuse bags per household per week and store the rubbish in shipping containers on the roadside which are emptied weekly by truck" (Green, 2018). "The City aimed to provide one six meter container per approximately 400 dwellings however, there are still areas, such as Site C's 'Taiwan' area that borders the N2, that do not have any containers." (Green 2018a: 8).

[14] 'Black bags' are usually referred to in policy documents and news articles, but they are not black in colour the majority of the time, as I observed during my fieldwork. In this dissertation, black bags and blue bags mean the same thing.
[15] In a conversation with Prof. O'Rian at the University of Cape Town – who has worked with the City of Cape Town on waste removal systems – I learned that the shipping containers that are used as waste containers are favoured above skips because when skips were being used they found several dead bodies while emptying them.

15% of the KRS survey respondents from the Island area indicated that their waste was collected in this manner and it was also noted that "households facing a shortage of plastic bags would fill their bags with rubbish, empty them into the river and then use the same bags again" (Green, 2018). Through conversations with community members in the Island area, it is safe to say that although the city claimed it is an 'improved' system, the same attitude is not shared among community members. Several indicated that the waste containers are far from their homes, which means they need to walk a while before they can get rid of their waste. The containers have not been placed in the most accommodating locations, although in Green's article, Councillor Xanthea Limberg, the Mayoral Committee Member for Informal Settlements, Water and Waste Services, states that the containers are placed strategically for easy access by vehicles and cleaning staff (2018). The residents living close to the railway, however, are not catered for by this 'strategic' placement and what shows in the survey data is that people living on that side of the river are more likely to dump their waste in the river (see Figure 6).

Although people in informal settlements are supposed to have a door-to-door system of rubbish collection, this system does not work for many of the residents and they have to take their garbage directly to the containers. For example, two community members noted the following: "All I know it's us who takes rubbish to the container." and "Our main problem is the rubbish here because municipal workers, they don't take our rubbish". However, it is not always easy to access the containers. I was also told that over weekends and at night the waste containers are often locked by the solid waste service providers, making it impossible for community members to place their garbage bags inside. In the focus group which I reference in my methodology section, residents also mentioned that the one waste container on Govan Mbeki Road – where the taxis are washed, as I pointed out in the flash at the beginning of this chapter – was occupied by the people washing the taxis. According to these residents, they make use of the container to store their equipment and cleaning supplies and they have their own lock. Other containers in the area are occasionally reported being occupied by drug-using youth looking for a place to sleep, and this often prevents residents from making use of the containers (Green, 2018). By looking at the quantitative data which represents the Island area, the figure below illustrates residents' behaviour regarding rubbish disposal.

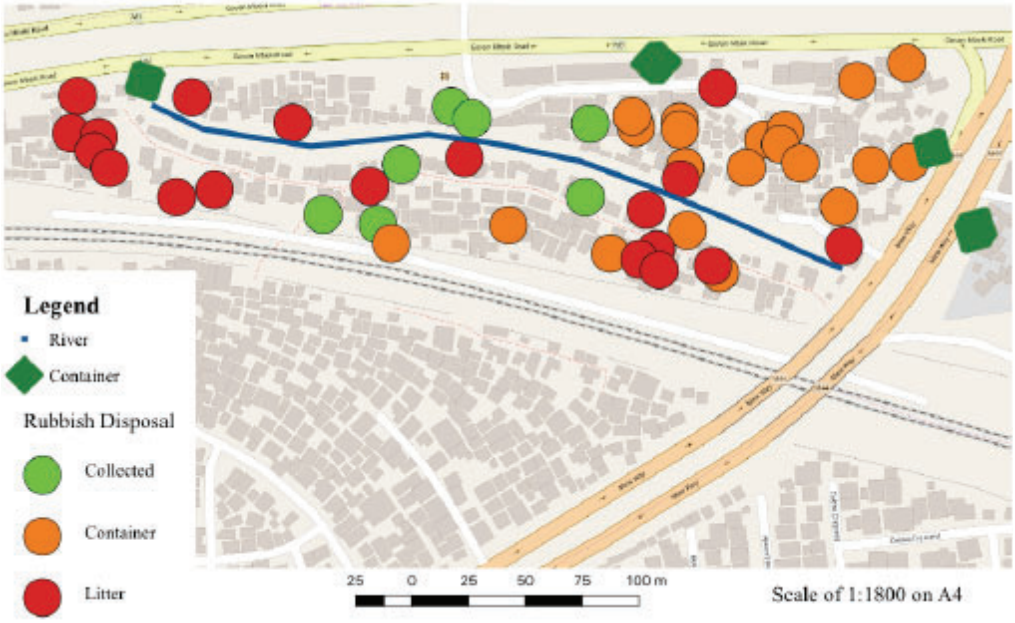

Figure 6: Heat map illustrating rubbish disposal behavior in the Island Area. Figure generated by Green (2018)

The container on the left side of this map (figure 6), is one that is reported to be occupied by 'drug-using youth' as a place to sleep as well as by the people who wash the taxis, to store their equipment[16]. Green (2018) found that the City blamed the waste removal contractors for this, but that the contractors blamed the 'community leaders' for not dealing with the 'hijacked' container. The residents closest to this container all admitted to littering. Even though the owner of Masiqhame Trading 729 CC, Matanzima Mthwa, continues to claim that the waste removal company provides a comprehensive door-to-door-cleaning service in Site C (Green 2018a: 13), the rubbish is still not collected as agreed. Due to this, it becomes clearer why these residents litter – pointing to a flaw in management and governance by both the City of Cape Town and Masiqhame Trading 729 CC. Through this discussion, it is possible to see that there are several variables that contribute to the dysfunctional waste management in Site C and the consequent impact this has on residents and the environment.

Returning to the discussion on neoliberalism in action, Faranak Miraftab (2004) has also made the connection between neoliberalism and the City of Cape Town's waste removal system, specifically in relation to Khayelitsha. Miraftab argues that the outsourcing and privatization of labour is a characteristic of neoliberal practices that have become a trend worldwide, and that what it produces is the blurring of a conceptual distinction between the private and public

[16] This was revealed in the focus group and also noted in Emma Green's (2018) *GroundUp* article.

sectors “whereby governments treat citizens as customers with stratified entitlements to basic services” (2004: 6). The author dismisses the attempt to involve people from the community in the service delivery as merely a “rhetoric of voluntarism and black empowerment to justify its use of outsourced labour and the precarious working conditions among poor women of black townships.” (2004: 6). Irrespective of whether there were any progressive elements to the neoliberal (outsourced) sanitation service provision, it is clear that the system has resulted in or at least exacerbated the estrangement – or rather the breakdown – in communication between citizens and the local government. 94.9 percent[17] of Site C residents did not know how often their rubbish is supposed to be collected from their doors. A further 99% did not know how often the storage containers are meant to be emptied and cleaned. When asked whether they have ever contacted their local council about waste removal in their area, 85.7% of residents noted that they never have. Out of the residents residing in informal areas (46 in total from the KRS sample), who should be receiving refuse bags according to government policy, 95.7% noted that they were unaware how many bags they are supposed to receive.

[17] Based on the 98 Site C respondents who answered the questions in the KRS survey specific to refuse removal.

Dirt, waste and trash animals

When thinking about the notion of dirt and how to make sense of it, I turn to Mary Douglas' text *Purity and Danger: An Analysis of Concepts of Pollution and Taboo* (1966). Anthropologist Mary Douglas theorizes dirt within different societies as 'matter out of place' which is culturally constructed and which fits into a social hierarchy in terms of what is pure or clean and what is not (1966). That which is seen and understood as impure, contaminated, reeking, filthy and even dangerous among particular groups of people, can come in varied forms and holds symbolic meanings, as Douglas reminds us. Accordingly, people tend to connote particular actors with an object or place that they deem to be dirty and 'matter out of place', should the two cross paths. However, I seek to add a further dimension to this understanding of dirt. Achille Mbembe's (2011) take on the term 'waste' is useful for this analysis and it elaborates on what Rob Nixon calls 'disposable casualties' (2011). When writing about the notion of humanism in the context of contemporary South Africa, with its colonial and apartheid history, Mbembe urges us to think beyond what we might conceptualise as waste –conventionally understood as that which is bodily or socially produced by humans – and to rather "consider the human itself as a waste product at the interface of race and capitalism." (2011: 190). What he essentially argues, through the notion of waste, is that what he calls 'black life' is "a race doomed to wretchedness, degradation, abjection and servitude" (2011: 188) when considering the historical and contemporary oppression faced by many poor black South Africans in spaces similar to Site C. Considering Mbembe's contribution on waste, Douglas' notion of dirt as 'matter out of place' and finally Nixon's 'disposable casualties', it becomes possible to make sense of dirt by employing a larger set of questions and new ways of seeing dirt and waste in Site C, Khayelitsha.

The river is perceived as the origin of the rat since a space filled with trash can only be home to 'trash animals' (Nagy and Johnson, 2013)[18]. Douglas continues that "dirt is never a unique, isolated event. Where there is dirt there is system. Dirt is the by-product of a systematic ordering and classification of matter, insofar as ordering involves rejecting inappropriate elements" (1966: 36). Although Douglas refers to a social or cultural system here, this understanding tempts me to push the boundaries in order to make the link between social groups – middle class suburban residents - outside of Khayelitsha – that might view

[18] It is important to note that perhaps not all animals who interact with the river are seen as 'trash animals'. For example, the pigs that can be seen in the pictures I provided here are owned by a local resident who has a small scale pig farm close to the train track. When I refer to 'home' in the sentence, I refer to those animals who are considered to live in or close to the river. The pigs only roam in the river during the day.

Khayelitsha as homogenous – as outsiders, and themselves as insiders of the city of Cape Town because of their socio-economic standing placing them outside of the 'dirty' areas in Cape Town. As much as it is important to focus on dirt in Khayelitsha, it is just as important to note that Khayelitsha – and Site C more specifically – functions within a system and in relation to other areas and socio-economic groups in Cape Town. While this river is dirty and understood as the origin of the dirty and destructive rat, there is a wider system in place and neither the river nor the rat exists in isolation – Island is not in isolation from the rest of Cape Town and its political and economic history and present-day reality. Island forms part of the governing system and policies stipulated by the City of Cape Town and retains strong roots in a city geography, which was and still is profoundly shaped by Apartheid. Currently, the city of Cape Town as well as the Western Cape is ruled by the Democratic Alliance (DA). Since the end of Apartheid, the DA has been the official opposition nationally, and since 2009 has governed the Western Cape Province. The party was mainly formed by previous NP politicians and more liberal/leftist politicians from other smaller parties. The DA has been accused on many accounts for being a racist and classist party, protecting the wealth and interests of the middle and upper-class, especially the white population in Cape Town and its surrounding areas (Davis, 2018; Davenport, 2019). With the strong divide between rich and poor, black and white and so on, many believe the DA has maintained what Apartheid caused and continue to manifest some of its elements further. The trash bags that can be seen in the river are thrown there by people, but these also reflect the failures of the city's outsourced waste removal contractors who do not collect them.

Making use of the sense-scapes in Island, what is visible without a doubt is the abundance of informal technologies which form part of the everyday and this is entangled with the overarching political ecology. This points to the infrastructural violence (Rodgers and O'Neill, 2012) that people need to negotiate while trying to make a life for themselves in a space that renders one 'abject' (Anand, 2012). In this section, infrastructural violence could be defined as a form of violence that is enacted onto people living in impoverished circumstances on the margins of society who have to make use of and interact with infrastructure (e.g. shared toilets outside of the home, dirt roads, illegal electricity connections) that is derivative of unequal policies and a re-manifestation of inequality (Rodgers and O'Neill, 2012). In my theoretical outline at the beginning of this dissertation, I introduced the work of Angela Storey (2016) who, through her ethnographic fieldwork, links the use of informal or makeshift technologies to that of infrastructural violence which is formed through both the legacy of Apartheid as well as today's neoliberal practices. Storey's work reminds us that we need to take the ordinary

items such as milkcrates, toilets and taps seriously, as they point to wider systemic problems. The informal technologies which are visible and used alongside the river by those who reside there illustrate the violence that manifests in different forms. We do not only see this with the toilets that are erected between the informal houses and shared among a ratio of five households to one toilet, but also in the dirt roads, the power cables connected by community members themselves to different households needing electricity, the large shipping containers that serve as waste containers and the materials used to construct informal houses. All of this signals the lack of infrastructural development and how it serves as a particular form of violence that places community members into positions where they, for example, need to buy illegal pesticides to deal with rat infestations and in the process could lose a child to poisoning, as I will discuss in Chapter 5. What is important to note is that infrastructural violence does not only refer to the material elements used to build a house and so forth, but that it also points to the political ecology. What I mean by this is that some of these informal technologies which are used can be bad for the environment. The shared toilets and water taps are good examples of instances where toilets are damaged and sewage seeps into drinking water or pollutes river water. As I have observed, communal water taps sometimes run freely, which leads to large amounts of precious water going to waste because faucets are vandalized or stolen.

Figure 7: A communal water tap in Khayelitsha. Photo by Shachaf Polakow

The link between degraded, informal and underdeveloped infrastructure and the degradation of the environment is especially evident in the examples that I have provided here. This, intersected with the continuous rat infestation problem which is ongoing in the area, illustrates the wide-reaching forms of violence.

The type of living conditions in poor urban areas such as Island that promote excessive rat infestations are associated with poor sanitation and drainage thereof, open drains, uncollected solid waste, improper storage of food and the overcrowding of homes (Roomaney et al., 2012; Resnik et al., 2007; Landrigan et al., 1999). One element that is most likely a primary facilitator for rat infestations in the area is the dumping of waste in the river that runs through Island. The KRS survey found that 41% of people in Island admitted to throwing their water and solid waste in the nearby river or elsewhere such as on the railway or street. Using this as a framework, I argue that the act of people throwing their waste into the river is more than a surface level reading of people polluting a river. It is not that I argue for rivers to be polluted, but rather that it is important to understand why the pollution takes place and to consider the structural elements that place people in positions where dumping waste into the river appears as the best, or possibly the only option available. As Elliot relayed in the flash at the beginning of this chapter, the blue waste bags – which are handed out to community members on a weekly basis – are almost always overwhelmingly visible in the river. The blue bags, I argue, can be read beyond being plastic material or an object that holds waste. Through the lens of assemblage theory (Deleuze & Guattari, 2004), it is possible to view the blue bags littering the environment as testimony to a corrupt and dysfunctional solid waste removal system which stands as an informal technology inflicting slow violence.

The politics attached to the dysfunctional waste removal system are rooted in corruption and/or mismanagement. In 2012, the City of Cape Town outsourced seven waste removal companies in Khayelitsha to service both the formal and informal areas. According to a report by the Social Justice Coalition (SJC), each company was paid more than R100 000 a month for their service, costing the City more than R500 000 a month for a service that did not reach poor people consistently (SJC and Ndifuna Ukwazi, 2014: 4). The reality on the ground is that these companies are often not held accountable by the City of Cape Town and they fail to deliver the services which they are required to perform. This means that community members have to remove their waste themselves, waste containers overflow with rubbish, rubbish is placed on the street, next to homes, alongside the containers and rubbish is frequently thrown into the river. All of this is rooted at the core of what we see on the surface level of the river – the blue bags. There is no way that the blue garbage bags which are scattered all along the river can solely signify pollution. These bags are entangled in a wider and complex network that can partially explain to us why they are in the river in the first place and what the implications are around the use of these bags.

The failure of the outsourced waste removal contractors to manage a consistent refuse removal service in informal settlements places the spotlight on the neoliberal outsourcing approaches adopted by the local state, as I have already pointed out. In the case of the polluted river in Island, I subsequently argue that the neoliberal policies that are implemented are contributing factors as to why residents are faced with the daily reality of unreliable waste management, which results in environmental degradation. The commodification of cleaning up, the withdrawal of direct government intervention and the decentralisation of responsibility and resources are all at core of the current policies which are evident of a state that embraces and pushes for neoliberal reform. Although I have argued and illustrated this throughout this section, it is also important to note that I do not seek to make the claim that the South African state is ultimately a homogenous neoliberal state. Rather, it is more varied and complex than this, and this raises the question of how an ideal state would look and what alternative would be in place if there were no neoliberal policies or measures involved. The local government made the choice to outsource its waste removal services because they could not fulfil what was required and saw it best for another actor to provide a better service (Green, 2018a). Through this act, the local government can be seen as interventionist, and one may argue that they are acting in the best interests of their citizens. In looking beyond neoliberalism as an analytical tool, I would conclude that as much as it is useful, what remains at the core of my argument – in relation to what needs to be done about the ineffective waste removal system in Khayelitsha – is that the local government needs to oversee and hold the outsourced service providers accountable. Additionally, they need to build a better connection with local residents in order to understand how to be more strategic in the way they provide services and to intervene in problems faced by the community.

Planting trees, Planting violence

Extending the point on how a form of slow violence is enacted in the everyday toward residents in Island, I want to illustrate how violence can be rooted and encountered in nature, and in trees more specifically. One of the questions in the KRS survey asked participants whether they feel that more trees need to be planted in the area. Overall in Site C, 44% of respondents disagreed, or strongly disagreed, with the statement that the government needs to plant more trees in the area, while 14% neither agreed nor disagreed and 43% stated that they would like for there to be more trees planted. In short, over half (53%) of the residents of Island disagreed with the suggestion that more trees should be planted. A purely quantitative approach might suggest that this means that people do not care for trees or nature. However, the qualitative data, which was captured alongside the administering of the survey and the focus group, shows that the answers cannot be understood without reference to violence. Two participants noted the following:

> "Having trees in Khayelitsha is not a good idea because even now we are facing crime and thugs, so they can use the trees to attack us."
>
> "Trees are important in order to prevent blowing winds, [but] I know that it is going to be a good chance for thugs to use trees to attack us."

In this instance, a political ecology approach is highly useful since it serves as a tool to make the connection between the ecology of the physical environment – in this case something such as trees and the absence of trees – and the politics of violence that trees can represent in a space such as Island. The ecological aspects of the absence of trees in Island, Site C and indeed the wider area of Khayelitsha firstly speaks to the type of soil on which Khayelitsha is built, a low quality (in terms of nutrients) aeolian sand that has degraded over time through the removal of natural and indigenous vegetation. Trees are thus not abundant in the area and they struggle to grow without the necessary attention. Alongside this is also an inadequate water supply in the area, which is needed in order to sustain the growth of the trees. Besides the ecological reasoning behind the absence of trees, it is possible to observe the effects of formal and informal urbanization and how the proliferation of housing in the area takes up a majority of the available land. Finally, alongside this are the political economy elements that intersect with and extend my earlier discussion on spatial inequality and Apartheid urban planning. Gauld (2015) alludes to this in her own research on the absence of trees in Khayelitsha and she states that "tree cover in Cape Town, South Africa tends to be a marker of environmental inequality and racism, with trees being significantly more prevalent in wealthy, predominantly white,

areas as opposed to poor, predominantly black, ones." (2015: ii). The satellite image below, provided in the researcher's work, clearly illustrates the point of environmental inequality.

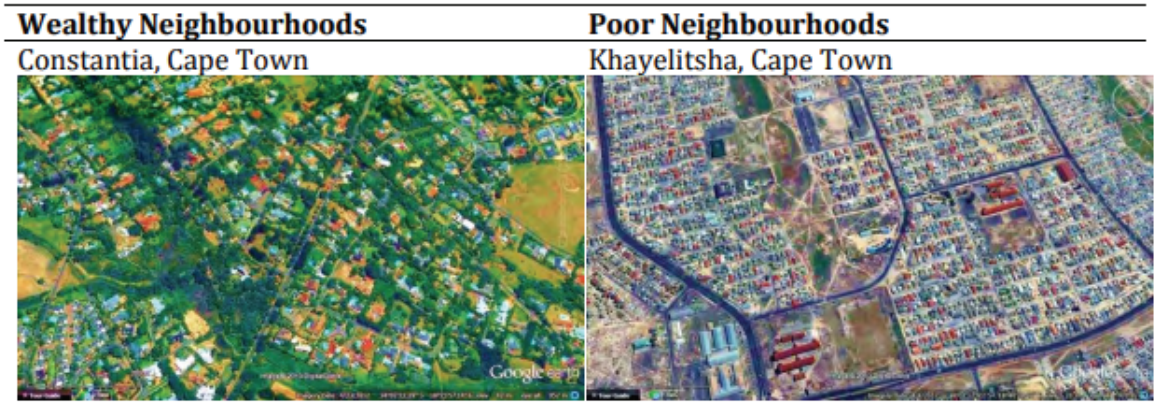

Figure 8: Satellite image showing tree coverage between Constantia and Khayelitsha (Gauld, 2015: 7).

The "relations of power, structures of inequality, and practices of domination and subordination are embedded in spatial design and relations. Thus, spatial arrangements are both products and sources of other forms of inequality" (Tickamyer, 2000: 806). It is therefore possible, when viewing the absence of trees in Khayelitsha through a political ecology lens, that it provides a more dynamic insight into the meaning of the sense scapes of Khayelitsha and spaces within the area, such as Island.

The benefits of trees in urban spaces relate to the "reduction in urban temperature, energy use, volumes of storm water runoff, and noise pollution; as well as improvements in air, water, and soil quality, sequestration of CO2, and provision of habitat for urban wildlife" (Gauld, 2015: 36). Trees have also been shown to have psychosocial and economic benefits for residents living in urban spaces. Interestingly, some research has outlined that the presence of trees in urban spaces have been associated with an increase in safety and reduction of crime rates (Kuo, 2003; Kuo & Sullivan, 2001). This research is, however, contextual and it does not factor in informal urban spaces, nor does it make those claims in the South African context. What is relayed in the data I am using, is that people would prefer for there to be trees around them but that they fear it will pose a greater threat to their safety as it offers hiding spots for criminals or robbers – characters they are already familiar with in the area. Similar to the polluted river, this speaks to the realities of everyday violence.

Chapter 4: The Rat and its Biological and Historical Significance

A note on biology and behaviour of 'the rat'

During an interview with Prof. Justin O'Riain, a behavioural ecologist from the University of Cape Town's Institute for Communities and Wildlife in Africa (iCWild), he mentioned that research on environmental issues such as rat infestations in poor areas is limited and rarely understood in an interdisciplinary manner [11/05/2018]. He went on to say that one cannot fully grasp the impact that rats have on humans (and vice versa) if you do not understand the rat's behaviour and the ecological circumstances it requires to survive. Through my own experiences studying rats, I have come to understand that the biological and ecological behaviour of the rat within a particular context is vital as it opens up space for more questions and for relations to be drawn between the imagined human and nonhuman divide. Beyond this, it also provides a backdrop for the reader to understand why and how rats are being managed and controlled as well as whether those strategies affect and respond to the rat's behaviour.

The Norway rat or the brown rat (*Rattus Norvegicus*) and black rat (*Rattus rattus*) belong to the order Rodentia "that comprises of over 40% of all mammalian species" (Wilson & Reeder, 2005 in Feng & Himsworth, 2013: 149). Both rat species are considered 'commensals' as they often live in close proximity to humans (Aplin et al., 2003) and interestingly enough, it has been noted that they are rarely found in the wild and that they might be obligate pests in need of humans to sustain themselves (Aplin et al., 2003). Similar to humans, rats display social hierarchies among themselves. In Lund's paper *Social Mechanisms and Social Structure in Rats and Mice* (1975) he discusses the different social structures, as observed with dominant male rats which are usually called the 'alpha-rats' controlling a colony (Lund, 1975). These rats are typically larger in size and assert their size in fights with other rats to maintain power (ibid, 1975). It should be noted, however, that this type of information on how rats function socially mostly stems from observations made in laboratories and not from rats living in the 'wild'. I would therefore argue that some of these behaviours could be induced since the space that the rats share is much smaller than the space they would have in the 'wild', although these types of observations are still useful as some studies have noted similar behaviours when studying rats in non-contained spaces (see Telle, 1966).

Urban rats generally have a higher growth rate and reach sexual maturity relatively faster than rats found in rural areas (Perry 1945; Davis 1949, 1951; McGuire et al. 2006; Vadell et al. 2010

in Feng, A. & Himsworth, C. 2013). The gestation period is approximately three weeks (Margulis, 1977) and because conditions in urban environments are favourable (enough food supply and harbourage) rats are able to reproduce all year round with as many as five litters per year consisting of 4-8 young (Davis 1953; Marsh 1994; Perry 1945; Tamarin and Malecha 1972 in Feng, A. & Himsworth, C. 2013). It can take up to three months from birth for a female rat to reach sexual maturity, and after giving birth the female rat can become pregnant immediately. This explains why rat populations can grow exponentially, especially in supportive urban environments with plenty of food and shelter for the rats (Marsh, 1994).

According to Davis' (1953) study "*The Characteristics of Rat Populations*" which was conducted in the US city of Baltimore, the lifespan of an urban rat tends to be short, rarely exceeding one year. In Feng and Himsworth's (2013: 153) review of literature on both the Norway and black rat, the authors note that there is "little information on the causes of rat mortality, [and] it has been suggested that mortality is primarily a function of resource limitations combined with interspecific competition". This excludes rat mortality caused by rodent management strategies, such as the use of rodenticides and snap traps. One of the primary variables for survival is the availability of food. In urban spaces food wastage by humans acts as a major food source for rats where there are few natural food sources (Glass et al., 1988). In an experiment by Barnett and Spencer (1953) on the food preferences of wild rats, both rat species based their food preferences on nutritional value and previous experiences, acting opportunistically and adapting quickly to new food sources.

Young rats learn from their mothers about what is safe to eat, how to forage for food and where to eat the food they have foraged (Marsh, 1994). Mature rats follow odour trails left by other rats in order to find food that is safe to eat (Clapperton, 2006). Beyond this, rats explore their direct environments well before settling and through this they collect information on the topography of the area and where suitable places would be for shelter, food and water (Clapperton, 2006). Most urban rats have been noted to stay in a proximity of 20 meters from their nests, but the male rat tends to forage further afield than the female rat (Davis, 1953 in Sullivan, 2013). Most exploring and foraging takes place just before and after sunset since rats display characteristics of nocturnal animals. While rats travel to and from their food sources, they touch and feel things on their way and are described as thigmophilic (Sullivan, 2008). Over time rats "develop a muscle memory, a kinesthetic sense that allows them to remember the turns, the route, the course of movement" (Sullivan, 2008: 24) and this protects them from danger and prevents them from getting lost.

Rats manifest neophobia, that is “the fear of novel stimuli, and manifests as avoidance of new food or situations” (Feng & Himsworth, 2013: 156), a characteristic thought to be an adaptive behavioural response for survival (Breed and Moore, 2011). This behavioural adaptation among rat populations has made it more difficult for humans to control rat infestations through the use of poison, as rats take longer to begin consuming food that is newly introduced into their environment and they are also suspicious of new objects including traps (Inglis et al., 1996).

The Norway rat is known to burrow and live in buildings. “Their skeletons collapse and they can squeeze into a hole as small as three quarters of an inch [19 millimetres] wide, the average width of their skull” (Sullivan, 2008: 19). The black rat is more likely to be found occupying spaces that are on higher ground such as roofs, which is why they are usually referred to as roof rats. Black rats live in trees in the wild, which is one explanation for their preference for roofs; another is that Norway rats, which are larger and more aggressive, can force black rats from lower-lying territories (Barnett and Spencer, 1951 in Feng and Himsworth, 2013).

It is important to note that the information about urban rats that is available to us transpires predominantly from the Western context and is derived from cities such as New York and London (Feng & Himsworth, 2013). Although rodent species such as the Norway rat and black rat might not differ much from one another based on geographical location, it is important to address this gap in the research through further studies on rat biology and behaviour in Cape Town, since contexts differ in relation to multiple variables such as informal settlements, different vegetation and climate, to name a few.

Historical significance of the rat in Cape Town

The Norway rat and black rat are known to have originated from Asia and spread throughout most of the world over the past two millennia through maritime trade between Asia, Europe and West Africa (Karagas, 2015). With the expansion of trade routes and colonisation in the 15th century, it is believed that both rat species made their way to Southern Africa via ships carrying people and goods. Rats, as pointed out earlier, are known to cohabit with humans because of the ideal circumstances which humans create for their survival. Rat harbourage, one of the common ways rats easily cohabit with humans, "[describes] the enclosed spaces which afford rats hidden or partly hidden shelter, homes, and suitable facilities for breeding and protection" (Holsendorf, 1937: 77). Alongside rat harbourage, unsanitary practices and environments as well as food, have made it possible for rats to coexist with humans for centuries.

Whether in literature or scientific papers, rats are often framed as carriers of disease, including the bubonic plague. Bubonic plague can be understood as "a zoonosis of wild rodents" (Echenberg, 2010: 6) where the pathogen *Yersinia pestis* is spread through a flea vector *Xenopsylla cheopis*, commonly known as the oriental rat flea. The manner in which bubonic plague spreads is through the flea which feeds off a rodent infected with *Yersinia pestis* and becomes infected in return. The flea then feeds off other mammals which include humans and other rodents and the dispersal of the bacilli continues.

The history of the bubonic plague dates back to 542 C.E. where it is believed to have claimed millions of lives in the eastern Mediterranean and Middle East (Echenberg, 2010). The second wave of bubonic plague, known as the 'Black Death', was one of the most well-known and documented health epidemics in the world. It originated in Central Asia, surfacing in 1347, and spread to Europe thereafter. The Black Death claimed around 20 million human lives in the first four years and is believed to have claimed many more up until the 1500s (Echenberg, 2010). The third bubonic plague lasted from 1894 to roughly 1950 which affected "densely populated provinces of south China before attacking Canton and then the British colonial port of Hong Kong" (Echenberg, 2010: 5). This plague is believed to have claimed at least 15 million lives. In 1901, Cape Town, an English colonial city at the time, faced a threat of bubonic plague through its port which was receiving goods and people from India, Australia and Hong Kong (Echenberg, 2010: 271). Three hundred and eighty-nine people died out of 807 reported cases of bubonic plague, most of which were African or coloured individuals who were only

documented by their race with no individual data ever captured (Echenberg, 2010: 272). One of the most recent occurrences of bubonic plague hit Madagascar in 2017, where it claimed more than 170 human lives (Wexler & Antoy, 2017).

Figure 9: District Six, Cape Town - February 1901 (SA Breaking News, 2017)

Rats are widely framed as 'the' disease vector for the plague, even though the flea was ultimately responsible for the spread. A recent study emphasises that human ectoparasites such as lice and fleas carrying *Yersinia pestis* also contributed to the second pandemic/Black Death (Dean et al., 2018). The authors used computer modelling to analyse and compare different datasets related to bubonic plague from different cities across Europe and they concluded that plague transmission was mainly due to human ectoparasite vectors. However, the authors do not dispute that rats have a contemporary role to play in the spread of bubonic plague and they state that "most human plague cases are bubonic, caused by spill over of infected fleas from rodent epizootics, or pneumonic, caused by inhalation of infectious droplets" (Dean et al., 2018: 1304).

Bubonic plague, whatever its exact links to rats, serves as a lens to date back human and rat relations in Cape Town and to understand the history of racism and racial segregation in Cape Town since African and coloured people were forcibly removed from the city centre because they were deemed to be vectors for disease such as the bubonic plague. Swanson (1977) calls this the 'sanitation syndrome' where the "social and the sanitary, the imaginative and the material, lock together with racist theory in the pursuit of social control" (in Polykett, 2017: 1). As Echenberg notes: "not until the plague epidemic of 1901 and its aftermath did the political and medical threads for racial segregation unite to persuade the Cape government to grant

permanent legal powers to segregate" (2010: 279). Thus, the threat of disease associated with rats facilitated the forced removals and segregation that still shapes the geography of Cape Town today. Most of the literature on rats and their relationship to people in Cape Town emphasises the problems which are especially associated with low-income housing (Mngadi, 2016; Roomaney et al., 2012; Rother, 2010; Nattrass et al, 2018). However, the nature and location of townships like Khayelitsha cannot be understood without appreciating that the people who live there were historically displaced and pushed onto the outskirts of the city where it was harder to find work, thereby exacerbating and perpetuating disadvantage and inequality. The City of Cape Town remains segregated along racial lines. The map below shows how in 2011, almost two decades after the formal end of Apartheid, Cape Town remained strongly segregated with the white population residing in more affluent areas whereas black and coloured populations were located on the outskirts of the city in lower-income neighbourhoods.

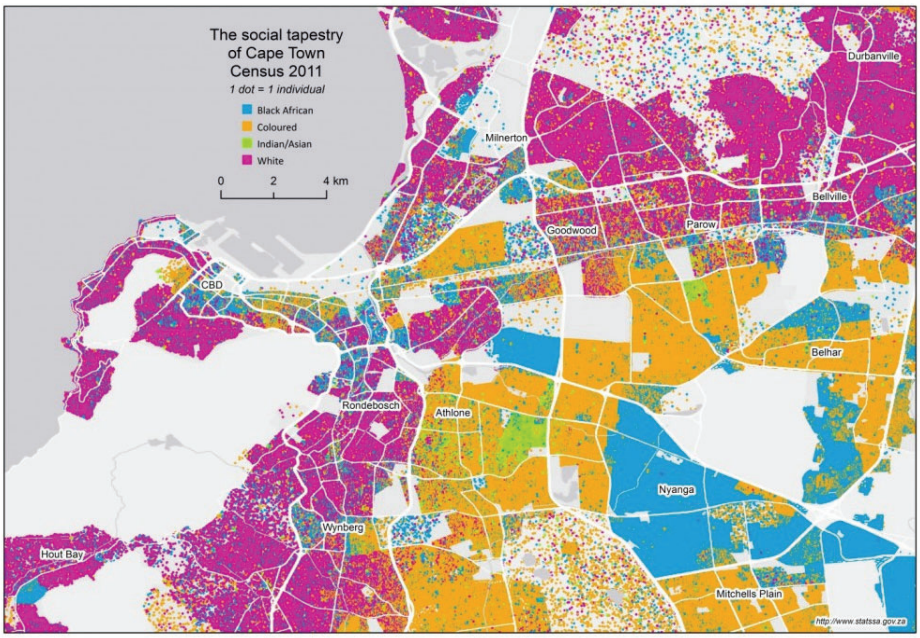

Figure 10: The social tapestry of Cape Town 2011 (StatsSA, 2018)

Urbanisation, which is the growth of population in urban spaces due to increased migration and natural growth, is anticipated to increase dramatically world-wide with "two-thirds of the human population expected to reside in cities within the next 30 years" (Bradley & Altizer 2006 in Jassat et al., 2013). On the African continent it has also been noted (see Govender et al., 2011) that urban areas are growing at an accelerated pace with most cities failing to improve their infrastructure to sufficiently accommodate new migrants. Similar trends were evident in South Africa, but with a racial implication as the legacy of apartheid spatial planning shaped

urban spaces and rural-urban migration. Influx control (which sought to limit African urbanisation) and the Group Areas Act of 1950 (which segregated suburbs along racial lines) not only shaped the geography of Cape Town, but also helped to consolidate white economic privilege whilst pushing black Africans into over-crowded townships. When influx control eased in the 1980s, informal settlements burgeoned. Informal shack areas such as 'Island' and 'Taiwan' on the outskirts of Site C (originally planned as a formal area) are characteristic manifestations of Cape Town's recent history of rapid urbanization. The satellite image below shows the planned formal area and the informal areas that have sprouted on the periphery (jammed 'onto' the highway's edges):

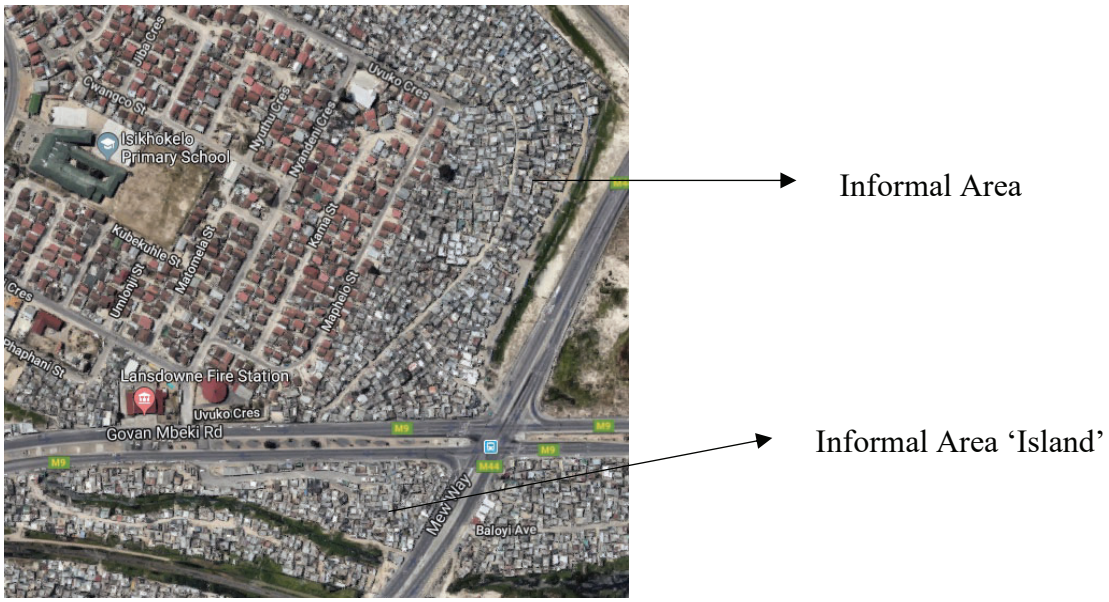

Figure 11: Satellite image of Site C via Google Maps

Such urban settings are highly conducive to rat infestations (Mngadi, 2016; Roomaney et al., 2012; Jassat et al., 2013). The type of living conditions in poor urban areas that promote excessive rodent infestations are associated with poor sanitation and a lack of drainage thereof, open drains, uncollected solid waste, improper storage of food and the overcrowding of homes (Roomaney et al., 2012; Resnik et al., 2007; Landrigan et al., 1999).

Rats in the urban space are often seen as destructive and this characteristic is commonly highlighted when they feature in news articles and literature. I would argue that the destructiveness of the rat is what sits at the core of ventures to control rats as they pose multifaceted threats to human security. Robert Sullivan notes that in New York "26 percent of all electric-cable breaks and 18 percent of all phone-cable disruptions are caused by rats" (2008: 19). Through these types of narratives, we come to learn that rat infestations in urban spaces could have detrimental effects on food security as well as infrastructure, not to mention

the significant costs that pest control efforts hold for local governments. In the next chapter, I shed light on why rats are controlled and managed in the city of Cape Town and what the motivating factors are for this intervention. It remains important to acknowledge that an imaginary of the rat as well as the physical damage – whether it be to food or electric-cables – underpins and motivates rodent control efforts. In the subsequent chapter on the politics of controlling and managing rats in the city of Cape Town, I show that this undertaking is rooted within politics which unfold in a multitude of ways.

Chapter 5: The Politics of Controlling and Managing Rats in Cape Town: A Tale of Inequality

Figure 12: Sketch by Laura-Lee Mostert

In a sense, rodents – and in particular rats – became topical and surfaced as a 'real' issue in Cape Town around 2013. The story starts with a toe – then and current Western Cape Premier Helen Zille's toe in particular. In March 2013, Premier Zille tweeted a photo on her Twitter account which showed her bleeding toe with a message: "The weirdest thing just happened. I went to fetch the newspapers at the gate when a rat darted out, and bit me on my toe!" (News24, 2013). The Premier's spokesperson reacted to this in a media interview by saying: "I know the City Bowl rats are mutant freaks of nature, but if they're starting to take nibbles out of people, we're in trouble" (News24, 2013). The city increased its rat poison budget to R530 843 after the incident (Times Live, 2013) – which again begs the question about who the City of Cape Town is serving when in fact people in poorer areas have been struggling with rat infestations and have had way more interactions with rats than those in wealthier areas where the Premier resided for example. Later that month and throughout the year more reports started emerging in the media about rats attacking people in Cape Town. One news article included an interview with Eunice Phathiwe, a community leader in Langa (an old African township in Cape Town) where she said: "They bite us in the face, head and feet... They know what they want and where they are going... they walk with a purpose like humans" (Times Live, 2013).

2015 was an eventful year when it came to rats in Cape Town. Cape Town rats made news headlines again as two Pollsmoor Prison inmates died allegedly due to leptospirosis (Hopkins, 2015). The unsanitary environment and overcrowding at the prison, together with an unaddressed rodent infestation, was blamed. Homeless people in Cape Town's central business district (CBD) complained to reporters that they were bitten by rats when sleeping (in park spaces) and in homeless shelters (Bamford, 2015). According to a news report the following year, "rats and cockroaches account for over a third of complaints to the City of Cape Town health department" (TMG Digital, 2016).

Following the controversies related to rat infestations as well as how rats are controlled in the city, as part of a scoping study for the University of Oxford, I conducted research for three months in the city of Cape Town. My objective was to find out how rats are managed and why they are controlled in particular ways. What follows here is an outline of the findings which I use to sketch a foundation that underpins the discussions that are to follow and to add to the literature on how rats are managed in Cape Town. Beyond this, I also point to the inequalities when it comes to rat control methods between the individual, public (city of Cape Town) and private sectors in Cape Town through looking at the use of illegal pesticides and gentrification.

The City of Cape Town currently has a protocol in place that is called the 'vector-control protocol' that is in line with the Health Act 61 of 2003. This protocol, as followed by the local government, clearly outlines how rats should be managed and controlled, by whom and what the limitations are of implementing these methods. Armien Petersen, the City of Cape Town's environmental health coordinator working in the realm of specialised health support, was responsible for creating and implementing this protocol which has been in place for the last three years. According to Petersen in an interview I conducted, this is the first protocol that has ever been implemented for rat control and waste management in the city of Cape Town and which complies with all the laws of South Africa. Previous practices were apparently illegal but went by unnoticed. The environmental health units which are divisions within the City Health Department are in operation to "address the environmental and personal health factors that might have a detrimental impact on human health and well-being" (Western District Brochure). Some of the services that environmental health units provide to the public are licensing, certification, inspections and sampling of food quality and safety, assessments of basic sanitation and risks involved, investigating infectious diseases relating to environmental health, noise management, health education in schools and communities regarding environmental health and lastly rodent control programmes in public places (Western District Brochure). In terms of the rodent control programmes that are implemented via the 'vector-control protocol', the city of Cape Town services only municipal owned buildings and land where there is rodent activity – this could include public schools, libraries, clinics and offices – and they service informal settlements or low-income areas in the city where there are rodent infestations. There are about 146,000 households in 437 informal settlement pockets in Cape Town (ISMaps, 2018) (see figure 13 below).

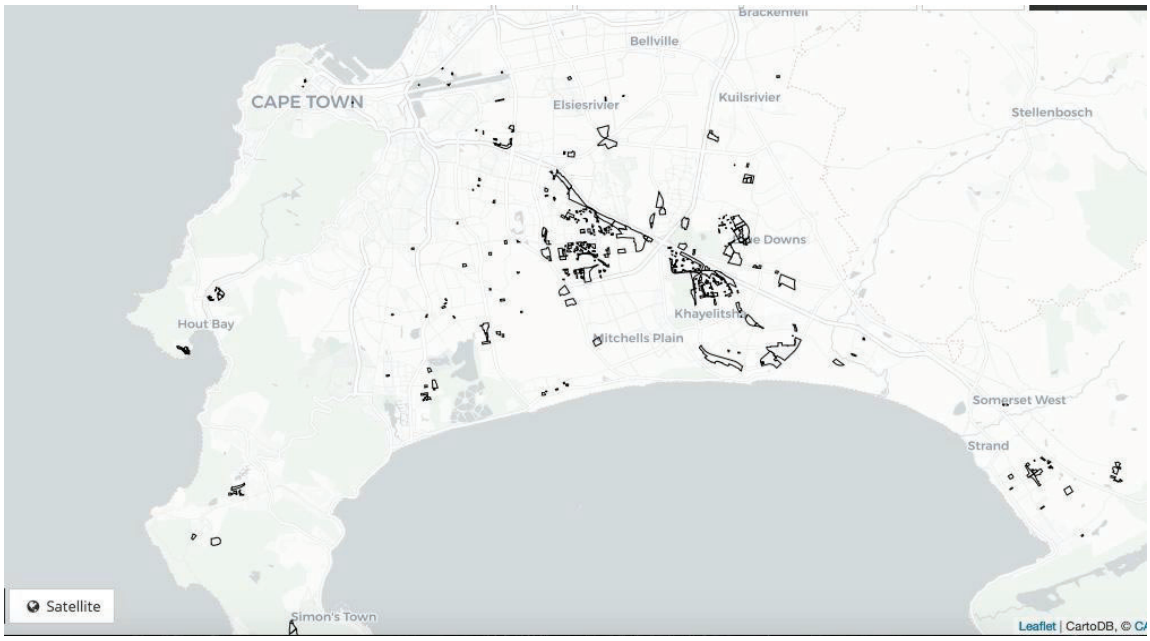

Figure 13: Informal settlements in Cape Town, Western Cape. Follow this link to view the interactive map with more details: http://ismaps.org.za/mobile-map.html

The city does not provide rodent control programmes to people living in formal housing, middle-to-high income areas or businesses, and it also does not conduct rodent control in the storm water drains and tunnels across the city. This is partly due to an 'ethical stance' the city maintains as well as the availability of funds to run rodent control programmes. According to information obtained in my interviews with several city officials, this 'ethical stance' is premised on the fact that Cape Town is a highly unequal city, with people living in informal and lower socioeconomic areas carrying the burden of rat infestations and hence being seen as the most deserving recipients of public rodent control efforts.

Before any Environmental Health (EH) staff member can participate in rodent control programmes, they need to attend a compulsory training course where they are trained by a private company that is able to accredit the individuals with the necessary credentials to perform pest control and management. This is a legal requirement enforced by the Department of Agriculture, Forestry and Fisheries (DAFF) (*Fertilizers, Farm Needs, Agricultural Remedies and stock Remedies Act no. 35 of 1947*, 2011). All pest control companies and the employees need to be accredited as well. In this training, they receive information about different pests and how they should be managed. They receive a handbook that is compiled by Bayer – a German multinational, pharmaceutical and life sciences company – which they are able to use for future reference. There are currently 23 staff members across the city of Cape Town in respective EH offices that actively work on rodent control in their designated areas.

The organogram below depicts the structure of EH offices in the city of Cape Town. I include names of individuals I personally interviewed in these jobs. These employees are referred to as either Head of Environmental Health Sub-District (HEH) Environmental Health Practitioners (EHPs) or Environmental Health Assistants (EHAs). The HEH oversees the functioning of the sub-district office, oversees EHPs and EHAs and represents the sub-district at City Health meetings and strategy planning. The EHPs are assigned areas by the HEH which they oversee and strategize in terms of how to approach a rodent problem; they also do weekly checks in communities they are servicing. EHAs, on the other hand, report to EHPs and are responsible for visiting communities and areas they service on a daily basis, as well as monitoring and dispensing poisons. Both EHPs and EHAs also do weekly water tests in particular areas in order to measure the quality of drinking water.

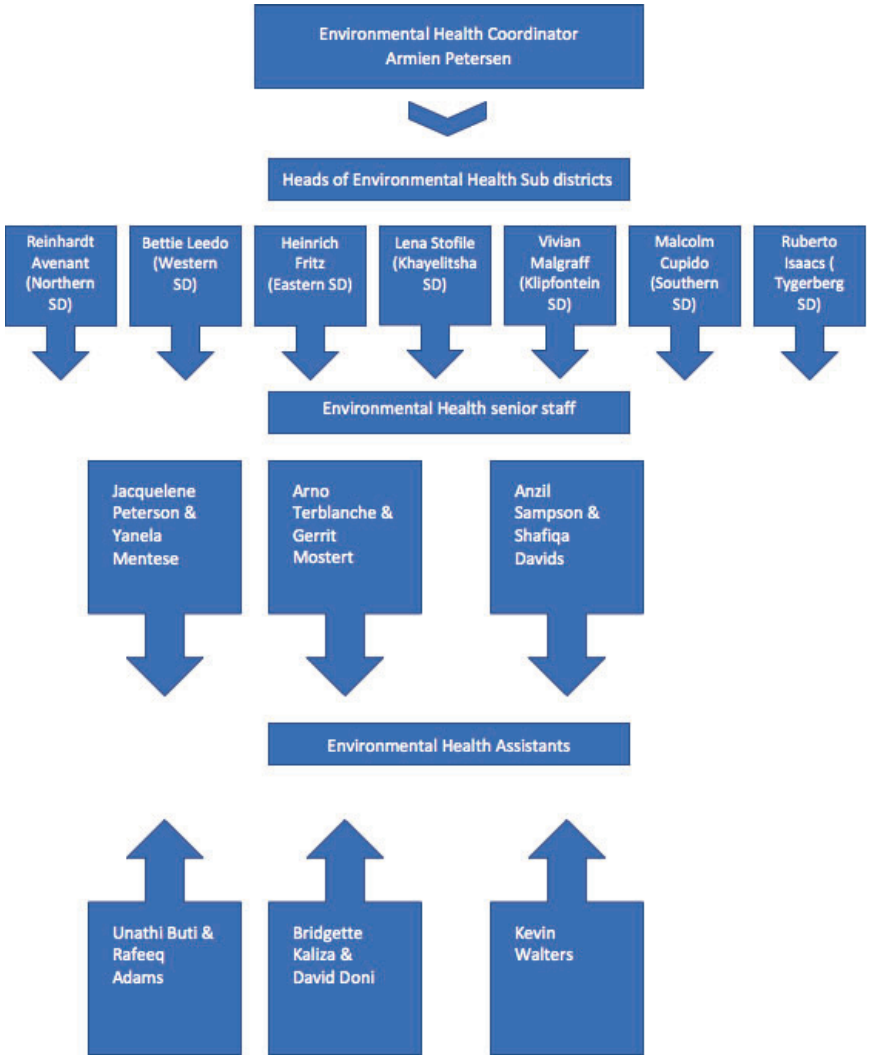

Figure 14: Organogram of the City of Cape Town's Environmental Health units and employees. Generated by Pieter du Plessis.

The rodent control protocol across the city consist of four components which it delivers through its environmental health sub-districts:

1) Servicing municipal owned properties

The city installs bait boxes – otherwise called 'Tomcats' – around the buildings it owns and in public parks, for example[19]. These boxes are installed by the EHAs under the guidance and instruction of the EHP based on assessments that have been conducted about where and how many boxes need to be installed. They are supposed to first follow the Integrated Pest Management (IPM) model. IPM "is an approach that primarily involves improving sanitary and structural conditions to deny pests food, water, harbourage, and movement, and includes the judicious use of pesticides after an evaluation of need and the hazard to human occupants" (Kass et al., 2009: 1219). Accordingly, EH officials are required to assess where rodents come from or how they enter a building, and what draws rodents to the area, addressing this first and then installing the boxes. The boxes are then serviced by placing poison in them, according to the intensity of the infestations – twice a week, once a week, every second week or once a month. By servicing the boxes, the EHA places poison[20] which is most likely block bait into the box and monitors how fast the block gets consumed by the rats. This in turn determines how often the box needs to be serviced. For example, Cape Town's Central Business District (CBD) has an estimate of 1,000 boxes (tomcats) that are serviced by the Western Sub-District as well as the CCID (Central City Improvement District), which is a Non-Profit Organisation that serves to improve the CBD and surrounding areas by cleaning streets, employing security guards and assisting with rodent control. In this case, the CCID has willingly assisted the Western Sub-District by providing labour and constant monitoring of these boxes.

2) Servicing informal settlements through block (box) baiting

The very same process applies as above, however, what might differ is that the bait boxes are placed on the outside of some of the housing units. Several staff members have expressed that this is something challenging as the majority of the structures in the informal settlements are not made out of durable materials which can hold a bait

[19] The average cost of one of these boxes is around R60 (3.5 Pounds).
[20] These are the poisons that the city of Cape Town uses according to the interviews I conducted:
Racumin Blocks - https://www.growsolutions.com.au/en/products/products-details.php?id=189
Untrakill Rat and Mouse Liquid Bait - http://www.cooperses.com/product-detail/rat-and-mouse-liquid-bait/
Storm block bait -
https://www.pestcontrol.basf.co.za/agroportal/pc_za/en/products/storm_secure_initialsorextransport/storm-secure.html

box for a long time and therefore the number of bait boxes are limited. Bait boxes are usually installed around community waste containers, toilets and buildings that might be erected nearby or within informal settlements.

3) Providing rodenticides to people in informal settlements upon request

Should a household have reported rat activity in their home, an EHA does a site visit to determine how severe the case is. The EHA would serve as an advisor to tell the household members what the causes of the rat activity might be (refuse lying around, holes in walls etc.). Because most people are not always home when EHAs work in their area, the city came up with a solution to give people rat poison (Finale grain pellets[21]), for which they need to qualify after the assessment. They must also complete a consent form which is explained to them in the language they best understand. These poison pellets contain a bitter ingredient (presumably to prevent accidental ingestion by children), but even so, the consent form makes it clear that in the case of accidental poisoning by rodenticides, the household cannot hold the City of Cape Town legally responsible. The City used to hand out poison to households in informal settlements but one reason why they had to implement stricter procedures is because they "noticed with the increase of crime and the use of drugs that people use the poison to make the drugs with poison" an EHP told me.

4) Facilitating environmental health education programmes in informal settlements

Alongside installing bait boxes and servicing them with rodenticides, and handing out rodenticides to control rats, the city uses the approach of environmental health education as a prevention tool. Some examples of these educational outcomes are the flyers below, which were made available in Afrikaans, English and isiXhosa:

[21] https://www.bayer.co.za/static/documents/LABELS/Finale_Grain_Bait_label.pdf

Figure 15: Educational flyers available in Afrikaans, English and isiXhosa by the City of Cape Town's City Health department

The educational programs are implemented and executed by both EHPs and EHAs through engagement with the local community experiencing rodent problems. This could be in the form of a private consultation, when EHAs do site visits in informal or low socioeconomic areas, as well as hosting a workshop or presentation in a community hall and talking through points on how to prevent rodent infestation, how to get rid of rodent infestations and providing information about poisons. Through interviewing 12 EH staff members it was possible to gather that the content focus of educational programs at this point is primarily on illegal dumping and managing waste, especially in informal areas, as well as educating communities about the dangers of using illegal poison such as organophosphates ('two step' or Temic/aldicarb) to get rid of rodents. Later in this chapter, I discuss the use of poison by community members.

Reporting rat activity in Cape Town

There are several ways in which residents of Cape Town are able to report rodent infestations or sightings to the city. The main route that is taken is through phoning the sub-district environmental health office managing their area. Following this, the report is apparently logged onto an online system called C3 which then records the report and sends it to the relevant individuals who need to respond to the request. The City did not want to provide me with the data on the C3 system. I was told that the City of Cape Town has recently installed telephones at all local libraries for residents to be able to call the City of Cape Town's different service providers. Residents are also able to log a complaint via the internet if they have access at home or at a local library. Other ways in which rodents can be reported are through the community leaders, such as the ward councillors, or by filling in a form and submitting it in a box at the local clinic (as seen in Langa). What appears to happen most of the time in informal settlements is that people approach the EHAs since they see them often and become familiar with the work that they do. Once a report has been made and logged on the C3 system an environmental health unit has a target of 23 days in which they need to respond to the matter at hand.

Why do people report rats?

In an attempt to understand why people report rat infestations to the city, I asked officials whether they thought people reported rats on the grounds of health reasons or because of fear and stigma. Most of the responses were that it is a mixture of the two, but that fear and stigma definitely took the lead in reasons for reporting rats. Below are a few extracts from the interviews that touch on fear and stigma:

> "Most of the complaints are about the fact that 'I saw a rat and now I am reporting it to the office because there is a rat problem'. Not very much will you find that there are rats in people's houses, sometimes they are just mice. … It is more about seeing or feeling the rat you know, that type of thing [and not health reasons]."

> "I saw [while] working in informal settlements and like in Langa, there is [a belief] in the Xhosa culture [that] if you shout or swear at a rat [that] they are gonna eat your clothes. So, you cannot treat them badly."

> "Sometimes they [community members] indicate in the informal settlements, especially in Langa I think, that if there are rats, there are snakes and people are afraid of snakes. You know so there is this entire cultural thing around snakes and owls and it goes together so that is about fear really."

What these extracts suggest is that there is not a clear reason for rodents being reported, but it also points to the social and cultural elements that have been observed by these environmental assistants and practitioners working with communities. What came across strongly in the conversations I had with EHPs and EHAs on the topic of why people reported rats, was that the manner in which EHPs and EHAs understood the 'beliefs' and fears to which they referred was something that they were not trained to understand. The only exceptions were two EHAs who were familiar with the cultural context of people living in Langa where they worked, since they grew up in a similar area. What we see in this instance is the manner in which socio-cultural elements of a community can be disregarded in the process of training staff members.

Waste management by City of Cape Town

Throughout all the interviews conducted with City of Cape Town officials, waste management was one of the most prominent elements that was explained as a major facilitating factor for rat infestations. This arose as an issue in both formal and informal settlements but was shown to be more of an issue in the informal areas. At this stage, it seems as if City Health and Environmental Health do not have a good relationship with the Solid Waste Removal Department and that this is only starting to be addressed. The head of an Environmental Health department, points to this contested relationship:

> "Waste is a city-wide problem. The solid waste removal department is very much aware of how Health feels around their refuse removal system. The city is currently updating its integrated management plan and we have once again made our feelings known from a health point of view. What sort of alternatives there are you know in very dense informal settlements is of course the problem that they struggle with. For many years there was a different head for Solid Waste that has thankfully left the city now. You know, they work very much on a bottom-line and there have been improvements between these relationships, between city health and solid waste, now that there is different management there."

This is something that Green (2018) has also remarked in her investigative news article and which I have already discussed in Chapter 3. Most environmental health units felt that informal businesses in informal areas are also complicit in causing rodent infestation because they do not manage their waste according to the City of Cape Town's health guidelines. As for formal businesses, such as big shopping centres or restaurants, some of them do not meet the health guidelines, but their waste is also not removed in a timely manner by Solid Waste Removal. One EHA makes note of this when he says, "With all the new restaurants opening [in the CBD], you see the population is growing but the services are not on par with the population especially our waste control…". The manner in which waste is removed, or the lack thereof, has also been a political discussion between political party members in the public realm.

The current political party that administers the city of Cape Town is the Democratic Alliance (DA). In a recent tweet (MTshwaku, 2018) by a member of the Economic Freedom Fighters (EFF), the member called out the manner in which the city of Cape Town continuously excludes poor people when it comes to providing adequate waste removal services in Khayelitsha. The photo included in the tweet (below) showcases the blue trash bags.

Figure 16: Tweet by MTshwaku [7/02/2018]

Too few hands to catch the rat

One of the other factors which contributes to ongoing ineffective rodent management is that the workforce involved in this area appears to have stabilised rather than grown, and this is likely also the situation for waste management. In the case of EHPs and EHAs that service bait boxes, for example, it is clear that their numbers are tiny in relation to the scale of the problem they address. The same EHA quoted above takes us through what his minimum tasks look like on a daily basis. He noted this after I asked him how many rodent bait boxes or areas he services on a daily basis:

EHA:	A lot of points. The minimum five, that is five widespread points. Like I will do my informal settlements, I have one, I will try to do that one day or two days a week and it will be Maitland Cemetery, Sixth Avenue, Royal Road, Kuku Town, Pineland Road, about seven.
Head of Department:	So, you are saying seven geographical sites, not boxes?
EHA:	Those are the sites ja… each site, you can maybe just say, at about each site there is plus minus twenty to fifty [boxes], that depends on your burrows.

Through looking at the themes which emerged in the interviews with City of Cape Town officials, such as the one above, and what the City does to control and manage rats, what emerges is an understanding that the management system is flawed. I take this stance by contending that the city cannot manage and control rats effectively, especially in informal settlements, if they continue to function on the same system of organisation. The workload that EH practitioners and assistants have is overwhelming in that they have to visit around five to seven different geographical sites within their departmental boundary every day. This leads to some bait boxes not being serviced or community members not being addressed. The same EHA continues on a similar point when he states:

> "The population is moving too fast for the resources as well. It is just getting like, we are four staff, four EHAs here, I have been here for four years but our area has gotten bigger and in that time some informal settlement grew. Areas has been added onto us but we still the same four servicing still, so the work is getting more and we are staying the same. So, the gap is basically stretching."

The quote indicates that it is not the EH workers who are at fault for failing to service people adequately with regard to rodent control – but rather that the state is failing its citizens by

allocating insufficient resources to sanitation and environmental health. Apart from this, EHA and EHP workers face other struggles when attempting to complete their daily tasks. Not only do bait boxes get vandalised by community members, which takes time to repair and halts the rodent control practice, but some employees have also found themselves in life-threatening situations, especially in informal settlements. When conducting an interview with an EH department, the EHA that works on the rodent control programme was unable to attend because she was undergoing trauma counselling. This followed after she was attacked by protesters in the informal area where she was conducting a site visit. Besides this one incident, employees informed me that they often feel reluctant to visit dangerous areas in informal settlements seeing as they have been robbed or heard of their colleagues being robbed. Failure on the part of the state to ensure adequate safety for employees and citizens is thus another reason undermining the efficiency of service delivery.

Use of illegal pesticides and fatalities

Rother's research (2008; 2010) on the use of illegal pesticides in South Africa, and more specifically Cape Town, which she terms 'street pesticides' – organophosphates such as Aldicarb, often referred to as 'Two-Step' or 'Temic'/'Temik', methamidophos, and chlorpyrifos – focusses attention on the informal street vendors who sell poison on trains and at taxi ranks. She traces how these pesticides have detrimental effects on human health (Arnot et al., 2011) and especially on young children in informal settlements. The table below, from Balme et al. (2010) indicates the number of paediatric poisonings from 2003-2008 by low-income suburbs in Cape Town and for the city as a whole. This clearly illustrates the type of communities worst affected by child poisoning due to illegal pesticides.

Area	Total pesticides (%)	Cholinergic pesticides (%)	"Street pesticides" (%)
Khayelitsha	91 (29)	64 (32)	17 (39)
Nyanga	24 (8)	16 (8)	4 (9)
Gugulethu	21 (7)	18 (9)	7 (16)
Langa	19 (6)	12 (6)	4 (9)
Philippi	31 (10)	24 (12)	7 (16)
Mitchell's plain	31 (10)	17 (8)	0
All areas	311	203	44

Table 2: The number of poisonings among pediatrics from 2003-2008 according to suburbs in Cape Town (Balme et al., 2010: 930)

Illegal pesticides are also used against insect pests (notably flies) in informal areas, but their primary function is to manage rats and mice in and around homes (Balme et al., 2010). Since 2012, Aldicarb has been banned from the country and it is regarded as a criminal offence for anyone to use or sell the pesticide (London & Rother, 2013). This has not stopped street vendors in informal settlements as the poisons are still sold today in various settings. Environmental Health employees often try to check for these pesticides, and as one EHP states below, according to him there has been a decline in organophosphate poisonings because of the routine checks:

> "So, we have confiscated a numerous amount of illegal poisons especially at your public transport interchanges and your normal informal vendors because there was a spike in the sale thereof and also your wholesalers, your Chinese shops and all that. So, in the recent years or two or three years we have noticed there was a decline in the amount of organophosphate poisoning cases right,

> because obviously about our interventions. So that is quarterly that we conduct that."

On the other hand, a Head of an Environmental Health sub-district notes that it should be kept in mind that it is more complex than this. Environmental health departments cannot confiscate poisons themselves, they need to work with the DAFF and the South African Police Service (SAPS). She further remarks that there seems to be very limited prosecution of vendors for selling illegal poisons. Items are usually confiscated but then a few weeks later the same products are back on the street – this is something she and her team have observed directly in the informal areas where they work. According to her, the DAFF contends that they cannot issue fines and the police appear to be hesitant to take cases. They are also reluctant to press charges as it is unclear which municipal legislation is relevant and the current city by-laws are inadequate. She mentioned that even though Aldicarb has been banned, the law is a 'bandaid' (elasticised bandage) on a very big problem.

Considering the data collected through the KRS, it is possible to see that as of 2017/8 Aldicarb was still actively purchased and used to get rid of rodents. More than a quarter (29%) of participants in the study admitted to having purchased Aldicarb – also referred to as 'two-step' – in the past year, and most of the individuals purchased it from a hawker on a train (67%) or a street seller (33%). I discuss this further at a later stage in this chapter. The key point here is that despite the national ban, local legislation and policing appears inadequate for the task of enforcement. Mbembe's concept of necropolitics (2003) could not be more prevalent in this case study. The state is aware of Aldicarb's negative effects, and the fact that it is still sold publicly and is still causing harm, yet through an unclear mix of incompetence and complexities to do with levels of government and ambiguous patterns of accountability, citizens remain exposed to harm. The outcome is a further illustration of slow violence in the form of gradually accumulating harm, which is difficult to see or measure and which appears invisible to the state.

Health effects of rats on humans

> "A rat can jump onto a plane in Nigeria and find it necessary to get off the plane when the plane is parked here for a day. All of a sudden we have Nigerian rats- and they could be disease carriers." (City Health official)

When asked about the possible effects rats might have on human health, , the only rat-related health consequences noted in Cape Town by the environmental health units were leptospirosis (the case at Pollsmoor prison), rat bites and organophosphate poisoning because of attempts to control rodents. The EHAs and EHPs were knowledgeable about other possible diseases (hantavirus, rat-bite fever, etc) transmitted by rats, however, they had never encountered any cases of such diseases while working for City of Cape Town. What did come across strongly from the interviews was that most EHPs and EHAs believed people in Cape Town might be experiencing some of the zoonotic diseases linked to rodents, but that they are not being diagnosed appropriately.

Leptospirosis caused by the bacterium *Leptospira spp.* (Ko et al. 1999, Guerra 2009, Ko et al. 2009, Evangelista and Coburn 2010 in Himsworth et al., 2013) is known to be the most widespread zoonotic pathogen in the world (Evangelista and Coburn 2010). The manner in which this bacterium is spread is through the shedding of urine since *Leptospira spp.* first colonises the kidneys of the rats (Guerra 2009, Ko et al. 2009). The way humans most likely contract leptospirosis is through contact with contaminated water, foods and soil where rats have urinated (Himsworth et al., 2013). The climate, weather and season in a geographical zone have a notable role in rat associated zoonosis such as *Leptospira spp.* and this influences the exposure to humans. Heavy rainfall and flooding are elements that increase the dispersal of leptospirosis (Evangelista and Coburn 2010). Rats who carry these bacteria have adapted to their effects and therefore function as a carrier of the diseases– spreading it to other rats, animals and humans, without experiencing clinical illness themselves. What remains missing from the literature on rat-associated zoonoses is the true prevalence and distribution among rats and humans and knowledge about the "true health burden caused by rat-associated zoonotic disease in people" (Himsworth, et al., 2013: 355). The literature related to rat-associated zoonoses, as studied by Himsworth et al. (2013), indicates that "developing nations and impoverished populations within developing and developed nations are at highest risk for rat-associated diseases" (2013: 355). However, there is insufficient data to quantify this risk in any exact manner. Bacterial zoonoses, including leptospirosis, probably "remain under-diagnosed and under-reported in Africa, and as a result are overlooked [as a public health

concern]" (Allan et al., 2015: 2). This then sheds some light on why EH employees do not know with certainty what the true health burden might be.

The quote I presented at the beginning of this discussion, besides its xenophobic connotations, has an undercurrent of fear and perhaps awe at the capacity of rats to spread rapidly across the world. Although there have only been the two cases of leptospirosis (Hopkins, 2015) and rat bites reported in numerous newspapers, to my knowledge, there is no information available on other reported zoonoses related to rodents in the city of Cape Town. One might expect that in a city that builds its rodent control strategy on the premise that rodents are a threat to human health, appropriate health monitoring and data collection would be a priority. Yet there is no reliable data to inform a discourse in which actions (cruel or otherwise) taken against rats are framed in terms of reducing health risks. In every interview with EH officials and workers in all the sub-districts I visited, human health was at the core of why there needs to be rodent control and why poisons are used as a control measure. Rodents, specifically rats, are viewed in one dimension – as disease carriers – and they are treated accordingly. The xenophobic comment of the rat being from elsewhere, Nigeria in this case, demonstrates the imaginary around the rat as disease-bearing, but moreover, this positions rats from elsewhere as even worse than local rats.

A study conducted in the metropolitan of Durban in South Africa by Archer et al. (2017) discusses endo-parasites that were recovered from rats and mice (379 *Rattus norvegicus*; 10 *Rattus rattus*; 11 *M. natalensis*) and are a public health concern. The researchers trapped and euthanized 400 rats in 60 different sites across four locations in the city after which they proceeded to take samples of the rats' blood and visible parasites on the rats, and they dissected each organ from every rat to collect the parasites. This resulted in the detection of eight parasites of public health importance – *Gongylonema sp.* being the most prevalent (25.3%), followed by *Trypanosoma lewisi* (22.8%) (Archer et al. 2017). Both endo-parasites could have negative effects on human health, and they could be fatal if left untreated or misdiagnosed (Archer et al. 2017: 63-64). Alongside this study, Julius et al. (2012) provides more insight into rodent-borne zoonotic diseases in rural and urban South Africa. With a similar methodological approach to Archer et al. (2017), the researchers sampled rats from four provinces in South Africa – Gauteng, KwaZulu-Natal, Limpopo and Mpumalanga, and thye found bacteria such as *Streptococcus* and *Bartonella* to be the most prevalent (2012: 263). *Bartonella* is known to possibly cause endocarditis in immune deficient individuals, whereas *Streptococcus* infection can lead to meningitis (Julius et al., 2012). The authors conclude that "the results highlight the

public health implications especially for immune-compromised individuals, as these rodent-borne pathogens can cause opportunistic infections that in such individuals are not readily diagnosed or treated" (Julius et al., 2012: 261). The research on possible parasites and bacterial infections humans could encounter when living in close proximity to rats illustrates not only the concerns that are prevalent in the field of public health, when it comes to rat infestations, but also points to the gap in research on rat populations, which needs to be addressed in Cape Town.

In Mngadi's (2016) research paper on the rat infestations in Khayelitsha and Philippi, and the effects on human health, the author includes mental health as being potentially compromised or at risk through exposure to pests such as bedbugs and rats. She refers to the dearth of reliable statistics on mental health disorders in these low-income areas and observes that there is a gap in the literature relating to the impact of rats on human mental health. She notes that some studies – such as one by Zahner et al. (1985), which was conducted in the USA – indicate that people who live in pest-infested areas experience "anxiety-provoked psychophysiological symptoms such as dizziness, sweaty palms and headaches" (Mngadi, 2016: 49). Interestingly enough, Zahner et al.'s (1985) study indicates that their participants experienced better mental health due to pest infestations being reduced over the course of three years. A recent study in Baltimore (USA) indicated that people who live in close proximity to rats and see rats daily are 72% more likely to experience acute depressive symptoms than people in the same area who do not experience this reality (German and Latkin, 2014). This area of research is something that needs to be prioritised, specifically in the Southern African context, in order to provide a broader understanding of human health and how it is affected by urban animals such as rats.

In *Inescapable Ecologies* (2006) by Linda Nash, the author makes the following statement:

> "When we recognize that human bodies are directly affected by their environments, we are forced to acknowledge that humans are not simply agents of environmental change but also objects of that change. Conversely, the environment is more than an object upon which change is enacted; it is also an agent of sorts that acts upon the bodies inhabiting it. As landscapes can be investigated to uncover the effects of certain human actions, human bodies—their symptoms and diseases—become sites for investigating the quality and effects of certain landscapes. Subjects blur into objects, and historical agency becomes distributed among a multitude of entities: humans, insects, microbes, trees, groundwater, and chemicals." (Nash, 2016: 8)

Nash (2006) argues that it is vital to see human beings as holding a valuable function within the ecology of a space rather than being constructed as existing outside of the ecological sphere. As is evident in the above quote, Nash promotes a vision of entanglement –seeing humans, non-humans and ecological processes as entwined. This suggests that we should consider humans and rats as caught in a dynamic relationship: human settlements provide food and harbourage for rats → rats pose a potential health threat → humans poison rats. This dynamic relationship also has spatial and temporal dimensions. The landscape, as Nash argues, is a space that can relay so much, demonstrating why there are rat infestation in the first place and why some people find themselves in close proximity to these animals.

Private rodent control

Besides the City of Cape Town environmental health offices being responsible for rodent control in the city, there are other actors that practice rodent control. I categorise these in two categories: private pest control companies and city of Cape Town residents themselves.

Private sector

I interviewed two private pest control companies and corresponded via email with another. They employed similar methods and justifications for their control strategies. All serviced private clients' properties such as homes, shopping centres, restaurants, factories and other general businesses. All the companies emphasised that they make use of an IPM model before actually doing anything to get rid of rodents and other pests in general. The overwhelmingly used and conventional method employed by the three companies to control rodents was bait boxes – installed and maintained in a similar way to how the City of Cape Town does it.

One of the companies made use of glue traps "if necessary" in addition to the use of rodenticides for rats and mice respectively. Glue traps are "typically small sheets of cardboard trays with a strong adhesive substance on the top of them. When an animal steps on it, the adhesive holds it in place indefinitely" (Ndimande, 2018). The NSPCA has run multiple national campaigns to warn South Africans of the dangers related to using glue traps as well as contending that glue traps are "inhumane and unacceptable traps that should not be used under any circumstances" (NSPCA, 2014: 5). The aforementioned pest control company still uses this product, although they have received several complaints from the SPCA in Cape Town. The regional director of the company frustratingly noted:

> "Yes [we make use of it], I mean where are you going to draw the line? Are you going to think about rats that are disease carriers or are you going to make the rat a squirrel now and say 'poor thing, we are going to save you'. Then they [SPCA] need to tell us that rats are now squirrels… But at the end of the day, the SPCA needs to decide whether rats are a protected species. I mean they did it with the seals in the ocean as well and it is starting to mess up the entire food chain, so the seals eat too much and there is not enough food. Humans interfere with nature and then it is a mess."

The most innovative method that I encountered among the three companies was a fume and drown method. This method entails making use of a box that is referred to as Ekomille™ – 'Organic Rodent Control'. The Ekomille box can be purchased but as the owner of the pest control company pointed out, this does not happen very often as it is rather expensive since it

is an imported product from Italy. The product is mostly used by companies, whereby the pest control company installs it and then services and monitors the activity. The box has a feeder system consisting of two sections – a top level section and bottom level section. The bottom level section is the holding tank. The top section is where the mechanisms are for the trap itself and there are feeder stations based around the unit itself so the stairs leading to the top section are also a feeder. They make use of natural foods and there are no poisons involved in the trap. They use a variety of bread, bird seeds and sunflower seeds, and they make a combination of peanut butter and then put peanut butter in the machine as well. The rodent picks up the smell of food and is attracted to the box. Yet the rodent control companies I interviewed are aware of rats' fear of new spaces, tastes and smells. On interviewee states the following:

> "[the] rat is neophobic, so anything new in its environment takes a while to get used to, so the rule of thumb would be when the unit is installed and all the feeder stations are nice and full and there is a lovely smell coming off the unit we switch the unit off. So, we actually allow them to go and eat and to go back to the nest. It takes roughly a week from the installation where they have eaten literally everything off it, we then go back and refill with all the same food they have become accustomed to and then we switch the unit on".

With the unit active, when the rat reaches the top part of the unit there is a 'secret' platform with a sensor and if the sensor gets triggered, the platform flips and drops the rat into the box and into a fluid consisting of isopropanol, isobutanol and vaseline oil. The rat then supposedly swims in the liquid and becomes unconscious because of the alcohol fumes and drowns. The body of the rat cannot decompose and therefore does not cause a rotting smell. The box can catch up to 80 rats. When the box is emptied, the dead rodents are removed by a company that manages medical waste and the rodents are then cremated.

Figure 17: Ekomille box example as in the Ekomille brochure

One of the interesting points, among several others, that was raised during the interview with this particular company was that they were approached by the City of Cape Town in 2015 to assist in the case they had with the SPCA, opposing the drowning method that was applied in Khayelitsha at the time. The city wanted to make use of the same alcohol liquid that is used in the box. Their idea was to use the liquid rather than water to drown rats so that they would lose consciousness before drowning and would thus be subject to a more humane death. However, the director of the company did not want to supply the liquid because he argued it relied on fumes and would only work effectively within the boxes especially designed to contain them. Apparently, the box has come under scrutiny by the SPCA as well, and the company has faced legal threats by the SPCA presumably because the rat is still treated cruelly in that it swims around before being overcome by potentially distressing fumes. After consultation with the company's lawyers, they found that the SPCA did not have a legal right to open a case of animal cruelty and if they did, they would lose the battle. It is due to this that their services and the product still remains on the market and that the company is still able to operate using the Ekomille box.

Persistent inequality and its effects

There are clearly very different ways of controlling rats in high- and low-income parts of Cape Town – displaying different engagements with notions of humane treatment. Whereas the pest control companies working in high-income malls etc. are concerned with efficiency and humane treatment (although only up to a point), people in Khayelitsha use a range of more or less humane/cruel alternatives.

Data collected by the 2017/8 KRS representative survey of Site C provides some insight into the prevalence of rodent control technologies in the area. When asked whether they purchased and made use of a snap trap or glue trap in the past year only about 9% indicated yes to the fact that they used a snap trap, whereas almost 39% made use of a glue trap. In order to find out what people do once a rat or mouse has been caught with the glue trap, the survey asked respondents to indicate how they proceed in this case. The table below displays the responses:

If you used glue traps, what did you do with the mice and rats?	**Number of responses**	**Percentage**
I killed them by hitting them or standing on them	13	16.67%
I drowned them	4	5.13%
I left them alive and threw the glue trap away with them still stuck on it	40	51.28%
Other, explain	21	26.92%
Total	78	100%

Table 3: If you used glue traps, what did you do with the mice and rats?

The survey also asked questions pertaining to the use of poison. The graph below indicates the percentage of people who answered 'yes' to the particular poison they reported having purchased and used in the past year.

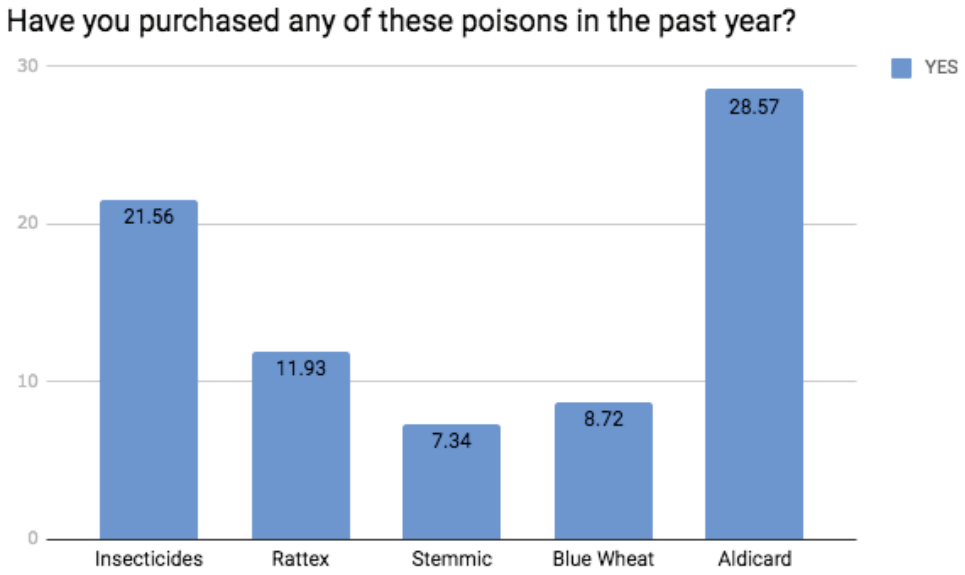

Table 4: Have you purchased any of these poisons in the past year?

I have already pointed to the fact that 29% of respondents made use of Aldicarb and as can be seen in the graph above, this is considerably higher than the other poisons that were used. I want to look at the use of Aldicarb or 'two-step' as being a symptom of inequality that is able to describe the ongoing inequality of rat control technologies between the private, public and personal spheres in the city of Cape Town. In the research that Nattrass and her colleagues conducted, they found that "as of late 2017, Aldicarb was selling for R2 a straw" (2018: 8) on trains from central Cape Town to Khayelitsha. Because Aldicarb is considerably cheaper than other poisons and people resort to the informal market, I argue that it makes sense why people, specifically in poorer communities, would still be purchasing this poison. Considering the socio-economic status of many residents in Site C, one can understand why you would choose to purchase Aldicarb even if it is illegal and you have been warned against the use of the poison. The reality is that the technologies that are available and utilised by private companies servicing high-income areas are simply not available to the majority of people residing in Site C and other low-income areas. It is thus poor people who bare the potentially heavy costs (injured children) from the use of unregulated and illegal poisons. This is a form of slow violence through inequality as well as a manifestation of necropower, as I discussed earlier in relation to illegal poisons.

Reflecting on the CCID's contribution to rat control in the CBD of Cape Town, I would argue that this cannot be viewed as a given or neutral occurrence – politics are rooted in everything. During the 1990s when South Africa transitioned from an Apartheid state to a democratic state, cities such as Bloemfontein, Pretoria, Johannesburg and Cape Town saw some shift in racial settlement patterns. One phenomenon, as Graham (2007) points out, was the fact that "most CBDs in South Africa have suffered from white flight, the spatial effects of global economic restructuring and the dysfunctionality of the CBD" (2007: 14). However, Cape Town's CBD did not transform in this way, partly due to the CCID initiative. As Graham points out:

> "the work of the Central City Improvement District, which has attempted to tackle crime and grime, has made the CBD more attractive, and, thirdly, the inner city and surrounding neighbourhoods house a wealthy, skilled labour force from which service sector businesses can draw.[...]Fourthly, the CBD is aesthetically pleasing: its physical location with the proximity of the mountain and sea has made it a unique, picturesque location to both live and work in and the proximity of the harbour is useful for some businesses." (2007: 77)

Turok (2001) discusses the process of gentrification in the city of Cape Town, which he outlines as a process by which private development companies, the government, investors and non-profit organisations renovate and improve particular districts in the city in order to make them palatable and to conform to middle-class tastes. Areas that have seen the emergence of gentrification in Cape Town include Observatory, Woodstock and Salt River. In many ways, one could view the CCID as playing a role in the gentrification process. The CBD has not only seen an "upswing in its market rental rates and a decline in vacancies since 2004" (Graham, 2007: 22), but it remains an area that is inaccessible to live in for many poor residents in Cape Town. The CCID's rodent control programme runs in conjunction with the City of Cape Town and can be seen as part of a broader attempt to make the CBD palatable and rat free, steering it away from being viewed as dirty. I would argue that if the City of Cape Town was to really take an ethical stance, they would take steps to have a similar impact in areas such as Khayelitsha. This, of course, may require more resources than feasible. Yet, by not doing this, the city perpetuates ongoing inequalities in terms of class and race in the city of Cape Town. By focussing on maintaining an image of the city through creating a beautiful CBD for tourists and residents living there, the local government will not bridge the gap and truly fulfil its own 'ethical' stance to help people combat rodent infestation in lower-socioeconomic areas.

Throughout this chapter, I have discussed the various ways in which rats (and mice) are controlled and managed in the city of Cape Town through the public and private sectors as well as by some residents in Site C. The discussion has sought to provide a sketch of current affairs in order to understand what is to follow in the rest of the dissertation. I have shown the 'tale of inequality' that is persistent in Cape Town through examining rat control and management strategies, rodent control technologies, the economic differences between who can access what type of technologies, the (in)effectiveness of waste management, and the impact that rats have on human health and gentrification.

Chapter 6: Framing the Rat in Site C Khayelitsha

Figure 18: 'Word cloud' generated from KRS qualitative data

During the focus group hosted by the KRS, I wanted to probe more into the experiences which shape how people view and relate to rats in Site C. When I asked the group about their experiences with rats, Eric – a middle-aged black man – was quick to share his encounters with the group. He told the group that rats live all around his shack and sometimes come into his house. He recalled a particular story about a day when two rats were fighting in his house. One, the larger of the two, he assumed was 'his' rat. He makes all of us relive his experience, climbing onto his chair during the focus group to show us exactly what had happened that day. With both of his feet firmly on the chair and gripping the chair handles with both hands, holding himself upright, he looks down with eyes wide open and starts pointing toward the ground. With his voice reaching a higher pitch now and the pointing becoming more aggressive he tells us about the two rats fighting in his house while he stands afraid on his kitchen chair. "There was two! I even opened the kitchen door before getting on the chair and they still did not leave! One big one and one smaller one. The big one was trying to get the small one out. There was a

WWE[22] match!" Mimicking the noises that the rats were making while biting one another, eyes big, voice screeching and fingers pointing out the rapid movements of the two fighting rats, Eric was committed to telling this story in the most believable way because he himself could still not believe what he had seen. At this point, the focus group had burst into laughter with some showing their disgust and shaking their heads. This moment in which Eric told the group about the two rats fighting in his home demonstrates the ways in which some residents share their intimate spaces, such as their homes, with rats. Moreover, this illustrates the fear that accompanies the sharing of space. As if Eric's account and my reading of how people share intimate spaces with rats was not enough for me to understand the particular forms of entanglement, he went on after his re-enactment:

> "I know the rats in my house so what I do before I go into a room is to tap with my fingers on the wall so that they can hear I am on my way. If I do not bother them, they will not bother me. They are very intelligent creatures, you need to handle them with care. You do not just shout at them, you do not just scream at them, you have to let them know that 'we are actually sharing this house', so you make light tapping noises to let them know that you are there. So, then there is no eating of clothes and all that."

Wondering whether this was an example of someone living in harmony with rats, I inquired more about this, but Eric was quick to tell me: "I would not call it my friend. We tolerate each other". This leads me to an understanding that we cannot simply view Eric's relationship with the rat in his house as them 'being together', but it rather signals the limits of their togetherness.

The ways in which Eric communicates his feelings towards rats – varying from fear to a certain grudging kind of respect to rats being co-occupants of his home – is telling of the different ways rats could be understood and perceived in the everyday. Usually described as pests, the relationship between humans and rats has been mostly negative. Edelman (2002) writes:

> "Rats have been seen as vermin, and they have been killed for food, killed for sport, or killed after having served as tools for experiments in laboratories. They have also been seen as carriers of infection and disease and a sign of unhygienic conditions and poverty in general." (2002: 3)

Edelman argues that the rat has a triple identity which is formed through human-rat relations – rats as pets and lovable, rats as pests, and thirdly, rats as scientifically neutral animals that are

[22] World Wrestling Entertainment, an American integrated media and entertainment company which is primarily known for professional wrestling.

mere objects in a laboratory (2002). This suggests that there is no singular way of understanding human-rat relations, and this can also be applied to the South African context. As Anthony Barnett notes in *The Story of Rats (2001),* "Human attitudes to rats depend on custom and circumstance: they include terror at the threats they represent to our food and health and welcome as a source of nourishment; and they range from disgust to curiosity" (2001: 1). Barnett vaguely points to the historical 'fact' that "South African warriors twisted tufts of rats' hair in their own hair: this, they said, conferred on them the agility of a rat, and so helped them to avoid an enemy's spear" (2001: 8). Unfortunately no references or data were presented to support this statement. This calls attention to thinking critically about how we research 'the rat' and what type of representations we create alongside this. Barnett's statement of the 'South African warriors' who use rats' hair to protect themselves is one example of an anthropology that can create inaccurate depictions of people, making broad generalisations. So when we talk about 'the rat', it is just as important to contextualize where the rat is and who exactly is interacting with rats (or any part of them).

The manner in which 'the rat' is written about and represented almost certainly differs across social, geographical and national settings. In South Africa, the narrative around rats has fed into a dominant discourse of destruction and harm or being the enemy. A key question here is what shapes and affects this fear and the moral understandings of rodent control. Most work on rodent infestation focusses on the implications for humans; hence, the rat is seen as a vector of disease and as a marker of poor sanitation. Yet the multispecies approach reminds us that the rat can also be seen as a being that has purpose and a right to life. As noted in my methods section, for a long time there has been an anthropocentric bias in anthropology and social science. 'Decentring' this type of approach allows for further understanding and insight as we know that we, as humans, do not exist in a vacuum but rather in webs of life, as Tim Ingold (2012) reminds us. I continue writing in the vein of highlighting a form of slow violence that is prevalent not only in the lives of people in Khayelitsha, Site C – such as Eric – but also in the lives of rats and mice. In many respects, we can see the "nourishing [of] some worlds and not others" (Haraway, 2008: 88), but moreover, the suffering that rats and mice have to endure when their worlds are destroyed through death at the hands of traps, rodenticides and other rodent control technologies – in this case, within the context of Cape Town.

The contestations and debates over what is a moral and amoral way of killing rats and how rats should be managed or controlled in Cape Town is a cornerstone feature in the paper by Nattrass, Stephens and Loubser (2018), which I referred to earlier. In this regard, it is important to note

that 82% of Site C residents interviewed in the KRS representative survey stated that they were in agreement with the cage drowning method that was in practice in 2014/2015. Considering the different groups involved, it is clear that there are a complex set of considerations, taking into account the community's needs and perceptions, the Khayelitsha EH's attempts to respond to those needs, and the NSPCA's position in terms of cruelty against rats. At the heart of this debate is the question of whether the rat has any right to exist and to be treated humanely. Respondents were asked whether they cared about rats being killed in a cruel way or not (Table 5). Over two-thirds opted for the answer 'No, I really don't care if the rats suffer' and about a fifth reported that they did not care and that they would, in fact, be happy if the rats suffered. Less than 9% said that they cared and would prefer rats not to suffer.

Do you care if rats are killed in a cruel way?	**No. of responses**	**Percentage**	**% (taking into account survey design effects)***
Yes, I care and would prefer the rats not to suffer	18	8.2%	7.2%
No, I really don't care if the rats suffer	158	71.8%	68.0%
No, and actually I am happy if the rats suffer	39	17.7%	22.0%
Don't know	3	1.4%	1.7%
Other (explain	2	0.9%	1.1%
Total	**220**	**100%**	**100%**

Table 5: Do you care if rats are killed in a cruel way?

Through analysing the qualitative data (based on notes taken by fieldworkers and subsequently included as text in the data set), it becomes clear that attitudes towards the killing of rats and mice were substantiated through various reasonings – most of them relating to dislike of the animals and previous and current negative experiences of them. One participant stated:

> "I don't care, I want it to have a terrible death because they mess up our lives. I want a painful method, you did notice I don't have any underwear because of them, now you want me to sympathise with them [by asking this question]? I want some heavy duty (potent) poison…"

Others said:

> "Who cares about rats, those who do must come keep them in their house because they're ruining our lives here."

> "I don't care how it dies, if it's by cages, boiling water or whatever. I don't care how it dies as long as it dies. They're not like normal pets."

These statements shed some light on why about a fifth of the respondents said they were happy if the rats suffered. The notion of 'lives being ruined' because of rats and mice is a theme that comes across strongly. Rats and mice are known to pose threats of destruction to human 'belongings' such as food, clothing, property, etc. and it is therefore possible to read into why people might feel that their lives are being 'ruined' by rats and mice. The qualitative and quantitative data pointed overwhelmingly to property being damaged, personal belongings such as clothing being destroyed, and foods being contaminated or consumed by rats and mice. The economic loss experienced by residents and brought about by rats and mice in the community is something that needs to be taken very seriously given that Site C is a low-income part of Cape Town. Almost a third of adults (32%) were unemployed at the time of the survey which provides further insight into the economic stance of some households. Forty-two percent of respondents stated that rats were a 'big problem' for their respective household and 51% of respondents felt that rats have become more of a problem over the past year. I argue that the fact that people were economically marginalised and left feeling overwhelmed because of the rats should be the foundation of our sensemaking when considering why participants would make statements such as those outlined above and why they would predominantly not care how the rats are killed.

The overwhelming majority of participants in the KRS survey thought that the rats were coming from either the river in Island, rubbish dumps or the waste containers. This is something that I followed up on in the focus group and when doing fieldwork, and I received the same response. The rats and their habitat are understood to be characterised by dirt – and in reality those spaces *are* dirty, providing both food and harbourage for rats. The manner in which residents makes sense of where the rats come from or live is consistent with the literature on the kinds of conditions conducive to rats in urban spaces. There are thus real and symbolic reasons why the rat becomes characterised according to where it originates – dirty, smelly, rubbish-filled spaces.

The multispecies approach seeks to diffuse the human-animal dichotomy. In Site C, people understand very well that no clear boundary exists between their homes and the world of the rat. Rather than being an animal separate from the human species, it is hated precisely because it is symbolic of dirt and poverty, and a threat to food and possessions. The rat is also burdened with assumptions about the role of other people in shaping these unfortunate circumstances. A strong 'insider' and 'outsider' divide can be observed in the community where people see rats as coming from the outside, always elsewhere and the majority of the time from dirty spaces

such as the river, waste containers or train tracks where people dump rubbish. Residents in the formal areas of Site C often blamed residents in the informal areas for being responsible for the rat infestation due to informal areas being dirty. Consider the following responses to the question of where rats or mice originate:

> "I think rats are coming from the informal settlements. We are close to shacks and in most cases there are many in those areas."
>
> "Definitely the rats are coming from dirty places such as informal settlements and rubbish containers."
>
> "[They come] from the nearest dirty places such as informal settlements."

The rat therefore represents dirt and in this case it has an origin – the nearby informal settlements. In her research among tuberculosis (TB) patients in Khayelitsha, Abney (2011) argued that they saw their surroundings as dirty and by keeping their house's windows closed, they hoped to keep the disease/pollution/dirt out, but by doing so this raised the risks of other household members becoming infected with TB. Her study shows that it is important to understand how notions of dirt and pollution shape everyday practices and risks. As discussed in Chapter 3, Douglas (1966) provided insights into how rats are perceived as dirty and as 'trash animals'. When thinking about people living in informal areas, such as Taiwan or Island, it also becomes possible to see how these residents are then associated with dirt and how through this process they become stigmatised as the outsiders by people living in more formal areas. In this instance, it is possible to not only understand some rationales behind why people want the rats dead, but also to perceive how people residing in more privileged spaces view those at the 'origin' of where the rat emerges. Moreover, this also leads to an understanding that Site C is not a homogenous space of only informal housing and intense rat infestations, but rather an area that is varied and also displays elements of inequality.

The scary rat

Hugh Raffles's notion of "the nightmare of knowing and the nightmare of nonrecognition" in his multispecies genre book *Insectopedia* (2010) is one that points to the way in which we, as humans, often perceive animals such as rats as a nightmare and by knowing they are around us, we also do not recognise their lives as valuable, but rather, we take them for granted and remove them from our spaces. He calls it the nightmare of nonrecognition because he claims that it we are driven solely by fear and act accordingly (2010). The statements below, from the quantitative data in the KRS, point to the fear that people have toward rats and how this influences their engagement with rats:

> "Because they [the rats] come so unexpectedly if I were locked up in here with one I'd get really stressed out. When I see it from a distant I'm not frightened but when it runs past me I get scared."
>
> "I read/see from newspapers what they can do to people. So yes, I am scared"
>
> "I'm really afraid of rats, I don't even want to look at it, where would I get the courage to drown one?"
>
> "There's no way you wouldn't be scared, they're heavy. They're so big they could scoop us out of our homes."

To the best of my knowledge, there are no studies on the psychological and socio-economic correlates of such fear and it is impossible to generalise on the basis of these quotes. However, they remind us that rats can provoke strong feelings of fear and disgust and that such emotions are an important element in human-rat relations.

The harmful rat

Real or imagined harm is also a contributing factor to how rodents are perceived. One parent even made the claim that a rat, which according to her was linked to witchcraft, bit her baby: “It bit my baby, a rat, she was sleeping it wasn't bleeding but she could only see and feel that it was sore the next day. I didn't know what it was, but my neighbour said, "It’s a rat, it bit and blew on her [so that the baby would not feel the pain of its bite]”. In this case, the rat was imagined to be the culprit. In other cases, people referred to specific rat behaviours as posing direct threats, especially to children:

> “Especially when they're running over our heads. I worry about my baby as well.”
>
> “Raising children here is most difficult. You know children eat everything, the germs in that wetland are tougher than the rest. Have you had a rat eat a pair of your new shoes? You can't even have a girl here, how do you explain a rat eating her stuff? Now you have to make sure she first gets used to the situation.”
>
> “But they could eat a little baby whole. It's not safe here, if you leave your baby on your bed then they crawl onto your bed – now children smell like milk or they have food on their face, then they could eat your whole baby.”
>
> “You can't even leave a baby sleeping on the bed because these rats will sneak up on them. Because babies smell like milk.”

The fear of rats harming their children is an element that could help in understanding why respondents were mostly hostile to rats and did not care how they were killed. The home space where people sleep, where new shoes are kept, food is stored and where children are raised and cared for, is a space that should not be taken for granted – specifically in post-Apartheid South Africa. In *Making Freedom: Apartheid, Squatter Politics, and the Struggle for Home* (2015) Anne-Maria Makhulu writes about the home space within townships in South Africa during and after the Apartheid era. The author addresses how black Africans had to claim spaces to make a home in a country with a history of targeted forced removals and several other policies that hindered them from making the home they wanted (as discussed in Chapter 2). Makhulu (2015) focuses on squatters, those who (at times illegally) build homes in informal areas with makeshift building materials, and through this she illustrates the politics of belonging and the home space. Considering the home space in light of the politics that are attached to it in post-Apartheid South Africa, it is not possible to read the above statements without seeing the depth in them and how the fear that is relayed speaks to a wider socio-political history of home

making – where children need to be raised and cared for, where people need to eat and sleep, and where one needs to feel safe. With this insight, it is possible to see how and possibly why rats are perceived as the enemy and as a threat to living a healthy and safe life.

The mischievous human-like rat

As I have already indicated, the characteristics that are attributed to rats vary from being dirty to scary to harmful and even being related to witchcraft. Together with this I want to explore the ways in which respondents often attributed human-like characteristics to the rats they encounter. Notions of *playfulness*, listening to music, being *cheeky*, being skilful, having knowledge of people's schedules and even being described as tsotsis[23], are all indicative of what I would argue to be the intimate ways in which people's lives are entangled with those of rats. During my fieldwork I noticed that whenever I started talking to people about their experience with rats, the discussion often provoked laughter. What becomes of interest here is that if rats were only thought of as the dirty, scary and harmful creatures, as several respondents told me and indicated in the survey, one would imagine that people would not laugh about them or tell funny stories related to them. This is, however, what I found during the discussions – funny stories and laughing, alongside the stories of rats being harmful, scary and dirty. What this implies is not only that there is no clear-cut manner in which one can understand and relay the socio-cultural perceptions of rats among people in Site C, but also that there is a particular closeness and entanglement that people have with the rats that they encounter and that with this comes forms of characterisation which help to better understand rats and their behaviour. Respondents of the survey made the following statements that relate to what I am suggesting here:

> "They make a noise while you are sleeping at night and play on your blankets."

> "I remember one day I was coming from the shop and left the door open and playing music, and the rat was sitting in front of the speaker, listening to the music."

> "It's my buckets with groceries that they attack constantly, no they're having the time of their lives with those. They have such skill with those – like a person! They're so skilled they chewed off another woman's Tupperware, the lid, so skilfully. They get into everything."

> "It seems like rats know our schedules, they know to come into your house when you're not there and cause damage. They know us, they become a part of your life that you can see it aging in front of your eyes with its hairs fading."

> "There's no getting used to those, they're so cheeky and heavy, you have doubts when approaching them."

[23] Tsotsi(s) is a South African word in several languages which refers to a criminal, troublemaker, thief or murderer.

> "These aren't rats, they're people! You have to keep an axe by your side for when one walks in. When they step into the house it feels like a tsotsi walked into your house."

Similar to how people characterized rats with human-like qualities, people also have ways of communicating with the rats they encounter. Eric's story at the beginning of this chapter speaks to this – having to communicate via tapping sounds to warn rats of his presence. Another example that I came across was the belief that shouting at a rat or chasing it away was not a wise thing to do. Some respondents noted:

> "They [the rats] chewed my cardigan. I showed it to some friends they then asked if I shouted or cursed them because apparently, they chew your clothes in rebellion when you curse them."

Another noted: "The minute they hear 'voetsek'[24] they come back with much force, vigour and spite and eat your clothes". When this was brought up during the focus group, one man agreed and said that if you were to shout at a rat "they destroy your clothes" with another participant quickly interrupting, "They will destroy the best ones. They are clever man. They know the ones that you like and those are the ones they are going after". However, this was not a unanimously held belief, with one participant noting that "It is just a story that is around. Some [people] know and some do not know".

These quotes illustrate how people and rats are entangled actors in a social web. Although people see rats as a complete 'other' at times, they still attribute human-like characteristics to them – something with which they are familiar. This is what Ginn et al. (2014) calls "alterity-in-relation" which they argue "comprises togetherness" (2014: 121). In the case of Site C, people are occasionally more intimately familiar with rats than what they would prefer, but at the same time they remain alien – "[opening] up space for friction, conflict, and misrecognition within togetherness; in other words, it moves beyond an understanding of 'togetherness' as simply life coming together" (Ginn et al., 2014: 116).

[24] Voetsek is an Afrikaans word that is often used to chase someone or something away – simply meaning, 'go away' in an impolite manner.

Chapter 7: Rats, Cats, Owls, and Witchcraft

During my fieldwork in the Island area of Site C, I often noted blue and white flyers that were pinned onto waste containers, open walls, poles and behind street signs. The blue and white flyers, which are a common sight and can be seen in most South African towns, list the services of a healer or doctor that can provide services such as 'bringing back a long-lost lover' or 'helping with money issues'. Many of the flyers I saw offered the service of 'amagundwane', and I later learned that this is a service offered by witchcraft practitioners in the area, proposing that a rat will go and steal money from a bank, store or elsewhere and bring you the money. A dissatisfied customer of this service noted in a newspaper how he was robbed of R2,700 and that it was a scam (Makora, 2016). What is of interest here is not the scam itself, but that a rat, normally a creature framed as an enemy, is presented as a potential ally – being able to turn its ability to enter buildings through tiny holes to your advantage. As discussed below, rats are associated with witchcraft, but their role appears to differ depending on the circumstances. They can be seen as bearers of curses, or in the case of amagundwane, bearers of riches.

Figure 19: Advertisement of an Amagundwane specialist in Site C. Photo by Pieter du Plessis.

Ukuthakatha (witchcraft in isiXhosa) can be an uncomfortable topic in academia because of its complex historical representation in colonial and post-colonial South African discourses. Wallace (2015) outlines the intimate ways in which what was considered witchcraft in colonial South Africa was severely countered by Christianity and Western Enlightenment thought. Although witchcraft is no longer suppressed in South Africa today, it remains contentious, both in its practices and representation. Adam Ashforth's *Witchcraft, Violence, and Democracy in South Africa* (2005), an ethnography based on the everyday life experiences of people living in Soweto, an African township in Johannesburg, discusses the many ways in which people negotiate the notion of witchcraft and witchcraft practices in daily life. The ethnography relays the findings of Ashforth's on-and-off fieldwork in the 1990s during South Africa's transition to a democratic government, pre- and post- apartheid, finding itself at the peak of the HIV and AIDS pandemic. The author's intense exploration of witchcraft in the African context – specifically in the philosophical, epistemological and ontological realms – offers great insight for undoing the manner in which witchcraft has been understood as a static practice and belief. Ashforth argues that spiritual insecurity is closely linked to a belief in witchcraft, and he goes on to say that "Spiritual insecurity may be a universal feature of human life. It is related to, but not reducible to, other forms of insecurity such as poverty, violence, political oppression, and disease" (2005: 3).

Ashforth's argument around witchcraft as a dynamic and ever-shifting practice is a point I want to emphasise in this section. Instead of making the argument that witchcraft and the manner in which it is experienced in Site C is a characteristic of slow violence, what I want to do here is to position the notion of spiritual insecurity as that which can be included in the argument about slow violence in the everyday lives of residents living in Site C. I make this argument by looking at human security and how spiritual insecurity threatens the very foundations of human security. Alongside this anthropocentric argument, I also suggest that the notion of insecurity and moreover slow violence relates to not only the rats, but also other urban animals such as cats and owls in Site C.

Before delving into the experiences and perceptions of witchcraft in the everyday life, specifically in relation to rats, I first visit some elements of witchcraft to clarify what it is that I am discussing. Wallace (2015) points to the broadness of the category 'witchcraft' and mentions that in the South African context anyone from a practicing sangoma to an inyanga could be considered to be practicing witchcraft. Sangomas can be understood as individuals who are:

> "'called' to their role by the ancestors, [who] undertake a lengthy process of training in order to mediate human concerns with the spirit realm. This includes learning to achieve altered states of consciousness to communicate with the spirit world, interpret dreams, use divinatory methods to enable their diagnosis of the causation of misfortune or disharmony and prescribe the correct medico-magical responses necessary for treatment and healing." (Wallace, 2015:32)

In the South African context, sangomas are those who check if misfortunes and illnesses are "caused by their clients having violated cultural norms and traditions" (Nattrass, 2005: 2) and inyangas employ "medicinal and magical properties of herbs, plants and animal parts to be used as medicine" (Wallace, 2015: 32). These sangomas and inyangas are usually referred to as 'traditional healers'. Ashforth offers a critique of the term 'traditional healers' on the grounds that it "conjures up a sense of timeless unchanging traditions practiced by adherents of fixed and systematic customs and procedures" (2005: 50). I am in agreement with this critique and when using this term, I am fully aware of the connotations it might have. However, this is a term used in everyday South African language (as seen in my own fieldwork, Ashforth, 2005; Nattrass, 2005, Levine, 2012) and by refraining from using it, this would exclude the politics linked to this term and the life that it holds in the South African context. For a long time, ambiguous statistical claims were used in the media (Fihlani, 2013) by the World Health Organisation (Bannerman et al., 1983) and in scholarly works (Mbatha et al., 2012), that 60 to 80% of black South Africans consult traditional healers. This statistic has been proven inaccurate by Africa Check (2013), an African fact checking organisation. Regardless of knowing how many people consult traditional healers, this has a reality and life of its own in people's lives within South Africa and moreover in Site C.

Part of the analytical discomfort surrounding the terms 'traditional healing' or 'traditional healer' is that it has, in the past, been negatively juxtaposed with modern medical practices, as encountered in governmental and private hospitals, clinics and pharmacies. Ashforth argues that witchcraft is more nuanced than this simple binary juxtaposition and that witchcraft "is not merely a form of benightedness that disappears with enlightenment and modernization. Nor is it simply a matter of belief that can be relegated to a distinct sphere of human concerns: religion" (2005: 3). Francis Nyamnjoh, an African anthropologist, adds to this discussion:

> "The emphasis on the negativity of so-called witchcraft and sorcery has tended to de-emphasise the epistemological potential of belief systems and practices that refuse to caricature reality through resorting to easy dichotomies

> between ways of being and knowing by means of sensory perception and other forms of being and knowing that are not easily reducible to the senses and linear conception of time and space." (Nyamnjoh, 2017: 207)

In his book *We Have Never Been Modern* (1993), Bruno Latour argues that what is seen as 'modern' among different groups of people is relative in the way that they make sense of and live in the world. People can be both 'modern' and accept witchcraft as a reality. Peter Geschiere, in his book *Witchcraft, Intimacy and Trust* (2013), asserts that witchcraft has not disappeared with modernity, but is very much part of it, and he highlights the "close and mesmerizing link between witchcraft and intimacy in present-day Africa [and elsewhere]" (2013: xv). Geschiere points to issues of trust and uncertainty in the ongoing relevance of witchcraft in contemporary societies, and he challenges us to understand how witchcraft operates at various levels of social life, noting that there is a notion of intimacy and closeness for those who subscribe to it.

In Site C, it is possible to see how witchcraft operates at a very intimate level of everyday social life. The intimate ways in which witchcraft operates among residents of Site C feeds into the way people navigate their immediate environment, such as thinking about their movements at night time, as a few participants noted in the focus group that "night time is evil spirit time" (something I touch on again in Chapter 8). Navigating the environment also means knowing how to treat some animals because of their relation to witchcraft and being aware of the results caused by particular actions such as shouting at a rat. The KRS probed people's belief in witchcraft by asking if they agreed or disagreed with the statement that when a young person dies of illness, their family should sometimes, always or never suspect *Ukuthakatha*.

If a young adult dies of illness, their family should suspect *Ukuthakatha* sometimes, always or never	**Frequency**	**Percentage**
Sometimes	102	46.15%
Always	75	33.94%
Never	37	16.74%
Don't Know	7	3.17%
Total	**221**	**100%**

Table 6: If a young adult dies of illness, do you suspect Ukuthakatha (Witchcraft)?

As shown in the table, almost half (46%) of respondents said that families should sometimes suspect witchcraft if a young person dies and a further 34% noted that families should always suspect witchcraft to have been involved. Death and illness are very intimate experiences which operate both at a personal and community level. In the KRS study, one participant told the interviewer that: "There are times when family members suspect witchcraft when someone died, but it depends on that person who dies". What this type of statement suggests again, is that it also matters who you are, and this affects whether you should suspect the involvement of witchcraft in the death. Attached to this are feelings and emotions. Envy, jealousy and hate are all feelings that have been noted by scholars who have studied witchcraft (Geschiere, 2013; Ashforth, 2005) as reasons for consulting a sangoma to 'bewitch' someone. Such feelings are deeply personal. In response to the question of suspecting witchcraft when a young person dies of illness, one respondent noted: "You have to think of the time frame if you only got sick after fighting with someone the previous day". This illustrates one example of how one would have to think about with whom you interacted and what you did, considering the possibility of being 'bewitched' by a sangoma under the instruction of someone who might envy or hate you. Having to consider this last point does not speak to a particular ontology of understanding the body and illness in relation to things outside of it, in this case witchcraft, but what it showcases is the point I am making here – that witchcraft can play an intimate role in the lives of people in Site C. This links back to spiritual insecurity and its relation to health. During the focus group, one participant suggested that witchcraft was a fact of everyday life, noting that "If you are not scared [of witchcraft], you are involved in witchcraft". Considering this statement, what we learn again is the intimate connection to feelings that witchcraft has in many people's lives and the complexity thereof. In order to understand witchcraft in Site C as an element of everyday life, it is important to seriously consider the spiritual insecurity in terms of whom you can trust based on their actions or feelings toward witchcraft as well as the considerations one would have to make when becoming sick. Witchcraft operates at various levels of social and cultural life, shaping actions, feelings and perceptions – but differing between individuals.

	Respondent believes that rats are linked to witchcraft		
Respondent agrees strongly that they get stressed when seeing a rat	**No**	**Yes**	**Total**
No	73.2%	47.7%	65.6%
Yes	26.8%	52.3%	34.4%
Total	100%	100%	**100%**

Pearson:
Uncorrected chi2(1) = 11.4608
Design-based F(1, 9) = 13.3540 = 0.005

Table 7: The relationship test between stress when seeing a rat and the belief that rats are linked to witchcraft

Almost a quarter (23.9%) of respondents agreed – and a further 4.2% agreed strongly – with the statement that they are worried that rats might be linked to witchcraft. This could help to understand the fear towards these animals and the lack of concern for their welfare when killing them. The statistical relationship between people believing that rats might be linked to witchcraft and people saying that they feel very anxious or bothered when they see rats is of interest here, if we wish to explore whether there is a relationship between believing rats are linked to witchcraft and fearing rats. Table 7 shows that about a third (34.4%) of respondents reported feeling very stressed or anxious when they see a rat. However, for those who also believed rats to be linked to witchcraft, the proportion was more than half (52.3%). To test if this relationship is statistically significant, the Pearson Correlation test is used. The Pearson Correlation (accounting for the survey design effects) between these two variables yields a p-value of 0.005 – which means that there is a low likelihood of this result occurring by chance, rather than reflecting a general pattern in Site C (0.5%). Accordingly, we can assume that there is a statistically significant positive relationship (at the 1% level) between believing that rats are linked to witchcraft and the likelihood of feeling very anxious when seeing a rat.

Below are some statements by residents who said they believed that rats are linked to witchcraft:

> "...people say [rats are] the ones listening for gossip. Sometimes you find them with their ears [and] their ears [are] not moving – standing still listening for gossip."

> "Because of those papers they give us at the taxi rank warning us of rats linked to witchcraft, I believe they are linked to witchcraft."

> "Sometimes they look like they're in a trance not seeing you, not searching for food just standing still turning its head listening to conversations."

> "When I see a rat, I wish I can get a gun and just shoot to kill it. Today's rats really are witchcraft because if you came to the kitchen and they just look at you as if they say something instead of disappearing."

As the above statements suggest, there are a variety of ways in which people believe rats are linked to witchcraft. One of those beliefs is that rats are sent to listen to your conversations and spy on you to gather information for someone else with evil intentions. The same applies to *impuku* (mice) as one participant in the focus group explains:

> "Sometimes you find the tiny ones, impuku, standing up and listening to your conversations and chatting. Then if you have problems in your home, maybe you are fighting in the home, maybe you have money problems or like actual problems and you are not progressing, then you can go see someone and they will tell you it is those rats and that is why you are having problems in your home"

In this instance, we also see that 'someone', probably a sangoma, is likely to tell you that problems in the home are linked to rodent infestations. In this case, the distinction between rats and mice was blurred – both appeared to be implicated. Table 8 runs the same Pearson Correlation test as in Table 7, but this time it correlates the belief that rodents might be linked to witchcraft with whether people get stressed when they see rats or mice in the house. The relationship is positive, but not quite as strong as in Table 7, with there being a 4.5% chance that this is a false positive (meaning the relationship is statistically significant at the 5% level).

	Respondent believes that rats or mice are linked to witchcraft		
Respondent agrees strongly that they get stressed when seeing a rat or if they see a mouse	**No**	**Yes**	**Total**
No	73.7%	51.3%	66.2%
Yes	26.3%	48.7%	33.8%
Total	100%	100%	100%

Pearson:
Uncorrected chi2(1) = 10.9640
Design-based F(1, 9) = 5.3954 P = 0.045

Table 8: The relationship test between stress when seeing a rat or a mouse, and the belief that rats or mice are linked to witchcraft

The practice of amagundwane referred to earlier suggests that the relationship between rats and people can be more ambiguous when it comes to misfortune. Given that rats can also be used to attract money through this witchcraft practice, at least the rat associated with the practice becomes more acceptable – desirable even.

This ambiguity is evident even in the way some participants comment on rodents in their home. One participant observed that "Those crafty things run up and down walls, surely they must be little witches. Unless it's those white ones, apparently those bring money." When I asked participants from the focus group what they thought about amagundwane, one participant mentioned "If they [rats] bring me money, I want it". Other participants were more sceptical. One participant said, "It only goes with those that believe. I do not believe – from where? It needs food, what is it going to do with money? Transporting money up and down, up and down? That is just an African belief to other African people because it is not all of us."

"I'm not a great believer in these things [witchcraft]. I used to believe that about cats but now not so much, you'll go crazy believing that stuff," a participant noted on the survey when asked whether they were worried that cats were linked to ukuthakatha. This again points to the fact that there is a lot of variation with regard to what people do or do not believe about witchcraft and its relationship to animals. Looking at people's attitudes toward cats (animals kept as pets or also tolerated as a form of rodent control), the KRS survey found that two thirds did not like cats. However, for those who reported in the study that they are sometimes or always worried about cats being linked to witchcraft, over three quarters of them (77.2%) did not like cats (Table 9). The Pearson Correlation test shows that this relationship is highly statistically significant.

	Worries that cats are linked to Ukuthakatha (witchcraft)		
Do you like cats?	**Never or don't know**	**Sometimes or always**	**Total**
Yes	57.9%	22.8%	**33.1%**
No	42.1%	77.2%	**66.9%**
Total	100%	100%	**100%**

Pearson:
Uncorrected chi2(1) = 25.2633
Design-based F(1, 9) = 56.7364 P = 0.000

Table 9: The relationship test linking cats and believing they could be linked to witchcraft

During the focus group, some participants disagreed with one another about whether cats were linked to witchcraft. Men were most likely to articulate that cats are evil animals, remarking on the way they make strange, evil/scary noises at night. The women in the room were quiet and I noticed one older woman in particular remained uncomfortably silent on the matter. Observing this, one of the focus group facilitators asked whether everyone agreed and the older woman broke her silence stating that she has cats, who she loves dearly and that she does not believe they are related to witchcraft at all, in fact, they help her control the rats around her home. The other woman agreed with this, stating that she has two cats of her own. Sharyn Spicer (2012) conducted extensive research in the city of Cape Town, in which Khayelitsha was included in the sample, about the relationship people and their pets have. One of the outcomes in Spicer's research was that people (from low-socioeconomic background) in Khayelitsha who have pets "showed sensitivity to animals, cared for their pets and had an awareness of welfare issues" (2012: 274). Alongside the connotations of evil which some people might have about cats, it is also important to note that perceptions are varied. This is evident in the examples of the women who have and love their cats. This not only disrupts the idea that poorer people do not care for animals, but moreover, it challenges the perception that black people who are poorer do not care for animals.

The men who believed that cats are definitely linked to witchcraft maintained that the cats in the area are usually more 'alive' during night time and that 'night time means evil time'. One man noted that the cats stay indoors during the day and at night time they go out and make strange noises which signals to him that the cats are bewitched. Similar to the men who made this argument in the focus group, one participant from the survey noted the following:

> "There's witchcraft everywhere in this township. Those cats are as big as they are so surely they must be linked to witchcraft. I mean, even small ones are linked to witchcraft. They don't flinch when they see you and when you try scare them away. They listen for news. I mean I now tell them: "Relax I'll take notes and minutes for you."

In the same ways that rats and mice are believed to be sent by someone practicing witchcraft and are suspected of listening in to conversations, cats, as seen above, are also believed to be sent to eavesdrop on conversations. However, like in the case of other animals, not everyone believes that they are linked to witchcraft. The statements below indicates these kind of responses:

> "My cat isn't a witch. When I took her to the vet they explained their strange sounds, they're mating sounds not witchcraft."
>
> "I like my cat, well the cat in the front house, "Kitty" she's cool. I'd get hurt if Kitty died. We love her, we feed her proper cat food. Yes there are some [cats linked to witchcraft] [but] it depends on whose cat it is but not all are used for witchcraft practices."

In February 2018, a cat was set on fire in Khayelitsha on a road close to the Mdzananda Animal Clinic (News24, 2018). An employee of the animal clinic encountered the incident where a woman who lives on the same street admitted to setting the cat on fire. She claimed that the cat sat on her roof for two days making noises and disturbing her sleep. Besides this, her motivation for killing the cat in this manner was because it was "looking at her with 'snake eyes", that it was evil and that she believed people in the community were using cats to "do witchcraft in order to destroy people's lives" (2018).

Figure 20: A dog sniffing the ashes of the burnt cat in the road (News24, 2018)

Marcelle du Plessis, a representative from the Mdzananda Animal Clinic notes the following in response to the woman's sentiments above:

> "I understand that the community that we work in have deeply ingrained cultural beliefs, many of these not based on scientific fact. I by no means want to insult people's beliefs as I have my own cultural beliefs too, but when your belief clashes with the law, you cannot act on your belief. Our law is written to protect the people of this country as well as our animals and we need to respect the law." (News24, 2018)

This incident highlights the potential for tension between protecting animal rights and respecting cultural beliefs. It is also another indication of why it is important to consider witchcraft and not to dismiss it as being unsupported by 'rational science' for example. The effects of these beliefs are very real for both humans and animals.

The KRS also probed people's attitudes toward owls (which, like cats, are predators of rats and mice) and asked whether they thought owls were linked to witchcraft. Owls have been used in several projects across the world to control rat populations (Wood & Fee, 2002; Meek et al., 2003) and have been observed to be an effective 'biological control agent' (Meyer, 2008). However, owls have also been linked to witchcraft by African people (Marcot, 2000). The KRS survey found that only one respondent agreed that they 'liked' owls and that over three-quarters (78.7%) said that they sometimes or always worried that owls were linked to witchcraft.

It is important to take cognizance of such negative attitudes towards owls – especially when considering them as potential biological agents for rat control. In 2014 the local municipality, together with 'FreeMe Wildlife Rehabilitation Centre' and EcoSolutions – an 'ecologically-friendly' pest control company – embarked on a project to install owl boxes in Alexandra, a township area in Johannesburg, to assist with the control of rat infestations (News24, 2014). The project went ahead without consulting community members, and owls were introduced through the installation of owl boxes. Not long after this, Brendan Murray, director of Owl Rescue Centre, approached the media and SPCA to express his concern that owls in the area were being "decapitated because people are afraid of them" (News24, 2014). The local municipality disputed these claims and maintained that their program was functioning well. Murray laid charges at the SPCA against the local municipality saying that local residents believed owls were related to witchcraft and wanted them dead or not present in the community, and due to this, the project needed to be concluded. In personal communication with Danelle Murray, the director of communications for Owl Rescue Centre, she noted: "This belief system [that owls are linked to witchcraft] will not change with a quick introduction or education program. This belief is ingrained in the culture that is transferred from one generation to another. Apart from this, we [Owl Rescue Centre] don't believe that the project showed any success in the management of the rodent infestation. Owls cannot control rodents to that extent and within that environment." [20/08/2018][25].

[25] This information was attained through email correspondence with Danelle Murray.

The two case studies discussed in this section suggest the impacts that social and cultural beliefs can have on particular animals living in urban areas. Beliefs, morals and the law collide in these instances, pointing to the complex nature of the relationships between humans and animals in general, and more specifically in Site C, Khayelitsha. It is vital to consider witchcraft as a variable that feeds into the everyday forms of slow violence experienced by residents of Site C. This is also an important factor to be considered when thinking about the way in which rats are understood – and the way that predators of rats (cats and owls) may also be seen as implicated in witchcraft. There are no clear 'policy implications' – only caution with regard to any assumptions that biological methods of control (such as cats, owls) are easy and simple alternatives to poison and other conventional rodent control measures.

When caring collides with all of this

The rat, as I have shown in this section, lives in a human environment where many people fear that both the rat and its predators are linked to witchcraft. This, in turn, affects people's beliefs about why or how a rat should be killed. Alongside this, it is important to note that although this is happening, as Eric points out, people have learnt to tolerate rats and to share intimate spaces to some extent. The rat is then not seen as a co-habitant but rather a tolerable (at times) occupant of people's intimate space. Some respondents mentioned that they would not want to kill rats but that they do not have any other choice, like the one below:

> "It makes me feel pain first (to kill the rat). If it wasn't so troublesome then I'd let it live and grow old. If we could live side by side with them we would."

"It becomes a part of our life" one respondent mentioned, "We greet them now. Yes, we even know these rats and know which one is ours. They've become a part of the family. You'll be sitting in the living room and see it walking by and no one say anything – we watch it. We even name them, they have markers". What this type of statement points to is the way families have come to tolerate some of the rats and how they see them as part of their intimate space. The notion of togetherness as well as its limits, as discussed earlier, can also be seen in this instance which leads me back to the discussion on how having an anthropocentric bias and way of looking could result in the exclusion of stories that tell us of how people live their lives alongside non-humans. Additionally, this demonstrates that these elements are part of and also shape the everyday experiences of life.

Donna Haraway's notion of 'respecere' (2008: 88) – which means 'to look again', when considering its Latin origins – is also useful to think about when wanting to indicate the togetherness and entanglement that humans and non-humans share in the everyday. Haraway discusses this concept through forming her own ethics in *When Species Meet* (2008) with the clear objective to "ascribe face to nonhumans". With this she uses the example of animals, like rats, in science labs and she states that they too have face, "They are somebody as well as something, just as we humans are both subject and object all the time" (2008: 76). Considering this notion of having face she states that "Respect is respecere—looking back, holding in regard, understanding that meeting the look of the other is a condition of having face oneself" (2008: 88). What she refers to here is the recognition that we as humans are imperceptibly entwined with non-humans and that it is something we cannot deny. With this in mind, she

then extends her discussion to include response and responsibility: response, in the sense that we as humans respond through a way of looking and recognising the non-human, and with that comes responsibility, since we cannot subsequently deny that the non-human has face just like us. In so doing, the oppositional binary of human and animal becomes more diffuse.

Although I do recognise the usefulness of this concept and how it can push for the decentring of anthropocentric bias and the undoing of the human-animal binary, I would argue that Haraway herself, within her formation of her ethics, still falls into the trap of the positivist binary construction through her use of human and non-human. Although I am critical of this, I see value in what Haraway offers us and believe that although her approach still remains within a binary, it can offer a more dynamic and insightful understanding of the entanglements or togetherness that humans share with certain living beings around them. Bringing this discussion back to the flash of Eric, we can see the notion of respecere in the manner that Eric has formed a responsibility toward the rats in his house by communicating with them and tolerating them. If he responds in a way that is harmful to the rat, he believes the rat will respond in a way that is harmful to him. Taking Haraway's discussion on 'having face' into consideration, I find it compelling to view this instance of Eric seeing the rats in his house as having face, as being somebodies and taking responsibility for their lives as well as his. I do not dispute the fact that having this discussion leads to a sense of romanticising living with rats, but rather, I want to highlight the multiplicity in the ways in which we as humans have formed and continue to form relations with non-humans and I argue that taking these relations seriously could aid our understanding of ethics toward non-human others.

On the point of romanticising people living with rats, related to the notion of tolerance, Wendy Brown's *Regulating Aversion: Tolerance in the Age of Identity and Empire* (2006) is useful to remain critical about the discourse of tolerance. The author argues that the notion of tolerance cannot be removed from politics and power through drawing on a Foucauldian framework of power and domination. She states that "tolerance blinds the claims to equality and justice by reifying the differences in the form of deviations" (2006: 45) within contemporary societies. Although Brown refers to nation building and multiculturalism in this regard, I view her critique on the notion of tolerance as useful when setting out to describe and analyse Eric's tolerance toward the rat in his house. If we were to view his tolerance as just that, we run the risk of not seeing the reality in which Eric finds himself – to be tolerating the rat since he does not have much of a choice –

rather than privileging a discourse which views Eric's tolerance as yet another argument for 'togetherness' and entanglement with the non-human.

Chapter 8: Violence In The Everyday

Emma[26], Thobani and I had interviewed four households by now as we walked along the river. We had reached the side where Island meets Mew Way highway coming in from the N2. Vivienne, dressed in a black and white formal blouse and black skirt with golden earrings, holding an empty five litre bottle and empty plastic shopping bag in her hand, came walking out from a cluster of shacks close to the railway. Thobani recognized her as a participant whom he had interviewed previously for the survey and introduced us to one another. Vivienne was eager to talk to us and although she was on her way to a nearby shop to fill the bottle with paraffin and buy bread, she urged us to follow her to her house to ask her a few questions. Disappearing into the cluster of shacks, we followed her to her home which is painted inside in a bright yellow, where she offered us tea and biscuits. After small talk about the weather we soon came to talking about rats and how she felt about them, what her experiences have been and how she disposes of her waste. Emma and I went back and forth with questions – mine about the rats and hers about waste disposal and service delivery. At this point we had nothing more to ask and also felt like we needed to leave her alone so that she could continue with her day, seeing as she was on her way somewhere anyway. Vivienne escorted us out, and on her way out she turned up the volume of her television, closed the front door and locked the safety gate. She noted that she had to turn up the volume so that *tsotsis* would think that someone was home. We walked back to the main path where we met her and thanked her for the time she took to speak with us.

Discussing what we had seen as we walked closer to the highway, Thobani stopped where the river ends and pointed out the endless waste in the river. I scribbled a few notes in my notebook: 'dirty, muddy, sad, confusing'. After taking a few pictures on our phones to compare it with some that Emma took a few months back, we meandered across the road and then back to Island to inspect a waste container. While talking and facing the container, with Thobani behind us, my eye caught three men crossing the road towards us at a fast pace. I continued talking to Emma about the container and the pink pamphlets advertising 'money rats' (Amagundwane). I looked back again, the men had reached close to where we were standing. The man walking in between the other two lifted a silver gun from his side and pointed it toward Emma and me. Looking at Emma, confused and almost laughing, I was under the impression that it was three young men that Thobani perhaps knew and that they were just

[26] Student researcher in the University of Cape Town's Economics Department who was studying waste removal in Khayelitsha.

playing around with a toy gun. I was wrong. I heard the sharp noise of the gun being loaded and when I turned around to look, it was already pointed at my head. Thobani begged them to let us go while the three men shouted in isiXhosa “This is Site C! This is Site C! Shut the fuck up!”. All three us were pushed in an alleyway between shacks next to the waste container, patted up and down to feel what we had in our pockets and what we did have was now theirs. The gun was pushed into my back for what felt like an eternity. I was asked to take off my backpack, but I could hardly move as I tried to do it as slowly as possible. Thobani’s backpack was tossed on the muddy ground, turned upside down and mine followed. Field notes, my recorder, pens and sweets wrappers met the mud – this is all I could see as I held my head down. When they had taken everything that they wanted, the three men looked back toward the road to see if anyone saw them, they walked backwards while the one with the gun still pointed it to us and they finally disappeared around the corner.

We looked up at each other, silent, barely muttering a few words here and there, hesitant to walk back to the main road. We eventually started walking back to the main road after Thobani checked whether the three men were gone. The silence between all three of us was unbearable as we walked along the road, still not completely sure what had happened. As we were close to where I parked my car, a police car stopped at the stop street we were about to cross. Thobani approached the police vehicle and explained what had happened. While just standing there, muttering a few words to Emma about being thankful that we weren’t harmed, my eye caught a familiar face. It was Vivienne. She was holding the five-litre bottle that was now filled with paraffin and on her way back home. She seemed to be confused to see us so soon again. “Are you guys done already? So fast?”. Emma and I started explaining what happened and it was at this point that I could not hold my tears back any longer. Vivienne was shocked and immediately said: “Do you see what I mean now? That this place is dangerous? That things like this happen all the time.” It was in this moment that I realised that I had listened to Vivienne when she had talked about safety but I had not really heard her. She mentioned a few times that she was scared to live where she lives and that she was herself robbed at knifepoint just a few weeks ago. The import of this escaped me completely while we were with Vivienne. I was too focused on asking questions about rats and wanting to hear about rats, rather than considering the other things she was mentioning. “Guys, I wish you all the best, I am so sorry that this happened to you,” Vivienne said as she hugged both Emma and I and walked off. The silence between us remained as all three of us got into my car, which was parked at the petrol station, and made our way to the police station to report the incident.

The environment and its ecology, the rats, the dirt, the river, the people, the gun, the history of the place, of Cape Town, of South Africa, the manner in which I did not listen to Vivienne, my white skin, the paraffin in the five-litre bottle, the shacks, the volume being turned up on Vivienne's television. These elements all exist in relation with one another – they are all in an assemblage that relays more about the everyday forms of violence in Site C, specifically in informal areas. In this chapter, I revisit this moment to think about my politics of location in the research process (as introduced at the beginning of this dissertation), and moreover, to point to the reality of violence in the everyday. Through the lens of assemblage theory (Deleuze & Guattari, 2004), I seek to showcase various elements in the everyday life of some living is Site C, particularly in spaces such as Island, and how through thinking about objects, actions, circumstances etc. in relation to one another – as an assemblage – this can depict a wider understanding of the lived realities.

For some time I contemplated whether I should include this incident in my analysis. One reason I was hesitant to do so is because I do not want this flash to be read as if I am the victim here and that I, a white South African, have yet again fallen prey to crime and violence. In an objective sense, yes, I had been violated, but there is more to what happened than the incident itself. Through reflecting on what this moment is 'more about', I realised that I could have constructed a narrative about how dirty Island is, how poor people are, how people are suffering, how it is infested with rats, how it does not smell great. It could be read as a memoir of a poverty safari that ended with me, the white male lone ranger protagonist, as a survivor from everything that is 'other' and threatening to me. But I am choosing not to do that because of the discomfort I have in relation to this form of representation and my very own politics of location, as a socially and economically privileged white South African, but also because it revealed the limits of my own understanding. As pointed out in the flash above, I did not listen to Vivienne when she told me about the violence she faces in the community she calls home. During the research process, my interests were that of rats and not violence and since I have never lived in Island, nor any space similar to Island, I lacked crucial insights. The point I want to make here is that the politics of location is of great importance in order to think through the research process and to interrogate the particular biases one might hold or have internalised. This self-reflexive approach can inform an ethics of representation, but moreover, it provides the 'thick description' (see Geertz, 1972) which captures research that is not always straight-forward or flawless.

When I look at the form of flash ethnography that I employed in retelling the robbery, I would argue that it is possible to see the links between the sensorial experience and details of the event, creating interconnections or moreover, assemblages. This approach does not only make the violent event described above unstable and unfixed, but it also offers an opportunity to engage with what is not present or perhaps goes unseen – the forms of slow violence. "If violence, when it happens dramatically, bears some relation to what is happening repeatedly and unmelodramatically, then how does one tell this, not in a single narrative but in the form of a text that is being constantly revised, rewritten, and overlaid with commentary?" (2007: 80), Veena Das asks in her text *Life and Words*. Das's question speaks to this need for recognizing the assemblages, without setting up a binary between the micro- and macro, but rather embracing multiple fluid and changing narratives, structures, events, people – ultimately forms of matter. The interconnectedness which is present when looking at the event in this way shows the fluidity and formation over time. This also subverts the notion of sticking with categories in relation to power structures in the present, which restricts a wider understanding between various forms of matter.

If I had remained with some of the notes I took and the recording of the conversation with Vivienne, I might have only included her views about rats in this dissertation. Because of what happened and what Vivienne made me aware of, I was able to view the various elements that I have observed during the research process, not as separate entities, but rather in relation with one another – telling a story of the ongoing violence exhibited in various forms. This dissertation has described the ineffective waste removal system, the infrastructural violence, the experiences of living in a rat-infested area, the disturbed ecology, the ongoing inequality and the spiritual insecurity of everyday life in Site C. With the various elements that stand in an assemblage alongside one another and in relation to the robbery that had taken place, what I argue is that it becomes impossible to view these elements in isolation from one another.

The reason why Vivienne had to go to a shop to purchase paraffin is not only because she needs to use it to cook food or to use it for heating in her home, but rather because her local government fails to provide her with housing that is dignified and has electricity. There are many people in a similar situation to Vivienne, who have to make use of informal technologies such as the burning of paraffin and other flammable substances. This leads to major fires every year, leaving hundreds homeless and even dead. One of the latest occurrences of this kind took place in Khayelitsha in October 2018 and it left 1300 residents homeless (Chabalala, 2018). Although it might seem that Vivienne's experiences and these incidents are separated from one

another, they are not. They stand as an assemblage in relation to each other, which speaks to the particular policies in place, a history that systemically contributed to individuals' reliance on these informal technologies – posing a threat to their lives. The gun and the act of theft relate to the overarching crime statistics in the community, which I have already discussed. The act of Vivienne turning up the volume on her television is also not an isolated event. In this instance, what Vivienne is doing is responding to the reality she has to face on a daily basis in Site C – the fear of her house being broken into and having all her possessions stolen. Vivienne has embodied a practice through which she negotiates her movements and employs different strategies to overcome the possibility of violence. These examples that are assemblages of daily life speak to the violence in the everyday – something that I argue should be strongly considered in order to gain a wider understanding of the experiences living in a rat-infested area. By doing this, we can try to prevent homogenising the struggles of people in Site C or creating a single-issue narrative.

Negotiating movements

> "Violence, above all environmental violence, needs to be seen—and deeply considered—as a contest not only over space, or bodies, or labour, or resources, but also over time" (Nixon, 2011: 8).

It is of importance for us to understand the complexity of Site C, specifically when wanting to understand the presence of rats and rat infestations. Time has created the present-day reality and as time goes on it is positioned as a discourse that is telling of the contemporary politics at play. We can tell this from the historical accounts relayed earlier in this dissertation. I turn to look at time in the embodied sense, discussing how it is possible to see the ways in which residents shape and alter their movements according to the time of day in order to be safe and to circumvent being a victim of violence. One example of this, which I have already discussed in relation to witchcraft in Chapter 7, was the notion of 'night time being evil spirit time' and how some residents alter their movements at night in order to avoid both criminals and anything related to the practice of witchcraft. In this section I look at the action of residents negotiating their movements because of violence that is prevalent in Khayelitsha, and specifically in Site C.

Street lighting in townships such as Khayelitsha remains a basic element of infrastructure that is still not equally distributed in South Africa. In 2012, a *GroundUp* article (2012) reported on the severe lack of street lighting in Khayelitsha and the writer illustrated how this goes against South Africa's Constitution, and moreover, the responsibilities that the City of Cape Town has to fulfil. In 2017, five years later, another *GroundUp* article (Pertsovsky, N. 2017) reported the lack of street lighting in Khayelitsha once again, how the City has not rapidly improved the condition, and how it relates to crime in the area. However, despite the City's lack of action to address the infrastructural inequality in the area, in the *Design and Management Guidelines for a Safer City* – a document drawn up by the City – they acknowledge that "good lighting is one of the most effective means of increasing levels of safety and deterring crime" (City of Cape Town, 2017: 21).

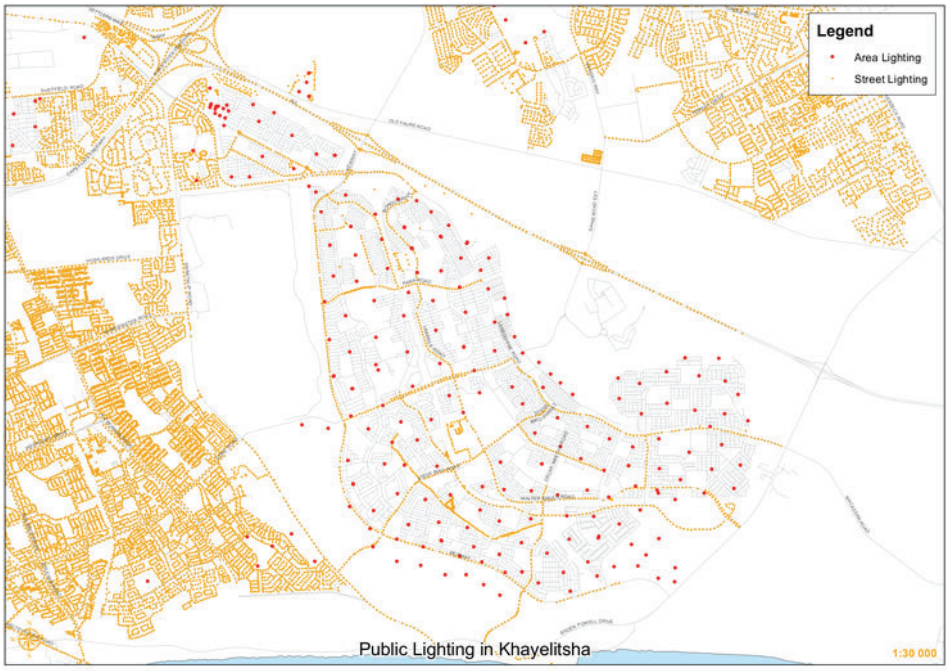

Figure 21: Public lighting in Khayelitsha. "The orange represents street lights, and the red represents the high-mast area lights. The latter is less effective than the former" (Pertsovsky, N. 2017).

This not only points to the ongoing infrastructural violence, but moreover, it illustrates how intimately this plays out in the lives of many who live in spaces such as Island. Not having street lighting restricts movements at night time and creates more opportunities for criminals to take advantage of people residing in the area. Similar to Mngadi's (2016) research, which I discussed earlier in relation to the health effects that rats have on humans, Smit et al. (2016) adds to the discussion on violence in Khayelitsha through research on non-communicable diseases. More specifically, Smit et al. focus on mental health as a factor of non-communicable diseases such as stress and depression correlated to poverty and violence. The researchers found that several residents, especially in informal areas, constantly felt unsafe, scared and in fear of either being attacked, robbed or raped. Stress and depression, both elements of mental health, have been shown to have an impact on physical wellbeing as well, making people prone to other non-communicable and communicable diseases (Smit et al., 2016). In the Island area, the reality of fear, violence and feeling unsafe is also prevalent, as I found in the research process and which was evident in the KRS survey data. One participant noted: "A person could be close to you but could turn on you and we fear for our safety, we have to be home before a certain time." Another resident commented, "We are not enjoying to go there [to the outside shared toilets] especially at night because thugs attack us if we go there." Having your movements controlled by fear has a major impact on the types of decisions you make and what you are able to do. Veena Das's notion of 'violence in the weave of life' (2007) illustrates the point I am making here. Das (2007) contends that we need to understand violence in the

everyday by looking at the choices people make to negotiate their safety and how they adapt to escape particular forms of violence, be it physical or non-physical. For the theorist, violence is not solely located in the 'event' or 'moment', but it is rather found in the weave of everyday life – in people's daily events and their way of life.

Necropolitics and necropower can be located in the reality of residents' lives through looking at the way they have to interact with violence in the everyday. Being robbed, possibly killed or sexually violated are all daily threats and realities for people in Site C, and this everyday exposure to harm is connected to what Mbembe argues about necropower being a form of power that a government occupies when they actively choose to expose some citizens to harm or death, while others are protected. In a recent article published by *GroundUp,* titled "Here's how unfairly police are distributed" (2018), the writers investigate the unequal distribution of police services across the city of Cape Town. This follows after human rights activists pressed charges at the Equality Court against the Minister of Police, as they felt that police resources are unfairly distributed and that the manner in which police are currently deployed in Cape Town "discriminates against black and poor people" (*GroundUp*, 2018). The article's findings are based off of South African Police Service data as well as data collected by the Social Justice Coalition. These findings demonstrate that white and wealthier areas in the city of Cape Town have on average a higher number of police officers, proportionate to the population, whereas predominantly black and poorer areas such as Khayelitsha, with some of the highest murder rates, have relatively fewer police officers. This points to the tangible aspects of necropower, as argued for by Mbembe. The state has the power to deploy police services to areas in need in order to maintain justice, however, what is happening in reality is that the state chooses to neglect its poorer citizens and thus exposes them to continuous violence, which makes Mbembe's notion of 'the walking dead' more apparent.

"This is a terrible place to live in, we have both *tsotsis* and rats. In the morning a grown man cried, even a woman wouldn't cry like that – because of *tsotsis*," one respondent noted in the survey. In the focus group, residents brought up the topic of violence a few times, specifically related to how they need to regulate their movements such as going to the toilet in the evening because they might get robbed. These two sentiments point to the 'sense-scapes' of Site C – but more specifically, informal areas such as Taiwan and Island – and how people understand the rules of engagement within the space. The first sentiment being that of hearing a man crying out loud because he had most likely been violated in some way or another, and then the presence of the rats as adding to the already violent landscape. The second alludes to the fact

that the toilets are outside of people's homes and shared with several others, which can be read as a form of structural violence; moreover, the act of not being able to use the toilet because you fear for your life adds another dimension to the interplay of violence in the everyday. Even if one takes precautions when going to the toilet at night – such as leaving your cell phone behind – you might still encounter a '*skollie*'[27], as one participant noted in the focus group: "If you do not go with your phone to the toilet, the *skollie* will ask you where is your phone and then kill you."

In addition to this discussion on negotiating movement, 83% of survey respondents noted that they worry the rats will bite them while they sleep at night. Linking this stress of having to worry about being bitten by a rat in your sleep to that of the overarching violence already experienced by residents, it becomes almost incomprehensible how far and wide the different forms of violence reach in the everyday lives of people living in the informal areas of Site C, such as Taiwan and Island. Slow violence prevails throughout the assemblages that make up life and living for many of those in Site C. When considering the quote by Nixon at the beginning of this section, it becomes even more clear that the time aspect in the concept of slow violence, is very useful to aid our understanding of the various element that contribute to violence in the everyday.

[27] A 'skollie' is a South African slang word, which usually refers to a naughty or dirty boy-child who is sometimes involved in crime or gangsterism.

Conclusion

Returning to the quote I used earlier in this dissertation: “To know the rat is to know its habitat, and to know the habitat of the rat is to know the city" (Sullivan, 2008: 14), there is a clear difference in how I read this now, for the rat has shown us the city and its contradictions. Although I reflected on this quote earlier in relation to my politics of location, I can see now how it is more related to the rat holding up a mirror to us as humans. If anything, I set out to ‘follow’ the rat, I found its habitat, next I found the rat and then it showed me a reflection of slow violence that cannot be ignored.

As I stated throughout this dissertation, the challenging task was to write with the capacity to privilege both the human and the rat in this story of the everyday. At times, the scale of fair representation is uneven and the representation becomes messy – however, this is the reality that I have come to understand. Evidently, nothing ever fits clearly within a framework and we cannot simply force something into an existing construction. In this instance, the rat and the human in Site C are both violated and the consequences that come from this do not seem to be acknowledged or given importance in the South African society. Nixon’s slow violence, as I have discussed throughout this dissertation, helps us to understand that “a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (2011: 2) is what becomes the norm in society. Those who are living within the comfort of a middle-class to upper-class suburban home in Cape Town, like myself, do not have to face what most people in Site C experience on a daily basis, nor do they have to see this reality, since the city is so polarised. It is in this instance that the local government and other stakeholders who could make a difference also sit comfortably in suburban homes and the “casualties of slow violence become lightweight, disposable casualties” (Nixon, 2011: 12).

Throughout this dissertation, I have shown how in Site C “the past is never dead. It is not even past” (Faulkner, 1951: 17 in Nixon, 2011). Everyday life in Site C is shaped by the history of colonialism and Apartheid. It is not only the social, economic and cultural factors that are important in analysing the effects of history and present-day forms of necropolitics, but as I have shown, it is also the environment and its ecology – something that has often been neglected in the field of anthropology. The people residing in Site C and the rats have an

entangled relationship with the direct environment and therefore this becomes just as important to consider as that of economic welfare, social status and cultural beliefs.

In learning more about the rat, its biology and behaviour, I believe that I have sketched an image that is able to convey a wider understanding as to why rats are viewed and understood in a particular way – often dirty, a threat and destructive – and with this in mind, the rat reveals that it is not the actual enemy, but rather that the problem is a state that neglects citizens in dire need and knowingly exposes them to violence in its varied forms. The example of Cape Town's first forced removals – because of bubonic plague – and the way this shaped racial segregation in the city, illustrates how the rat and its disease can be used to substantiate discriminating policies and actions.

The City of Cape Town needs to make radical changes to the waste removal system in lower socioeconomic informal and formal areas such as Site C. Alongside this, leaders need to enhance the effectivity and the manner in which different servicing departments, such as solid waste removal and environmental health, communicate with one another. Through the discussions in Chapter 3 and 5, this could not be more evident. The rat infestation problem could be managed if the area of Site C was cleaner and people were living in better housing conditions; however, seeing as this is an ongoing issue which needs to be dealt with for many years to come, I believe that the local government and private sectors have a responsibility to ensure interim solutions to provide people with dignified living circumstances. This can only be achieved if the community is consulted and their needs are taken into account, and also if the City of Cape Town introduces creative and collaborative measures. In terms of the ethics that surrounds rat control strategies in the city of Cape Town, I believe it would be beneficial for various stakeholders to engage with one another and to work toward a politics of compromise and efficient solutions. These stakeholders should include researchers, policy makers, leaders within solid waste removal, environmental health and human settlements, the SPCA, private pest control companies and community leaders.

In terms of discussing the various ways in which rats are perceived in Site C, I hope to have added to the literature on this particular topic, but beyond this, I hope to have provided an account of people actively thinking about the animals around them – such as rats – and showing that they are not just killing rats because they feel like it or have a lack of feelings. The ways in which rats are perceived by the respondents in my research are varied, complex and at times contradictory. Although I have relayed what I thought was important, it is necessary to note

that these perceptions are ever-changing and shifting. The way that people perceive rats and the nuance surrounding these understandings can tell us more than just statistics on the likelihood of someone wanting rats to die or under what conditions they want rats to die. As I have argued in Chapter 6, this nuanced approach is vital as it provides more complexity and it moves away from reinforcing ideas about black people not caring for animals or the environment. What I have highlighted in this dissertation, and in particular when discussing how people perceive rats, is the notion of togetherness. By highlighting the "friction, conflict, and misrecognition within togetherness" (Ginn et al., 2014: 116), I would argue that I showcased that which goes beyond "an understanding of 'togetherness' as simply life coming together" (Ginn et al., 2014: 116). The importance of this is that I have shown the togetherness of rats, people and the environment without romanticising the reality of the everyday, but rather embracing those frictions, conflicts and misrecognitions as they tell us about the worlds we are making alongside non-human actors.

Considering spiritual insecurity as a part of human life and as a threat to human security, I have discussed this in relation to witchcraft. The outcome of this discussion was not only recognising that witchcraft (or at least the fear of it) plays a role in the lives of most people in Site C, but that the insecurity that it reflects and produces in everyday social life can be read within the vein of slow violence towards people and animals in Site C. What rats, cats, owls and witchcraft relay to us is not solely that of togetherness and entanglements, but moreover, the complex reasoning for killing or not killing an animal and the understanding around this. This is important as I believe witchcraft is not often taken seriously and seen outside of the discussion pertaining to people's livelihoods in the South African context. It is for this reason that I urge people intervening in communities such as Site C on projects around animals and beyond to take note of this and to work with sensitivity towards the kinds of rationales produced in a given setting. Although I have argued for spiritual insecurity to be viewed through the lens of slow violence – affecting both humans and non-humans in Site C – it is important to note that the notion of caring is important, since people can also care for the animals around them (as noted by the woman in the focus group who said she loved her cats). Spicer (2012) has shown that conceptions about animal care and understandings of the responsibilities involved in pet care vary widely in poor communities, but empathy and love for animals can exist even in dire socio-economic circumstances.

Returning to the political ecology of Site C and Island in particular, in my account of the river I have shown the various interrelated elements that have shaped the image of the river to be a

place of dirt. The river can be viewed as symbolic of the ongoing slow violence in the everyday life of people residing close to and around the river. The lack of service delivery and corruption as well as environmental degradation makes the river a contested space – one that is intimately associated with the emergence of the rats, according to residents, and also a space that most people do not want in the area. The discussion about how neoliberal practices are intricately tied to the City of Cape Town's waste removal practices is also telling of the system's failure. The notion of dirt is prevalent in Site C, and as I have illustrated in this dissertation, one can see this in the parallels between dirty spaces, dirty rats and humans as waste, and how this points to the unjust politics in Island. The exploration of trees in Site C and how they are perceived also surfaced an unexpected response. However, it ultimately reconnects to the issue of the ongoing slow violence – that a space such as Site C is filled with violence and that even trees can be used to perpetuate violence or the fear of it. This should encourage us to think critically about environmental redress, and by engaging with community members in areas where environmental redress need to take place, it may be possible to learn about the power that mundane elements such as a tree could hold.

As I have pointed out at the start of this dissertation – when discussing my positionality and politics of location – negotiating this research was not an easy task. In Chapter 8, I have returned to this conundrum through a discussion on representation in this dissertation, after having been subjected to a form of violence experienced by many in Site C. What this has allowed me to do is to showcase the assemblages in everyday life (or perhaps everyday life as an assemblage) and how they form particular realities that tell us about social life and the politics thereof. On the flip-side, I have also illustrated the importance self-reflexivity within methodological practices when conceptualising, conducting and writing up research. Focusing on violence in the everyday and taking forms of representation seriously, I observed the manner in which people negotiate their movements in the Site C area in order to avoid being robbed or harmed in any way, which I then linked to the notion of necropolitics intertwined with slow violence. The most important part of this discussion is the point that this dissertation was not necessarily *about* rats but rather *of* rats – understanding 'of' as expressing the relationship between a part and a whole. Rats are only but a part of the ongoing slow violence in the lives of people who reside in Site C, and because we as humans share intimate spaces with these creatures, if we follow them like I have in my research, rats tell us a lot about the socio-political life in a city such as Cape Town and the persisting inequalities and violence prevalent in the lives of poor people.

In conclusion, I return to Achille Mbembe, when the scholar states: “The urgency of these new moral dilemmas is such that, for the democratic project to have any future at all, it should necessarily take the form of a conscious attempt to “retrieve life and “the human” from a history of waste” (2011: 191). Alongside this, the non-human and the environment are equally as important to retrieve from a ‘history of waste’ since as I have illustrated in this thesis, they are entangled in intimate ways which shape everyday life. One respondent noted the following, “We live here but there's no life here”. This is a statement that requires serious consideration and thought concerning where some people make their lives in relation to others (in close proximity) and the politics thereof, and how this shapes the relations that people have to their direct environment and the animals they encounter within that environment. To live somewhere, as the respondent points out, does not mean much, but having a life surrounded by life is what matters.

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Appendix 1: Khayelitsha Rodent Study Survey

Map / Respondent Number:

Z.1.1	GPS Co-ordinate	N	D	D	.						
Z.1.2	GPS Co-ordinate	E	D	D	.						
Z.1.3	Accuracy	±									

Z.2	Household ID (Address)	

Khayelitsha Rodent Survey (pilot Site C): 2017

Z.3	Date of interview	DAY (1-31)		
Z.4		MONTH (for example May, Aug)		
Z.5		YEAR		
Z.6	Interviewer name)		Interviewer code	
Z.7	Start Time			

For Office Use		
Data Captured	Name	
	Date	
Double Entered	Name	
	Date	
Capture Check	Name	
	Date	
Back-checked	Name	
	Date	

iCWild
Institute for Communities and Wildlife in Africa

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CONSENT FORM

The Khayelitsha Rodent Survey investigates the problem of rodents (rats and mice) in Khayelitsha. The project is run by researchers at the University of Cape Town. You are kindly invited to participate in this survey. Before you decide whether to take part, we want to make sure that you understand the following information about the study.

What is the purpose of the study?
We hope to learn more about the problems caused by rats and mice for people, the strategies people use to deal with them, and their experience of local government pest control services. We are also interested in exploring the relationship between housing quality, local refuse sites, open spaces and the presence of rodents in people's homes.

What are the possible benefits of participating?
There will be no direct benefit to you; however, the information we obtain from this study will help us understand this issues better, and we hope this will help improve government policy.

What are the possible drawbacks or discomforts in participating?
We expect that the interview will take approximately 45 minutes.

Do I have to participate?
Your participation in this study is voluntary. Should you agree to participate, you are required to sign this form. You are free to withdraw from the study at any stage.

What will happen to me if I participate?
Information regarding your experiences will be recorded and treated confidentially.

Will the information be treated confidentially?
Yes, should you agree to participate in the study, all information collected for this study will be kept strictly confidential. Individual responses to our questions will never be made public, and no information which could identify you or your household will ever be released.

Contact details
If you have questions about this interview contact The Centre for Social Science Research on 021 6504656 or email Prof Nicoli Nattrass on Nicoli.Nattrass@uct.ac.za. This study has been reviewed and approved by the University of Cape Town Commerce Faculty Research Ethics Committee (REC/2017/03/01).

I, ... (name of respondent in block letters) have read and understood all the information given to me about my participation in this study and I was given the opportunity to discuss it and ask questions. I volunteer to take part in this study.

Signature of respondent

1 D2 NIDSW4	**Interviewer**: indicate the type of main dwelling that the household occupies	
	Dwelling/house or brick structure on a separate stand	1
	Flat or apartment in a block of flats	2
	Dwelling/house/flat/room in backyard	3
	Informal dwelling/shack in backyard	4
	Informal dwelling/shack not in backyard, e.g. in an informal squatter settlement	5
	Other – specify	6

2 D4 NIDSW4	What is the **main** material used for the roof and the walls of the main dwelling? **Interviewer**: Select **one** from drop down list	
Type of material	**2.1** Roof	**2.2** Walls
Bricks	1	1
Cement block/concrete	2	2
Corrugated iron/zinc only	3	3
Wood only	4	4
Mix of zinc and wood	5	5
Plastic	6	6
Mixture of mud and cement	7	7
Tile	8	8
Mud bricks	9	9
Thatching	10	10
Asbestos/cement roof sheeting	11	11
Stone and rock	12	12

3.1	**Interviewer:** Does the dwelling have a vegetable garden?	Yes	1
		No	2

3.2	**Interviewer:** Does the dwelling have a garden (meaning do they have any grass, trees or plants outside the dwelling)?	Yes	1
		No	2

3.3	**Interviewer**: Are there any chickens or livestock kept on the property	Yes	1
		No	2

3.4	**Interviewer**: Are there mats or carpets covering the ground outside? (NB: Do not count small mats at the entrance).	Yes	1
		No	2

4	**Interviewer:** Are there any of the following within 5 metres of the house?		
4.1	Derelict car?	Yes	1
		No	2
4.2	Building materials (wood, zinc, bricks, rubble etc.) lying on the ground?	Yes	1
		No	2
4.3	Piles of rubbish	Yes	1
		No	2
4.4	Please record any other items nearby that could potentially provide homes for rats		

5	What is the main material used for the floor of the main dwelling?
Mud/Earth	1
Mats or carpet on top of earth floor	2
Concrete	3
Carpet on concrete	4
Tiles	5
Mixture of carpet and tiles on concrete	6
Wood	7
Linoleum/Vinyl	8
Other (describe)	9

6.1	Does the household have electricity?	Yes	1
		No	2

6.2	What kind of water supply does the household have?	Piped water in the house	1
		An outside tap in the yard	2
		Collect water from a communal tap	3
		Other: describe	4

6.3	What type of toilet facility is available for this household?	
	Flush toilet inside the house	1
	Flush toilet outside shared with other households	2
	Chemical toilet inside the house	3
	Chemical toilet outside the house, shared with other households	4
	Other – specify	5

7 D5, D8 NIDSW4	Does the household own the house or pay rent?	Own	1
		Rent	2
		Don't know	-9

I am now going to ask a few questions about rats and mice in your house

8	In the past year, have you or anyone in your household:	Yes	No	Refuse	Don't know
8.1	Seen evidence that mice or rats were eating your food?	1	2	-8	-9
8.2	Seen evidence that mice or rats were chewing your possessions or damaging your home?	1	2	-8	-9
8.3	Seen evidence that mice or rats were getting into your rubbish?	1	2	-8	-9
8.4	Been bitten by a rat or a mouse?	1	2	-8	-9

9.	How do you think rats and mice get into your house? **Interviewer: Listen for response and select multiple options**	
	(1) Through the front door?	1
	(2) Through holes in the floor?	2
	(3) Through holes in the walls?	3
	(4) Through gaps between the floor and the walls?	4
	(5) I really have no idea?	5
	(6) Other (explain)	6
	(7) They never come into my house	7

10. Can you show me? **[Interviewer** make notes about rat holes and any damage shown to you]

……
……
……
……
……
……

11 D3 NIDSW4	What is the total number of rooms that the household occupies in all structures in this dwelling? Please note this excludes bathrooms and toilets	

12.1	How many adults (people no longer in school) live here?	
12.2	How many school-children live here?	
12.3	How many babies and young children (too young to go to school) live here?	
12.4	How many adults have a job in this household (either self-employed or working for a wage)?	
12.5	How many adults have a pension in this household?	

13.1	Where do you put your rubbish when you cook or wash up after a meal?	Inside: Go to **Question 13.2**	1
		Outside: Skip to **Question 13.3**	2

13.2	**Inside**: In what do you put the rubbish? **Interviewer: Choose one option**	Bin with lid	1
		Bin without lid	2
		Plastic, Shoprite or Checkers bag *on* the floor	3
		Plastic, Shoprite or Checkers *off* the floor	4
Interviewer say: "and once this is full?" – Go to Q13.3			

13.3	Where do you put your rubbish outside? **Interviewer: Choose one option**	Wheelie Bin	1
		Outside plastic or metal bin with lid	2
		Outside plastic or metal bin without lid	3
		Plastic bag *on* the floor	4
		Plastic bag *off* the floor	5

13.4	Does this ever overflow leaving rubbish exposed? (include dogs or rats opening rubbish)	Yes	1
		No	2

13.5	**What happens next to your outside rubbish?**		**13.6. How many times per week? (write down: 1 to 7)**
	The wheelie bin is emptied by government	1	
	The plastic bags are collected from outside our house by government workers	2	
	We take the rubbish to a container	3	
	We leave it outside (in the street)	4	
	Other (explain)	5	

14	**Interviewer:** Assess the condition of the inside of the house		
14.1	Generally clean, neat and tidy	Yes	1
		No	2
14.2	Are there any dirty dishes or cooked food on open surfaces where rats and mice could reach them?	Yes	1
		No	2
14.3	Is food stored in reach of rats and mice? For example, bags of rice on the floor?	Yes	1
		No	2

14.4	**Interviewer**: Please record any other aspects of the home that could encourage rats and mice

15. Type of good that the household might own (NB must be in good working order)	Yes	No	Refused	Don't Know
15.1 – Radio	1	2	-8	-9
15.2 - Hi-Fi stereo, CD player, MP3 player	1	2	-8	-9
15.3 – Television	1	2	-8	-9
15.4 - Satellite dish	1	2	-8	-9
15.5 - Computer/ laptop	1	2	-8	-9
15.6 - Cell phone (basic, no camera)	1	2	-8	-9
15.7 - Cell phone (with camera)	1	2	-8	-9
15.8 - Electric or gas stove	1	2	-8	-9
15.9 - Electric or gas heater	1	2	-8	-9
15.10 - Paraffin heater	1	2	-8	-9
15.11 - Paraffin stove/cooker	1	2	-8	-9
15.12 – Microwave	1	2	-8	-9
15.13 - Fridge/freezer	1	2	-8	-9
15.14 - Washing machine	1	2	-8	-9
15.15 - Sewing/knitting machine	1	2	-8	-9
15.16 - Motor vehicle (including bakkie or truck)	1	2	-8	-9
15.17 - Motorcycle/scooter	1	2	-8	-9
15.18 - Bicycle	1	2	-8	-9
15.19 - More than five books	1	2	-8	-9
15.20 - Basic tools (hammer, saw, pliers etc.)	1	2	-8	-9
15.21 - Electric or hand drill	1	2	-8	-9
15.22 - Snap trap for mice or rats	1	2	-8	-9
15.23 - Cage trap for mice or rats	1	2	-8	-9
15.24 - A couch	1	2	-8	-9
15.25 - A lounge suite (more than one couch or matching chairs)	1	2	-8	-9
15.26 - Cook on an open fire	1	2	-8	-9
15.27 – A boundary wall or fence	1	2	-8	-9
15.28 – An ornate/decorative, fancy wall/iron fence	1	2	-8	-9

PERSONAL QUESTIONS

16.		**16.1** Year	**16.2** Month	**16.3** Day
	When were you born?			

17	Where were you born?	
	Cape Town	1
	Eastern Cape	2
	Other (specify)	3

18	What is your home language?	
	Xhosa	1
	Other (specify)	2

19	What is your gender?	Male	1
		Female	2
		Other (specify)	3
		Prefer not to answer/ Refuse	-8

20 (A5 ARV04; A5 KMP04; A.8 KSPS07)	What is your highest school grade passed?	Class1/ Grade1	01	Class2/Grade2	02
		Std1/Grade3	03	Std2/Grade4	04
		Std3/Grade5	05	Std4/Grade6	06
		Std5/Grade7	07	Std6/Grade8	08
		Std7/Grade9	09	Std8/Grade10	10
		Std9/Grade11	11	Std10/Matric/ Grade12	12
		I never went to school	00	I cannot remember	99

21	What best describes your occupation or personal situation?	Employed (wage job)	1	
		Self employed	2	21.1 if Self employed please describe briefly.
		Unemployed, looking for work	3	
		Unemployed, not looking for work	4	
		Disabled/cannot work	5	
		Student	6	
		Retired	7	
		Looking after the house, children etc.	8	
		Other (explain)		

QUESTIONS ABOUT RATS AND MICE

I would now like to ask you some questions about rats and mice. [**Interviewer** please check that the respondent can differentiate between rats and mice. If they cannot, then just answer the rat module as if it was for all rodents]

22	The respondent sees a difference between rats and mice	1
	The respondent does not see any difference between rats and mice	2

23 How often have you seen rats in your area?	Never	A few times	Many times	Just about every day
23.1. In the past month?	1	2	3	4
23.2. In the past year?	1	2	3	4

24. How often have you seen rats in your home?	Never	A few times	Many times	Just about every day
24.1. In the past month?	1	2	3	4
24.2. In the past year?	1	2	3	4

24.3. How many times did you see a rat in your home yesterday?	
24.4. How many times did you see a rat in your home last week?	

25. How much do you agree or disagree with the following statements about rats?	Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
25.1. When I see a rat in my house I get very stressed and anxious	1	2	3	4	5
25.2. I have got used to seeing rats and they don't bother me much now	1	2	3	4	5
25.3. I worry that rats will bite me when I sleep at night	1	2	3	4	5
25.4. Rats are a big problem for my household	1	2	3	4	5
25.5. I worry that rats might be linked to ukuthakatha (witchcraft)	1	2	3	4	5
25.6 I would let a child keep a rat as a pet	1	2	3	4	5

	Got worse	Stayed the same	Got better	I don't know
27 Do you think rats are more or less of a problem than they were a year ago?	1	2	3	4

28	Are rats more of a problem in summer or winter?	Summer	1
		Winter	2
		They are a problem all year	3
		Other (specify)	4

29. Where do you think the rats come from in your neighbourhood?.....

.....

.....

30. What has been your worst experience with rats in this house?.....

.....

Mouse

31 How often have you seen mice in your area?	Never	A few times	Many times	Just about every day
31.1. In the past month?	1	2	3	4
31.2. In the past year?	1	2	3	4

32. How often have you seen mice in your home?	Never	A few times	Many times	Just about every day
32.1. In the past month?	1	2	3	4
32.2. In the past year?	1	2	3	4

32.3. How many times did you see a mouse in your home yesterday?	
32.4. How many times did you see a mouse in your home last week?	

33. How much do you agree or disagree with the following statements about mice?	Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
33.1. When I see mice in my house I get very stressed and anxious	1	2	3	4	5
33.2. I have got used to seeing mice and they don't bother me much now	1	2	3	4	5
33.3. I worry that mice will bite me when I sleep at night	1	2	3	4	5
33.4. Mice are a big problem for this household	1	2	3	4	5
33.5. I worry that mice might be linked to ukuthakatha (witchcraft).	1	2	3	4	5
33.6. I would let a child keep a mouse as a pet	1	2	3	4	5
33.7. I think that mice are cute	1	2	3	4	5

	Got worse	Stayed the same	Got better	I don't know
34. Do you think mice are more or less of a problem now than they were a year ago?	1	2	3	4

35.	Are mice more of a problem in summer or winter?	Summer	1
		Winter	2
		They are a problem all year	3
		Other (specify)	4

36. Where do you think the mice come from in your neighbourhood? …….....

.....

37. What has been your worst experience with mice in this house? .....

.....

38	In the past year, have you or anyone in your household:	Yes	No	Don't know	Skip
38.1	Purchased and used snap traps to kill rats or mice?	1	2	-9	
38.2	Purchased and used glue traps to kill rats or mice?	1	2	-9	If no or don't know, go to 40

39	If you have used glue traps, what did you do with the mice and rats?	I killed them by hitting them or standing on them	1
		I drowned them	2
		I left them alive and threw the glue trap away with them still stuck on it	3
		Refused	-8
		Other, explain	

40	We would now like to ask you about poison. Have you purchased any of these poisons in the past year? **Interviewer**: refer to the chart if necessary	Yes	No	Refuse	Don't know	Skip
40.1	Poison to control flies and cockroaches (for example, Green Leaf)	1	2	-8	-9	
40.2	Rattex	1	2	-8	-9	
40.3	Blue squares ('Steemic')	1	2	-8	-9	
40.4	Blue wheat	1	2	-8	-9	
40.5	Black wheat	1	2	-8	-9	
40.6	Aldicarb (small black grains, 'two-step')	1	2	-8	-9	If no, don't' know or refuse, go to 43

41	Where do you normally buy aldicarb (small black grains) from?	A hawker on a train	1
		A street seller	2
		A spaza shop	3
		Refused	-8
		Other, explain	5

42	What do you mix aldicarb (small black grains) with to kill mice and rats?	
	I mix it with mielie pap	1
	I mix it with cooked food	2
	Other (explain)	3

43	Have you ever put poisoned grain outside your house to try and kill rats or mice?	Yes	1
		No	2

44	Have you used other rat poison? If Yes, then describe. 44.1.1 44.1.2	Yes	1
		No	2

45	How effective are the following methods of controlling rats and mice?	Totally useless	Hardly ever works	Some-times works	Effect-ive	Very effect-tive	Don't know
45.1	Rattex	1	2	3	4	5	-9
45.2	Racumin	1	2	3	4	5	-9
45.3	Blue Squares "Steemic"	1	2	3	4	5	-9
45.4	Blue Wheat	1	2	3	4	5	-9
45.5	Black Wheat	1	2	3	4	5	-9
45.6	Aldicarb (small black grains, 'two-step')	1	2	3	4	5	-9
45.7.1	Other poison (see 44.1.1)	1	2	3	4	5	-9
45.7.2	Other poison (see 44.1.2)	1	2	3	4	5	-9
45.8	Small snap traps (wooden)	1	2	3	4	5	-9
45.9	Large snap traps (black plastic)	1	2	3	4	5	-9
45.10	Glue traps	1	2	3	4	5	-9
45.11	Cage traps	1	2	3	4	5	-9
45.12	Keeping a cat	1	2	3	4	5	-9
45.13	Keeping a dog	1	2	3	4	5	-9
45.14	Having owls in the area (because owls eat rats and mice)	1	2	3	4	5	-9

		Yes	No	Don't know	
46.1	Have you or anyone in your household ever phoned the local government to complain about rats or mice, or complained to a council worker about rats or mice?	1	2	-9	
46.2	Have you ever had a council worker to set traps or put poison in your house to kill rats or mice?	1	2	-9	If no or don't know go to 53

FOR THOSE WHO HAVE BEEN VISITED BY COUNCIL WORKERS

		Yes	No	Refuse	Don't know
47	If yes (to 46.2), what did the council worker do? (**Interviewer:** household might have been visited several times, with different methods, please answer all options).				
47.1	Put poison in your house?	1	2	-8	-9
47.2	Put snap traps in your house?	1	2	-8	-9
47.3	Put cage traps in your house?	1	2	-8	-9
47.4	Did the worker help in any other way? (explain)	1	2	-8	-9

48	If you had poison set in your house, what kind of poison was it?	Grain bait (grains soaked in poison)	1
		Blue squares	2
		Other (describe)	3
		Refused	-8

49	If you had a snap trap set in your house, did you reset the trap after the first rat was killed to try and kill another one?	Yes	1
		No	2
		Refused	-8
		Never had snap traps set	4

50.1	If you had a cage trap set in your house, did you reset the trap after the first rat was killed to try and kill another one?	Yes	1	Go to 50.2
		No	2	Go to 51
		Refused	-8	
		Never had cage traps set	4	
50.2	How did you kill the rats caught in the cage trap?			

		Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
51	We would like to ask you questions about your experience with council workers assistance with eradicating rats					
51.1	It helped us with the rat problem for a while, but then the rats came back	1	2	3	4	5
51.2	The workers gave me advice about how to stop rats and mice from coming into my house.	1	2	3	4	5
51.3	I think the council should send workers out more often to help us deal with rats and mice.	1	2	3	4	5

52. Is there anything else you would like to tell us about your experience with council workers helping to remove rats and mice from your home – any good or bad experiences?

……

FOR EVERYONE

53	Have you ever heard of the SPCA (the Society for the Prevention of Cruelty to Animals)? The SPCA helps protect animals, to make sure they are properly cared for and do not suffer. **Interviewer**: Make sure the respondent understands what is meant by cruelty	Yes, I have heard of the SPCA	1
		No, I have not heard of the SPCA	2
		Refused	-8
		Don't know	-9

54	Did you know that the SPCA stopped the government workers from using cage traps to catch rats in people's houses because they said it was cruel to drown rats?	Yes, I knew that	1
		No, I did not know that	2

55	Do you care if rats are killed in a cruel way?	Yes, I care and would prefer the rats not to suffer	1
		No, I really don't care if the rats suffer	2
		No, and actually I am happy if the rats suffer	3
		Don't know	-9
		Other (explain)	4

56	Do you think that death by drowning is a painful death for a rat?	Yes	1
		No	2
		Don't know	-9

57	Do you think we could/should find other less painful maybe quicker methods to kill them? **Interviewer**: Select the appropriate response or record other explanation:	Yes	1
		Yes, as long as it is effective	2
		No	3
		Don't know	-9
		Other explain	

58	Do you think council workers should be allowed to set cage traps and drown the rats?	Yes	1
		No	2
		Don't know	-9

59	Did you know that rat poison causes rats to die slowly and painfully from internal bleeding?	Yes, I knew that	1
		No, I did not know that	2

60	**Interviewer**: Please note if the respondent is uncomfortable or unhappy with these questions about rat suffering	Yes, the respondent is uncomfortable and would probably not want to think about this	1
		No, the respondent appears unconcerned	2

61	Did you know that if an animal (for example a cat or an owl) eats a poisoned rat it will probably die?	Yes, I knew that	1
		No, I did not know that	2

62	Does it concern you that if people use poison to kill rats and mice that other animals like cats and owls will be killed?	Yes, I worry about this	1
		Yes I worry, but not much	2
		No, I don't worry	3
		Don't know	-9
		Other (explain)	4

63	We would now like to ask you about your views about controlling rats. How much you agree or disagree with the following statements:	Disagree strongly	Disagree	Neither agree nor disagree	Agree	Agree strongly
63.1	I think that it is better for the rats (less cruel) to be drowned than to die of poison	1	2	3	4	5
63.2	I think it is better for the rats (less cruel) if they are killed instantly by snap traps.	1	2	3	4	5
63.3	I really don't care how rats are killed	1	2	3	4	5
63.4	I think the best way of controlling rats is for the city to improve rubbish collection	1	2	3	4	5
63.5	I think if people used rubbish bins and stopped littering it would really help control rats and mice	1	2	3	4	5
63.6	I worry that the use of rat poison in Khayelitsha is killing other animals and birds	1	2	3	4	5
63.7	I worry that the use of rat poison in Khayelitsha is dangerous for children	1	2	3	4	5
63.8	I think animal welfare is important (people should be kind to animals)	1	2	3	4	5

		Never	Hardly ever	Sometimes	Quite often	Frequently	Refused	Don't know
64.1	How often do you see or hear cats in your neighbourhood?	1	2	3	4	5	-8	-9
64.2	How often do you see or hear owls in your neighbourhood?	1	2	3	4	5	-8	-9

		Yes	No	Don't know	
65.1	Do you like cats?	1	2	-9	

		Yes	No	Don't know	Skip
65.2	Do you like owls?	1	2	-9	
65.3	Do you have a cat/s living in your house or which come into your yard?	1	2	-9	If NO go to 67
66.	If you have a cat:				
66.1	Do you feed the cat?	1	2	-9	
66.2	Do you let the cat into your house?	1	2	-9	
66.3	Is the cat a household pet?	1	2	-9	

67	Do you worry that cats might be linked to ukuthakatha ("witchcraft") sometimes, always or never?	Sometimes	1
		Always	2
		Never	3
		Don't know	-9

68 KSPSG.1	If a young adult dies of illness, their family should suspect ukuthakatha ("witchcraft") sometimes, always or never?	Sometimes	1
		Always	2
		Never	3
		Don't know	-9

69	Do you worry that owls might be linked to ukuthakatha ("witchcraft") (sometimes, always or never)?	Sometimes	1
		Always	2
		Never	3
		Don't know	-9

70. How strongly do you agree or disagree with the following statements		Disagree strongly	Disagree	Neither agree nor disgree	Agree	Agree strongly
70.1 (KPS07)	Generally speaking most people can be trusted	1	2	3	4	5
70.2	Generally speaking most people in my neighbourhood can be trusted	1	2	3	4	5
70.3	Generally speaking most people in my neighbourhood make an effort not to litter.	1	2	3	4	5
70.4	If you throw rubbish on the street in this neighbourhood, people criticise you.	1	2	3	4	5
70.5	I think it is important to provide spaces in cities for wildlife	1	2	3	4	5
70.6	I think the government should plant more trees in Khayelitsha	1	2	3	4	5
70.7	I would like to have more birds in Khayelitsha	1	2	3	4	5

		Yes	No	Don't know
71.1	Do you know that there is a park along the river (the Khayelitsha Wetlands Park) to protect wildlife and provide a place for people to walk and take boats on the water?	1	2	-9
71.2	Do you think it is a good thing to have spaces like this in Khayelitsha?	1	2	-9
71.3	Have you or anyone in your household ever visited the Khayelitsha Wetlands Park?	1	2	-9
71.4	Do you know that there is a nature reserve on the coast called Wolfgat, to protect sea birds and wildlife?	1	2	-9
71.5	Do you think it is a good idea to have nature reserves like this near Khayelitsha?	1	2	-9

72.1	Have you ever seen this animal? It is a wild cat called a caracal. It eats mice, rats, birds and small animals like lambs. They are too small to harm people.	Yes	1
		No	2
72.2	Did you know these wild cats (caracal) live on Table Mountain?	Yes	1
		No	2
72.3	Would you like it if they came to live in the nature reserves in Khayelitsha?	Yes	1
		No	2
		Don't know	-9
72.4	Do you think they might help control rats and mice in Khayelitsha?	Yes	1
		No	2
		Don't know	-9

CONTACTS AND VISITS

Z8. We may want to talk to you again. Do you give us permission to contact you in the future for an interview?	**Yes**	**1**
Signed …….....	**No**	**2**

INSTRUCTIONS TO INTERVIEWER: Please ask for contact details		
Z9	Name	
Z10	Address	
Z 11	Cell phone	
Z12	Email	

Z.13	End time	

Appendix 2: Ethical Clearance letter

Faculty of Commerce

Private Bag X3, Rondebosch, 7701
2.26 Leslie Commerce Building, Upper Campus
Tel: +27 (0) 21 650 4375/ 5748 Fax: +27 (0) 21 650 4369
E-mail: com-faculty@uct.ac.za
Internet: www.uct.ac.za
@Commerce_UCT **UCT Commerce Faculty Office**

23/04/2018

Mr Pieter du Plessis
School Of Economics
University of Cape Town

REF: REC 2018/004/023

Dear Pieter du Plessis

Exploring the socio-cultural perceptions of rats in Khayelitsha

We are pleased to inform you that your ethics application has been approved. Unless otherwise specified this ethical clearance is valid for 1 year and may be renewed upon application.

Please be aware that you need to notify the Ethics Committee immediately should any aspect of your study regarding the engagement with participants as approved in this application, change. This may include aspects such as changes to the research design, questionnaires, or choice of participants. The ongoing ethical conduct throughout the duration of the study remains the responsibility of the principal investigator.

We wish you well for your research.

Modie Sempu
Administrative Assistant
University of Cape Town
Commerce Faculty Office
Room 2.26 | Leslie Commerce Building

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Appendix 3 – Consent form

Exploring the socio-cultural perceptions of rats in Khayelitsha, Cape Town

Fieldwork researcher: Pieter du Plessis

Study endorsed by: Commerce Faculty Ethics in Research Committee (REF 7963)

This research project forms part of Khayelitsha Rodent Study headed by Prof. Nattrass at the University of Cape Town. This project looks at the manner in which people live in urban spaces among rats, what those relationships looks like and how rats are perceived.

What types of questions will I be asked?

You will be asked questions relating to your experiences with rats in your community, what you think about rats, how rats have impacted on your everyday life and what you think should be done about the rats in your community.

Will I be compensated for my time?

No, this study is voluntary.

What will happen to what I am telling the researcher?

Whatever you tell the researcher and consent to them using will be used as data to write a Master's thesis. Some of the information might also be used in the writing of research paper that could inform and motivate public policy around rats in your area – although this cannot be a given.

Will my information be treated confidentially?

Yes. All the information that you relay will be secured and treated with sensitivity.

Do you have questions or concerns about this study?

Please contact dplpie006@gmail.com for more information or clarity, or should you want to follow up on the research process.

You have the right to withdraw at any moment in the research process even after the person conducting the research have left. You can do this by emailing your withdrawal.

I, _____, have read and understood the information above and was given opportunities to ask questions and raise my concerns about this study. I acknowledge that I am a volunteer and that I can withdraw from the research process at any point.

Signature: Date:

CONSENT FORM

Title of Project: Exploring the socio-cultural perceptions of rats in Khayelitsha

Name of Researcher: Mr. Pieter du Plessis

Area:

Address:

Contact details:

Please initial all boxes

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. ☐

3. I acknowledge that all data the I provide will be held with confidentiality and be secured. ☐

4. I agree that my data can be used in research papers and for the Master's thesis. ☐

5. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Name of Person taking consent.	Date	Signature