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Good Fences Make New Neighbours: A Material Ethnography of an Enclaved City in Boom

By

Armin Kific

18221573

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Department of Anthropology, Archaeology, and Development Studies

Faculty of Humanities, University of Pretoria

Supervised by

Dr Detlev Krige

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Ethics and Plagiarism Declaration

Full names	Armin Kific
Student number	18221573
Topic of work	Good Fences Make New Neighbours: A Material Ethnography of an Enclaved City in Boom

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Na kraju i najvažnije, želeo bih da se zahvalim moju mamu i tatu. Vi ne znate da ste najbolji roditelji na svetu. Stvarno mislim da ne znate. Hvala vam što ste me uvek podržavali, od prvog dana na ovom svetu, i kako ste oduvek živeli za mene i Klaru. Ne bih želeo da me neko drugi vodi kroz život osim vas dvoje. Ovaj rad je za vas, i posvećen vama. Vaš mali Armin.

Abstract

Boomed suburbs, along with various other residential and non-residential enclaves, have increasingly characterised the South African urban socio-spatial order following the transition to democracy in 1994. Boomed suburbs, otherwise referred to as 'enclosed neighbourhoods' in the literature, are forms of 'gated communities' that constitute resident-driven initiatives to fortify and securitise already-existing suburbs with fences, booms, gates, surveillance technologies, and security guards. Unlike other gated communities, however, boomed suburbs are legally prohibited from denying access to any person seeking to access or move through them. The city of Pretoria-Tshwane hosts over 90 enclaves of this type, and continues to witness the growth of this figure with each passing year.

Based on data made over a period of nine months, through participant observation with a range of actors involved in booming, interviews, walking the city, and an analysis of documents and visual material, this dissertation describes the diverse set of actors involved in the process of their development and maintenance and repair of boomed suburbs, including suburban residents; project managers; private security forces; municipal officials suburban vigilante groups; and criminals. The main field site was 'Pretoria East,' an area of the city concentrated with these enclaves, although this ethnographic research was also multi-sited and participants were drawn from different boomed suburbs and the city space located in between them. A key research participant in the study was an individual and project management company that sits at the heart of the booming enterprise in the city, an individual actor that has singularly shaped the security landscape of the capital city.

The dissertation describes the actors involved in booming open suburbs, as well as the often long processes, diverse practices, labour, and costs involved in these enclosure projects. It demonstrates how these variously positioned actors get entangled across a complex, unpredictable, and experimental urban borderlands characterised by conditions of severe criminality and state abandonment, or hypogovernance. Moreover, arguing from the data made in this study, the dissertation suggests that amidst borderland relations between human actors and the technologies and infrastructures of enclavement, a new coproduced city is emerging, alongside technological and legislative innovations, knowledges and expertise, infrastructural hybrids, and redrawn understandings of citizenship and community.

Contents

Chapter One: Introduction

Gated communities are types of residential developments characterised by the presence of gates, walls, and/or fences that collectively serve to delimit private and public spaces and infrastructures so as to prohibit open or uninterrupted public access into or through them. Over the last four decades, gated communities have increasingly proliferated in intensive variation across the world (Atkinson and Blandy 2013). Their purposes, designs, and modes of access restriction are as diverse as the plurality of material and socio-historical contexts out of which they emerge: along the Californian coastline; in the illuminated streets of Singapore; across South America's dense metropoli; at the outskirts of China's large cities; peppered over London's Metroland; throughout central Africa's smart cities-to be; and perhaps most inescapably, in the Republic of South Africa. While South Africa expresses a long and well-known history of enclavement, private gated communities have increasingly dominated following the democratic transition in 1994, becoming attractive and popular residential options for individuals across the class spectrum (Bezuidenhout and Buhlungu 2015; Ballard et al 2021; Landman 2020). In this chapter, I provide a brief background of the study and the city of Pretoria-Tshwane, the ethnographic context in which the study took place, before discussing my own positionality as a researcher. This is followed by a description of the study's aims, including its research questions, arguments, and possible contributory significance, before presenting the research methods I employed in this study.

1.1. Background: The Study of Gated Communities and Pretoria-Tshwane

The global proliferation of gated communities has attendantly sparked the development of an academic field engaged in the study of them (Bagaeen and Uduku 2015). Some social science scholars of gated communities have engaged theoretically with the concept of *enclaving* in their study of gated worlds. I situate this dissertation into this conversation regarding enclaves, defined physically as enclosed fragments surrounded by alien environments (Vinokurov 2007), and sociologically as processual modes of residential organisation premised upon the defensive separation of space (Nielsen et al 2021).

For the purposes of this research study, I focus on one particular type of enclave, a form of gated community - enclosed neighbourhoods (Landman 2000), or what I call *boomed suburbs*. These are open suburbs (consisting of stand-alone houses, apartments, and other gated communities) that residents collectively retrofit with booms, gates, and fences, often in

response to fears of crime and resulting property devaluations, egged-on by a perceivable absence of the state in the provision of public security and infrastructural provision. In the process of booming a suburb, residents are legally required (in order to attain approval from the state) to form committees and garner a stipulated percentage of consent from the residents in a suburb towards its closure. Thereafter, committees must collect funds from residents to enter the market and purchase both commodities and services from professionals, such as project managers, building contractors, and private security firms. During development, committees must abide by a set of regulations set out by the state regarding this type of enclave while facilitating interaction between residents within the suburb – 'the community' - to generate both financial and ideological support towards successfully booming the suburb. Amidst this process, new forms of communication, social rituals, and bonds emerge, as well as novel requirements regarding mobility and interaction with nonhuman technologies and infrastructures.

Peculiar to this type of gated community - boomed suburbs - are its conditions of access, which unlike others, are contradictorily premised on free, unchallenged, and indiscriminate movement in and through them. Boomed suburbs legally remain public spaces after their enclosure due to the legislation that governs them, meaning that any person should legally be able to access such suburbs on foot or by motor vehicle or on bicycle. These conditions of access differ significantly to other types of gated communities such as estates, complexes, and gated apartment blocks, where access is legally prohibited. The mass development of these more conventional gated communities since the early 1990s arrived with various consequences, one of which was to make older, open suburbs and townships more vulnerable to crime, the long-term result of which is an increase in boomed suburbs. My reasons for dispensing with Landman's term, enclosed neighbourhoods, are presented in the literature review contained in Chapter Two.

In terms of ethnographic context, this research study reports and speaks from a particularly intensive moment of change in the young history of South Africa's post-apartheid cities, as the nation completes its 30th lap around the crash-course of democracy. One salvageable constant of its complex urban landscapes today is that "almost every neighbourhood in urban South Africa either experiences rapid change or anticipates it" (Mabin 2005: 44). This dissertation focuses on one of these changes, namely the increase in number and development of gated communities and other non-residential fortified enclaves since the early 1990s, which I consider have more recently entered a period of concretising consolidation. While these

residential forms can be found both within cities and without, this research study is specifically concerned with those that have taken material hold in Pretoria-Tshwane, the country's executive capital, located in the Gauteng province. The increasingly ubiquitous consolidation of boomed suburbs in my home city of Pretoria-Tshwane is what prompted and inspired this study, for as one important scholar of enclavement wrote two decades ago, "silence about one's native city is often neither a possibility nor a choice" (Caldeira 2000: 7).

The City of Tshwane Metropolitan Municipality (CTMM) is Gauteng's largest municipality, including the city proper (inner city), its far-reaching suburbs, industrial areas, former native locations and townships, and its rural hinterlands. Today, the 'city' of Pretoria-Tshwane stretches from Atteridgeville and Ga-Rankuwa in the west to Mooikloof and Silver Lakes in the east, and to Mabopane and Soshanguve in the north. It is home to over four million people (83% Black African, 13% White, 1.8% Coloured, 1.7% Indian)[1] with its urban edge negotiated and aggrandised daily, especially towards the east of the city (Stats SA 2023). It hosts the Union Buildings, the national seat of government, and the embassies of all nations that currently have foreign delegations in South Africa. The city itself is a balancing act between the "African Capital City of excellence" (CTMM 2012: 110) and one of the most dangerous, rifely unequal cities in the world (Hamann and Horn 2021).

In this dissertation, I use the term Pretoria-Tshwane to refer to this city. My first reason for doing so is because to refer to the city as merely 'Pretoria' or 'Tshwane' alone is factually inaccurate and contested. In the 2000s, the then ruling African National Congress (ANC) pioneered a renaming of municipal places and streets that until then bore names of apartheid leaders and war heroes. One of these proposed name changes concerned the name of the city itself. The CTMM's 2005 application to the South African Geographical Names Council (SAGNC) to rename the city of Pretoria to Tshwane has to this day not yet attained official approval. Initially accepted, the application thereafter stalled, leaving the city's name open to interpretation ever since. The name change was referred back to the CTMM for public participation in 2017, although remains effectively incomplete (Swanepoel 2009; Ehrenreich-Risner 2020; Horn 2021). My second reason for settling upon this name for the city was, at certain moments, to speak and write in the vernacular of this study's research participants. Both

[1] These are static race classifications that the government and Statistics South Africa make use of in collecting and organising citizenry data. They do not account for diversifications of these categories, and are only used in this dissertation for practical purposes.

‘Pretoria’ and ‘Tshwane’ fulfil different discursive meanings and purposes for the participants of this study, the details of which are expanded upon in Chapter Three.

1.2. Researcher Positionality

Researcher positionality refers to the “intersectionality of various categories of difference,” not excluding race, age, gender, and class, among others, and the resultant situated knowledges with which a researcher enters the field (Dall’Agnola 2023: 12; Given 2008). In post-positivist social scientific research, positionality refers to the various influences that the researcher’s location in the world (Gupta and Ferguson 1997), as an embodied actor, brings to the research process, thus necessitating the researcher to be reflexively and consciously aware of ‘where they are coming from’ (Holmes 2020: 1) as they seek to situate the knowledge they make locatable and accountable (Haraway 2013). My positionality as a lifetime, white, middle-class resident of this city allowed me to intimately depart from a perspective that traced its change over time, as boomed suburbs have grown from scattered and contested to practically unavoidable types of gated communities, particularly in Pretoria East wherein this study took place. Once again leveraging my positionality, I also sought from the start of the research project to integrate a ‘studying up’ approach (Nader 1972), investigating not those that boomed suburbs appear to marginalise and exclude, but instead the relatively privileged residential actors and professional experts that develop, consume, and reproduce them, in what is a predominantly white, male-dominated field. The literature on gated communities suggests that these formations offer paramount opportunities to study up and conduct ethnographies with privileged actors (Duca 2013), who continue to remain understudied in anthropology. Like Nader, however, mapping boomed worlds into a stratified, merely ‘up’ and ‘down’ binary was impossible. My upward gaze quickly became a ‘vertical slice’ (1980) in this research study due to the diverse relational inequalities that pervade the world of booming. Vertical slices are inevitable results of attempting to study up while maintaining a relational framework (Stryker and Gonzalez 2014). My relatively poor but working understanding of the Afrikaans language at times pitted me as an outsider in the field, but gradually improved and was enough to suffice throughout the duration of fieldwork.

1.3. Problem Statement, Aims and Objectives, and Research Questions

Pretoria-Tshwane and South Africa’s other large cities are undergoing significant changes in what can be deemed an era of enclavement. It is noteworthy to state here that South Africa is second only to the United States in its number of gated communities (New York Times 2019).

There is little question that enclaving has become a "dominant social formation," as Bezuidenhout and Buhlungu (2015: 22) call it, enforcing new and yet eerily familiar regimes of exclusion materialised in the form of walls, gates, and fences. These pervade across class lines and are even embraced by the state, evidenced in the fortification of government and public buildings. Gated communities include not only estates, complexes, and gated apartment blocks, but also fortified shopping malls, schools, public spaces, and most importantly for the purposes of this dissertation, boomed suburbs.

The research problem at hand in this study concerns the rapid proliferation of boomed suburbs across the city of Pretoria-Tshwane. These enclaves, once rare and scattered across the city, have in the last decade entered a period of b(l)oom and evolved into unmissable, and especially in Pretoria East, unescapable features of the city's urban fabric. It has become increasingly difficult today to traverse Pretoria-Tshwane without encountering the gates of different boomed suburbs. Now commonplace, enclavement in the form of boomed suburbs also does not appear to be slowing down anytime soon, given the increasing number of closure applications the municipality receives with each passing year. The city hosts over 90 enclaves of this type, and continues to witness the growth of this figure. Unlike in Pretoria-Tshwane's neighbouring city of Johannesburg, wherein boomed suburbs are similarly prevalent but predominantly appear in smaller scales, around urban edges, and encounter increased opposition from public authorities and public space advocates, the former's boomed suburbs are increasingly dominating more central areas and at a larger scale, gradually but consequently coming to define the Capital itself, along with a plethora of other, already-present residential and non-residential fortified enclaves. Further, while the literature on conventional South African gated communities is well-developed, direct ethnographic work on boomed suburbs - as gated communities with contradictory rules of access and complex municipal, legal, and developmental procedures - remains relatively scarce in comparison.

As such, the primary research questions I developed in response to this research problem ask: *Across what sort of environment, and how, are different actors of enclavement relating to one another in Pretoria-Tshwane? Is it possible that boomed suburbs reproduce effects beyond physical enclavement?*

In order to work towards answering this primary research question, numerous secondary research questions required answering first, including: What is booming and enclavement in Pretoria-Tshwane? How are these processes referred to by different actors? Who are the actors

involved in booming in Pretoria-Tshwane? What is involved in the process of booming? What are the phases involved in the process of booming? What are the economic dimensions of booming? What does it cost to boom a suburb? How are boomed suburbs funded? Why do residents choose to boom their formerly open suburbs? Why is Pretoria seemingly at the forefront of the booming of open suburbs in South Africa? What are the drivers of crime? What are other drivers of booming? What are the roles of private security actors in boomed suburbs? What are the consequences of state absence, or hypogovernance, in relation to boomed suburbs? How does hypogovernance drive booming? What infrastructures and technologies shape the changing landscape of booms and booming? What are the respective roles of these technologies? How do humans interact and relate with the nonhuman technologies and infrastructures of boomed suburbs? How are these technologies innovated over time? Who maintains these infrastructures? How are they maintained? Who owns the infrastructure attached to boomed suburbs? What kind of infrastructural hybrids are boomed suburbs? If boomed suburbs are assemblages, what are their affects? How do humans relate with the nonhuman technologies and infrastructures of boomed suburbs? What kinds of knowledges and expertise do boomed suburbs harness and develop? How do boomed suburbs redraw understandings of citizenship and community? How have boomed suburbs shaped municipal legislation and the state's position towards enclavement? What kinds of markets to boomed suburbs maintain or generate? What kinds of hierarchies develop between different boomed suburbs? What are the bases of these hierarchies?

The aim of this study was to ethnographically immerse myself into the world of booming in Pretoria-Tshwane by conducting participant observation and interviews with a range of actors - project and estate managers, committee members, residents, security officers, managing agents, pedestrians, workers, and engineers - and to gain insight into what roles these different actors fulfil, how they apply and conduct themselves in these roles, and towards what ends they do so. Out of these methodological manoeuvres I aimed to make rich, targeted data geared towards answering the primary and secondary research questions above, and to develop arguments concerning the ways in which boomed suburbs are changing the city and the everyday lives of those within it. A further objective was to add to the existing literature on gated communities in South Africa by tackling one type that remains relatively understudied, as well as to amplify more recent arguments of scholars concerning the mass proliferation and normalisation of enclavement in post-apartheid South Africa.

1.4. Argument and Research Significance

Based on data I made in the field and drawing from the findings of the research study, I make several arguments. The first of these suggests that the various and differently positioned actors involved in booming in Pretoria-Tshwane, situated in a social, legal, and material context characterised by severe criminality and state abandonment (what I term 'hypogovernance'), become entangled across a complex, unpredictable, and experimental urban 'borderlands.' Out of the borderlands a new city is emerging, and along with it, technological innovations (some of which are exported across the world), novel infrastructural hybrids, knowledges, expertise, legislation, and redrawn understandings of citizenship and community.

Thinking through a borderlands framework – wherein enclavement does not fragment the city but rather generates interfaces for interaction and exchange (Iossifova 2013) – allows for the transgression of mere cause-and-effect analyses of gated communities in South Africa by exploring "what else is going on" (Agar 2006: 18) alongside their proliferation. This approach helps me contribute to the scholarly debate regarding gated communities in South Africa and beyond, not excluding notions of urban fragmentation, segregation, and public space. The relational borderlands is web-like and messy, and disrupts clean-cut directionalities of power between the state, the market, the residents of Pretoria-Tshwane, and between the private and the public. By thinking in this vein, for example, I trace the changing stance of the state with regards to gated communities and argue that it has shifted towards beneficence and promotion, and reveal how the seemingly unproductive actions of criminals directly play a role in world-leading technological innovation.

I move from a base understanding that the city is always in a state of becoming (Deleuze and Guattari 1988), and the rise of boomed suburbs in no way suggests a clean break, conclusion, or beginning in the history or future of Pretoria-Tshwane. The booming of this city is but part of a larger and more complex, relational process (Desmond 2014), carried and shaped by a range of actors and assemblages, both human and nonhuman (Franklin 2017), a historical yet live process that I argue can be more clearly understood, at least in part, by thinking of urban change in Pretoria-Tshwane via the concept of a borderlands. Despite temptations, I have excised only one part of this longer process of enclavement, that may be historicised even further, which is one of the closing recommendations for further study in the conclusion. The processual lens with which I have approached the development and consolidation of boomed

suburbs in Pretoria-Tshwane further pits this study's findings in a forward-looking direction, and looks to contribute to the discussion on enclavement in South Africa by painting a possible picture of the shape and order of the country's cities in the future.

I am further hoping to contribute to the literature on enclavement in South Africa by providing up-to-date and empirical descriptions of how boomed suburbs are applied for, approved, inspected, developed, and operated, from an insider perspective gained through participant observation with those actors who agreed to become research participants. I am also looking to contribute to scholarly thinking about enclavement by including imaginaries of 'criminals' and their actions within the relational scope of this dissertation, as pivotal actors in the borderlands of enclavement and yet who rarely appear as such in studies of gated communities more broadly. Even though 'criminals' play a role as actors in the booming of suburbs, I did not do any research with 'criminals' but paid attention to how they shape the worlds of booming. I lastly aim to contribute to the discussion by thinking 'materially' with Pretoria-Tshwane's boomed suburbs, this after my curiosity was piqued by a plurality of 'new materialisms' (Fox and Alldred 2018) circulating the social sciences at present, and the dearth of materialist analyses of gated communities available in the literature both domestically and abroad. On the whole, I seek to contribute to discussions on gated communities and boomed suburbs during a period of significant change in South Africa wherein enclavement has increasingly become a norm, and this by documenting recent changes in enclaving in Pretoria-Tshwane.

1.5. Research Methods and Ethical Considerations

In this research study, I employed methods of participant observation, interviews, walking, and textual analysis in order to better understand relations and processes that reproduce boomed suburbs, towards the answering of my key research questions. My direct research sample consisted of 25 individuals, two of which I conducted participant observation and interviews with, and the remaining individuals only interviews. As per my relational, 'vertical slice' approach mentioned above, I looked to gain rich, rounded insight by studying different actors in the field and tracing the relationships between them (Desmond 2014). The sample thus consisted of: one project manager (Colonel Malan); one estate manager (Aris); two security reaction officers; one contract managing agent (Cathy*); four residents' committee members (Elroy*, Herman, Niels*, Brent*); one engineering consultant (Lehmann*); two building contractors (Jan, Johann); one municipal ward councillor (Liam*); one academic-activist (Dries); ten residents (of boomed and unboomed suburbs - Stefan*, Ingrid* Zuki, Denga,

Hannah*, Anne, Belle*, Ellen*, Rhulani*,[2] Elsabe); and two labourers who work within or at the borders of boomed suburbs (Happy, Edison). Sixteen of these participants were men, while seven were women. Twenty of these participants were White South African, three were Black South African, and two were Black hailing from other countries in the continent. I label this sample as 'direct' because it does not include numerous on-the-go conversations with actors involved in the worlds of booming that took place while conducting participant observation with the first two participants listed above, or when attending community meetings or events with other participants. These were conversations with security guards and other security officers, committee members, residents, vigilante group members, and contractors. I unavoidably engaged with security guards in this study due to their central prevalence in the daily reproduction of boomed suburbs, but they were not included as research participants. This decision was informed by the presence of already-existing literature on security guards (Sefalafala and Webster 2013), and ethical considerations such as difficulties in obtaining permission for interviews and cognisance of vulnerable employment conditions.

I recruited the participants involved in this study by holding preliminary introductory meetings, at which I introduced myself and the research study, and distributed a Letter of Informed Consent and Consent Form. Stapled together, these two documents respectively detailed the study and the roles and rights of participants within it, also providing them with an opportunity to confirm or deny their willingness to participate, as well as their preferences regarding pseudonymisation and recording of interviews (Appendix A). In some cases, as with my key research participant Streetsafe or when interviewing ward councillors, I attained additional consent beyond the two aforementioned documents, in the form of a specified Permission Letter (Appendix B), which I duly presented to the Research Ethics Committee at the University as part of the application to conduct this research (Appendix C).

There are several participants who played more central roles in this research study, for which I provide profiles here:

Colonel Jan Malan: Jan Malan, who I refer to interchangeably as Colonel and The Colonel in this dissertation, is the main project manager and facilitator of boomed suburbs in the city of Pretoria-Tshwane. He is the owner and director of his own one-man company, Streetsafe, which has successfully boomed more than 90 suburbs in the city since its establishment in

[2] All names in this list coupled with asterisks are pseudonyms.

1998. Colonel is a decorated veteran of both the South African Defence Force and South African National Defence Force. In the Angolan War, Colonel Malan served as the commander of Alpha Company, in the 61st Mechanised Battalion Group. After the war, Colonel was stationed in the Northern Cape to lead and instruct infantry training, a period during which he rose to his current rank. He holds qualifications from the South African Military Academy, Stellenbosch University, and the University of South Africa, in a number of disciplines relating to military strategy and leadership. After relocating to Pretoria-Tshwane in 1995 and officially retiring in 1996, he immersed himself in the then-nascent private security industry and has since risen to esteemed status in the field of road closures. Known for his militaristic thoroughness and meticulous attention to detail, Colonel almost single-handedly dictates the booming of Pretoria-Tshwane from his home office, an extremely technical room filled with maps and whiteboards but also humanised with a personal museum of memorabilia and a large relief of the Battle of Constantinople sprawled across the length of the room's walls. Much of his working day is spent outside of this office and in the streets, however. Colonel was my core research participant, and without him this research would not be possible. I conducted several interviews with him, some of which were formal sit-downs while others took place in the field during ride-along participant observation.

Aris (Estate manager): Aris is the estate manager at a younger boomed suburb situated further east. He has lived in the suburb, recently successfully boomed, with his wife and children for four years. Nearing 40, Aris is personable and youthful in his outlook. This made developing a relationship with him far more comfortable and enjoyable than with some of the older participants I recruited. Even if separated by more than ten years, we shared and bonded over our youth as a form of respite in a field dominated by a greying generation. It was with Aris I conducted the most participant observation, second to the Colonel. He volunteered for the role of estate manager in order to work off a capital contribution he made to the suburb's Non-Profit Organisation committee. Before this, he was an engineer of autonomous security devices and was offered a job in Sweden, which he declined because of the weather. Aris and I met on a number of occasions, either at cafes for interviews, at gates for inspections, or in cul-de-sacs for meetings with volunteers and residents. Aris carries the weight of the suburb on his shoulders. He is constantly juggling considerations of security, community, and technology. For this reason, and thanks to his keenness to be involved in the research, I was able to gain rich insight into booming from an estate manager's perspective.

Lehmann (Traffic engineer): Lehmann is a director and traffic engineer at a large engineering firm based in Pretoria-Tshwane. He is a friend of the Colonel and his go-to man for traffic

engineering inspections at prospective boomed suburbs. He holds nearly twenty years of experience in this role and is deeply familiar with the expectations of the CTMM regarding boomed suburbs. I conducted participant observation alongside himself and the Colonel across the then still-developing SafeWaterkloof suburb. It was alongside Lehmann when I was first asked to assume the role of "scribe," taking notes and producing an action list of all the traffic engineering faults in construction.

SALTUS Holdings Africa or **Jan and Johann (Building contractors):** SALTUS Holdings is a company based out of Pretoria-Tshwane that engineers and produces a number of composite technologies, including utility and communication poles, fences, pallets, and housing 'pods.' The pair are energetic in their work and often make jokes at the sites. I was the subject of a number of these light-hearted jokes, being labelled "the scientist" and as he who questions whether booms cry when damaged. SALTUS is engaged in a number of projects across the country, from art parks to the installation of poles for security cameras in poorer neighbourhoods. Colonel and I conducted two inspections alongside the pair, visiting each guardhouse in the suburb where they were contracted. Whereas Lehmann educated me in traffic engineering, this pair did much to advance my material understandings of guardhouses.

Cathy (Contract managing agent): Cathy is a high-ranking realtor and administrator for a major real estate company in Pretoria-Tshwane. Cathy has been working on boomed suburbs for more than ten years. I met her at a community meeting and held a formal interview with her soon thereafter. She has worked on the suburbs involved in this study and many others, and is close with Colonel Malan. By now she knows exactly how to keep a boomed suburb insured and compliant, and had much to share about the ins-and-outs of booming from the perspective of a managing agent. In the words of one suburb's committee chairman, Cathy and her team's job was "to assist to take those duties off our hands, so that it is done in a specific way. They take care of a number of these estates, if you can call it that, and also boomed-off and gated communities, so they know what they are doing."

Happy: Happy is a woodworking craftsman who both builds and sells his figurines on the gently inclining corner of Albert and Crown Street in Waterkloof, and has been doing so for the past five years. His wooden figurines include miniature replicas of Land Rovers, jet planes, and front loaders. He sources his wood from back home in Malawi, from which he emigrated in 2015. I informally interviewed Happy on one occasion, although often greeted and chatted with him thereafter upon my walks.

Herman (Committee member): Herman is the committee chair of the oldest boomed suburb in Pretoria, Wapadrand Security Village. He has lived in the suburb with his wife since the early 1990s. I held one interview with him to gain insight into the history of booming in Pretoria. He is adept at community management and is proud to claim that he fosters peace and friendliness among residents in the suburb. He provided me with information about booming's dark ages, the success of Wapadrand Security Village, the importance of establishing non-conflictual relationships with the municipality, and how the need for safety brings residents of different backgrounds together.

Security Officer #1 and #2: Security officer #1 is the head security reaction officer and manager at one of the older boomed suburbs, in which he lives with his wife. We held a semi-formal interview at a popular cafe adjacent to the boomed suburb. In our exchange I was able to hear some contentious stories of security matters in the suburb and learn much about license plate recognition, a technology vital to boomed suburbs. He is clearly well-versed in his craft and well-connected in the field of security in Pretoria-Tshwane and Gauteng at large. We only met once, and he informed me that it was unlikely I would be able to penetrate the upper echelons of his suburb's committee, especially following some unsavoury experiences with journalists in the past. Security officer #2, who I met on a number of occasions while conducting participant observation with the Colonel, occupied the same role in another established, older boomed suburb. I was similarly able to attain intimate insight into the realm of security in the closures in my interactions with him. Their names have been sensitively withheld for anonymity reasons.

Stefan (Resident): Stefan is a resident of a boomed suburb further east in the city. Stefan is a chemical engineer who is especially apathetic towards the enclosure, but has contributed significantly nonetheless. I was put in touch with him via his son, Keagan. He and Keagan have lived in the area since the late 2000s. I held one formal interview with Stefan, a stern man of few words. I was able to attend several community meetings in the suburb on his behalf, which I attended with his son, as he was not interested in attending and only wanted me to report back with main points. I was also fortunate enough to live-in and house-sit his home for spurts during the fieldwork.

Ingrid (Resident): Ingrid is a resident of a large boomed suburb and has been one for half of her life after moving from her previous home in the "naked" suburbs. She is an older student at the University of Pretoria and commutes from the suburb to the campus on a daily basis. I recruited her as a participant with the help of a mutual friend. I held two semi-formal interviews with Ingrid, one of which was more basic, and the second of which allowed me to ask more

targeted questions. An avid walker and runner, her responses opened a new side to booming with which I was unfamiliar, even with my daily walks through the suburbs. She is satisfied with the way the closure has safeguarded her, especially since she now lives alone following her parents' emigration to Australia.

Zuki (Resident): Zuki is a 26-year-old resident of the SafeWaterkloof suburb. He has lived in the suburb long before it was enclosed, since his childhood. He still resides at that house with his parents and sisters. He and I attended primary school together. I held two semi-formal interviews with Zuki at restaurants that overlook the boomed suburb. In these interviews he expressed his general apathy towards the enclosure as a non-contributor and provided insight into how he conducts mobility through it.

Denga (Resident): Denga is a new resident of Waterkloof in his mid-20s, although his apartment falls just outside of the boundaries of the SafeWaterkloof closure. I heard of his interest in my study through a mutual friend. Denga has had to work extremely hard to afford living in this area, despite coming from a wealthy family. He lives there with his girlfriend and a roommate. We held one walking interview along Lawley Street during the Lawley Christmas Lights exhibition.

Hannah (Resident): Hannah is a Pretoria-Tshwane local who has lived all over the east of the city throughout the duration of her life. She is a preschool teacher who has been living in the Groenkloof boomed suburb for the better part of the last five years. Since relocated overseas, she was at the time of our interviews living there with her two siblings and parents. We held two interviews in the public park within the suburb. Hannah feels safer since the closure and particularly enjoys the friendly relationships she shares with the guards, although is uncertain why it cannot be enclosed completely. A walker and gossiper, she tells me of a number of criminal incidents in the suburb that have been swept under the rug.

There are several actors who had a part to play in this research who cannot be considered outright participants, with whom I engaged in the company of other participants or merely because of sharing the same space at one booming event or another. These actors were important nonetheless and contributed deeply to my understanding of the various processes involved in booming. These include: several residents whose contributions were valuable but who do not require personal introductions; BoomGateSystems, the leading provider of boom gates in South Africa; the Faeriedale Security Village committee; various other security reaction officers who made presentations at community meetings; a vigilante group in one of the 'younger' suburbs; a number of committee members who redirected me towards Aris; and

various security guards, who I did not interview directly but were practically unavoidable during field research, with their comments and actions intimately educating me on the processes and perils of booming.

1.5.1. Participant Observation

Participant observation, the methodological cornerstone of Anthropology, is a qualitative research strategy that entails intensive immersion into the daily life of a particular social setting, its purpose to "gain a deep understanding of a particular topic or situation through the meanings ascribed to it by the individuals who live and experience it" (Given 2008: 598). Actively taking part in daily life by joining in, sharing with, and following, the researcher both observes and participates (Brinkman et al 2014) in practices and actions of involved actors, experiencing the dynamics of the social setting itself. The researcher ideally spends extensive time in the social setting and builds rapport to gain local or tacit knowledge and establish rapport with participants, learning a variety of skills and discourses in the process. Meanwhile, the researcher takes meticulous field notes to record observations for later synthesis. Participant observation transforms the researcher and her body into an instrument of data collection, and the presence of the researcher within the social setting does not appear out of place, ideally (Bernard 2011; Musante-DeWalt 2015). My employment of participant observation was consistent with this general orientation towards invisible, everyday experience, "concerned with how people live, work, eat, move, consume, sleep, parent, love, and die in place" (Meth et al 2021: 41).

In order to gain insight into the processes that the development of boomed suburbs entail, I established a relationship with the company Streetsafe to conduct an 'anthropology with' (Ingold 2013), as opposed to an 'anthropology of,' boomers and booming in Pretoria-Tshwane. An actor centrally involved in the development processes of boomed suburbs, Streetsafe is the leading company in the city to offer a "complete project management service in order to provide, establish, and maintain residential security zones (security villages) by way of street closures and access restriction" (Streetsafe 2005). Early on in the development of the research proposal for this study, I realised that this company is central to the city-wide booming of suburbs and therefore a significant actor to be recruited as a research participant. After establishing contact via email, I held an introductory meeting with the company's owner and CEO, Colonel Jan Malan. I became aware of Col. Malan's central role in the world of booming in Pretoria-Tshwane after being referred in his direction by several other participants I was

looking to recruit at the time. Out of these meetings I discovered that conducting participant observation with project management offered a prime opportunity to explore the various social linkages and practical knowledges that literally make boomed suburbs happen, not to mention the technologies and infrastructures with which these knowledges are coproduced. Project management informs every step of the development process and engages varieties of actors in web-like fashion, not excluding: residents; suburb committee members; security companies; security guards; building contractors; engineers; lawyers; administrative management agents; and municipal council representatives. Following these introductory meetings and in accordance with the specific demands laid-out by the University's Research Ethics Committee for research studies, I obtained consent from Col. Malan with a signed Consent Form and Permission Letter. This latter document stipulated the expectations of both parties (as in the researcher, myself, and Streetsafe), the limits of the proposed participant observation, and Streetsafe's protections as a research participant in this study, which were also available in the Letter of Informed Consent. It should be noted that I was at no point formally employed by Streetsafe, although the content of participant observation included a variety of the company's daily functions.

As such, the six months of participant observation I conducted with Streetsafe included making data by: visiting different boomed suburbs under construction and conducting infrastructural "inspections" at closed gates, access points, guardhouses, and control rooms; compiling "action lists" detailing the levels of completion of said infrastructures and what activities and additions were still required; attending and observing training sessions of incoming security guards set to be employed in recently-completed boomed suburbs; running tests on the readiness and functionality of different technologies and procedures in the boomed suburb, and thus the fortitude of the boomed suburb's security on the whole; engaging with stakeholders and relevant actors, not excluding contractors, residents, committee members, engineers, and security guards and officers; and traveling to and from different inspection sites alongside the Colonel. My participant observation with Streetsafe also entailed elements of the 'shadowing' research technique. Shadowing "involves a researcher closely following a member of an organisation over an extended period of time … When they have a project meeting or meet with a customer, the researcher sits in. If they have coffee with friends who are colleagues from another site, the researcher goes too" (MacDonald 2005: 3). Shadowing appeared attractive due to the amount of movement that characterises a working day as a project manager for boomed suburbs, from site to site and from one end of the city to another. As an especially mobile research technique, my use of shadowing treated this movement between sites not as

breaks in the research continuum but rather as opportunities to further understand the role in focus, allowing me to ask questions while on the move and while conducting activities, prompting a "running commentary" from the Colonel which was recorded in field notes (ibid.: p.4). The participant observation I employed with the Colonel shares some parallels with an anthropological research study conducted in the U.S. Airforce in the 1950s, which sought to gain insight into the technical aspects of its training program at the time (Sullivan et al 1958). An anthropologist and participant observer, provided with the pseudonym 'Tom,' was tasked with immersing himself in the Airforce by enlisting in and completing the training program, engaging in practices and actions first-hand, with his role as a researcher unbeknownst to neither his presiding officers nor fellow trainees. While conducting undercover research was never an option in this study due to ethical guidelines, I found that Tom and I shared some experiences while conducting research in similar militaristic contexts. Namely, like Tom, the field required of me to set aside my own views and leanings in order to successfully socialise into the role of a trainee project manager and effectively play the part, at times even conversing in another language. As a result of such "thorough-going participant observation" (ibid.: 667), and again like Tom, I found myself at times losing perspective and touch with my 'old self,' with which I had to battle once leaving the field to maintain a degree of objectivity in the writing-up phase.

I further conducted participant observation with Aris, an estate manager of a boomed suburb, although this was limited to attending suburban vigilante group meetings and similarly conducting inspections of the access points of his boomed suburb when still under construction, often with Streetsafe as well. I also attended three residential, "community meetings" as a researcher, either as the guest of participants or on their behalf. Lastly, in brief spurts throughout the fieldwork, I 'lived-in' and house-sat at one participant's home, Stefan, in the Faeriedale boomed suburb.

1.5.2. Interviews

Over the course of this research study, I held 23 semi-structured interviews with research participants, listed above, including: residents of boomed and unboomed suburbs; committee members; estate managers; security officers; ward councillors; managing agents, and non-resident labourers, all of which were set inside or on the borders of boomed suburbs, in homes, restaurants, public parks, parking lots, or on street corners. The semi-structured interview is the most common of interview types in qualitative research, notable for the "leeway" it

provides interviewees to expand and guide the interview's content, while also still allowing the researcher to focus the conversation, albeit less so than in formal, structured interviews (Brinkman 2014: 286). Some of these interviews only occurred once, while others enjoyed multiple follow-ups. Concerning participants who are residents, I refrained from going 'door-to-door,' or approaching people randomly with expectations that they have time or interest to partake in this study. I relied on pre-existing networks to establish my first base of residential participants, and enjoyed fruits of loose snowball sampling thereafter, then nourished through rapport-produced networks developed later into fieldwork. As stated above, I recruited these participants by presenting and distributing a Letter of Informed Consent and Consent Form and holding introductory meetings to describe the research study to them. I guided these interviews with open-ended schedules that contained questions tailored to participants' respective roles in the suburb (Appendix D). At follow-ups, after developing close rapport with several participants and already in possession of working knowledge of their role in booming, thus reducing the need for targeted questions, interviews sometimes took upon more unstructured forms. Unstructured or open interviews are characterised by minimal "preset structure" (ibid.: 286) in which the researcher asks vague, open-ended questions, allowing the participant to guide the direction of the interview themselves (Given 2008). Particularly applicable to ethnographic research (ibid.), these unstructured interviews were helpful in uncovering participants' perceptions and personal feelings about booming.

These 23 interviews only include those that were pre-arranged as interviews specifically. It does not include numerous conversations that took place while conducting participant observation and shadowing with Streetsafe, Aris, and to some degree Stefan. These unstructured, conversational interviews took place on the move, often in car rides between sites or at development sites themselves with committee members, residents, drivers, estate managers, security officers, building contractors, and traffic engineers. In this regard, there was considerable bleeding between participant observation and interviews in this research study. This is not rare, as urban analyses characterised by movement often require flexible interviewing techniques (Caldeira 2000).

1.5.3. Walking Methods

In order to materially embrace booming in Pretoria-Tshwane, I immersed my body in the daily rhythms of the suburbs by actively walking them. I walked the suburbs, boomed or not, alongside pedestrians of all kinds, at different times of day, on roads, kerbs, sidewalks, through

parks and shopping centres, and over dusty brown footpaths made by thousands of walkers before, that shortcut the route to the next sidewalk or emerge beside roads that have no sidewalks at all. Walking "redefines urban space as a space of social, theoretical, cultural and critical interaction, rather than as a static or formal object" (Bremner 2010: 34). Through the walking method, I became familiar with the suburbs' physical environments, points and processes for entry and exit on foot and by car, locations of contention and interest, and pedestrian patterns, all the while engaging and being engaged in various chance encounters with residents, pedestrians, and workers.

Geographers Pierce and Lawhon (2015), working with data coincidentally collected in Pretoria-Tshwane, suggest that walking, like other scholars have done (O'Neill and Roberts 2020), ought to be regarded as a method itself. They argue that urban researchers already make use of walking as method, but overlook it as such. Like Middleton (2011), the authors understand walking as a subjective practice practically unavoidable in all long-term urban research, and thus deserving of methodological recognition. Walking is by no means a novel methodological vehicle. Its history in social science stretches back to Benjamin's (1939) consciously metropolitan flaneur, the Situationist drifter of the 1950s (Debord 1958), and De Certau's Empire State voyeur (1984). Walking offers scholars of cities a means of eliciting awareness of how processes are tied to place (Anderson 2004). Through observational walking the researcher develops a "local literacy," an embodied geographical understanding of an urban context that lays bare its scales, rhythms, and conjunctions between the social and the spatial (Pierce and Lawhon 2015: p.656). When walking, humans and nonhumans share and cross paths, orienting their movement in relation to one another, through which understandings about oneself, space, and others are constructed (Hitchings and Jones 2004). Social relations are thus "paced out along the ground," (Ingold 2008: 1), and not at static points but through movement.

Walking here refers not only to peripatetically moving through space, but also related activities of standing, waiting, observing, and casually interacting. I walked along paths I saw others taking, either passing by, walking beside, or making space for various walkers. These included dogs, joggers, construction and domestic workers, power walkers, wanderers, pensioners, and strange characters in the night who likely wondered about my walking at such hours as much as I did of theirs. I unavoidably observed people resting and chatting on lawns, street corners, bus stops, and benches. I entered and exited gates, faced closed ones, and was filmed by many security cameras. By walking this way, I was able to grasp the spatiality of everyday life in the suburbs and glean both social and material insights (Edensor 2010). I looked to bear the fruit

of what can be found when not looking for anything in particular. That access control is the defining feature of boomed suburbs only complemented this method. Thus, in a study that rarely provided opportunities for dwelling in a traditional anthropological sense, so emerged a "dwelling in motion" (Sheller and Urry 2006: 214), resulting in an ethnography rich in geographic flavour. Walking was imperative as it fed and framed the other methods I applied. The data produced by means of participant observation, interviews, and textual analysis, I venture, would have been distinctly hollow without it.

Another dimension of walking methods is the walking interview. Walking appropriates the city in the same way speaking appropriates language, after all (De Certeau 1984). I initially aimed to utilise walking interviews to complement the walking method and to gain more intimate insights into everyday experiences of living, working, or simply moving in and through boomed suburbs. Walking interviews can either be researcher or participant-driven. Jones (2008) writes that walking interviews are ideal for exploring peoples' relationships with space, wherein the environment acts as a prompt, sparking recollections and articulations that are less likely to emerge in a traditional, sit-down interview format. Walking interviews are doubled-edged in that they simultaneously incorporate listening and observing, with especial focus on where - at which point in the walk or place - a participant provides a particular response. I made use of both 'go-along' and participatory walking interviews in this research study. The 'go-along' walking interview refers to conducting interviews while walking with participants as part of their daily routines, upon walks that would have taken place with or without the presence of the researcher (Carpiano 2009). Participatory walking interviews allow the participant to choose the walking site according to their understanding of the research purpose, often revealing attitudes pertaining to specific sites (Kinney 2017). I conducted five dedicated walking interviews (as in not brief, random encounters in the street), throughout the course of this research study.

1.5.4. Textual Analysis

The third method I made use of in this research study was textual analysis. Textual analysis entails the study of loosely defined, 'naturally-occurring' textual empirical materials - "the empirical materials themselves (e.g., the tape recordings of mundane interactions, the written texts) constitute specimens of the topic of the research. Consequently, the researcher is in more direct touch with the very object that he or she is investigating" (Perakyla and Ruusuvuori 2018: 1163). Texts abound in the worlds of boomed suburbs, including: municipal legislation;

provincial gazettes; community Facebook pages and posts; community and facilitation meetings (and their invitation pamphlets both digital and physical); suburb newsletters; newspaper articles; suburb maps; notice boards; security company posters; traffic signs, engineering schematics; and even amateur engravings in the once wet concrete of sidewalks. While expectedly secondary to my application of participant observation and interviews, the analysis of these diverse texts served to inform my understanding of the histories of the sites and of boomed suburbs in Pretoria-Tshwane on the whole, as well as my knowledge of technical aspects of boomed suburbs, whether legal, administrative, or technological. So too did texts allow for a grasping of wider public opinions on the topic, which may not always emerge during interviews.

1.5.5. Ethical Considerations

It is imperative that Anthropologists and Social Science scholars on the whole take stringent measures towards conducting ethical research. Ethical qualitative research centres around minimising participant harm, respecting individual participant autonomy, as well as respecting, and in some cases protecting, participant privacy (Traianou 2014). For this research study and dissertation, I have and continue to take utmost care in implementing and abiding-by the ethical pillars of Anthropology Southern Africa (2004), namely to protect participants from harm and anticipate potential harm; to make sure participants provide informed consent throughout all stages of research; to not intensify participants' vulnerabilities; and to disclose research results with participants where possible. All data produced in this study was and remains subject to the Protection of Personal Information (POPI) Act. Data is not produced by the researcher alone, but is rather coproduced by researchers and participants in a dynamic of reliance (Nyamjoh 2012). Nyamjoh's insights underlined the ethical approach of this study. I did my best to reveal this relation to participants and inform them that their contributions were gravely appreciated.

Dynamic, voluntary, and informed consent was the foundational ethical model of this research study. 'Dynamic' implies that informed consent is reviewed and re-attained (or not) throughout the research process - also known as process consent (Ellis 2009). It allows participants to exercise their right to withdraw from research, instead of singular provision of consent implying consent throughout. With an Informed Consent Letter and Form, I provided participants with information about the study, rights and ethical considerations taken, and details concerning consent, specifically their willingness to appear in the dissertation under

their real name and to be recorded during interviews. Unless otherwise requested or indicated during the research, on the Consent Form or verbally, most participants in this study preferred to be given pseudonyms to attain confidentiality. In the list of participants further above, pseudonymised participants have an asterisk beside their personal names. The contents of the Letter were subject to open and ongoing dialogue, tailored to participants' positionalities in the worlds of boomed suburbs (ibid.; Brinkmann 2014). In mind and memory of ever-threatening COVID-19 and variants, interviews were (when possible, majorly) held outdoors or in spaces with open-air circulation.

Conducting research in boomed suburbs arrives with several unique ethical considerations of its own. The first of these pertains to the fact that boomed suburbs are sites of everyday residence, which required me to approach participants and their suburbs' spaces with sensitivity and understanding of the expectations of privacy that characterise such spaces. Secondly, boomed suburbs are also highly securitised sites that rely on a variety of confidential information, technologies, and techniques to function. While I came to learn much about the security assemblages that power boomed suburbs, certain information was withheld from me for the safety of the suburb or the sanctity of competitive trade secrets. In this regard, it was important that I maintained an ethical standard by not pressing overtly for confidential information, and not exposing that with which I was already being trusted. In the various descriptions of field data below, I sometimes refrain from exposing the specific site at which an event took place, or the names of involved participants, in order to maintain confidentiality when handling expository or sensitive information - information pertaining to suburbs' security strategies or ongoing criminal investigations, for example. I have excluded these and other personal information. In all visual data, namely photographs I took when in the field, I have occluded faces of individuals, house numbers, and vehicle license plates.

1.6. Chapter Outline

The dissertation ahead takes upon the following structure. Immediately below, Chapter Two consists of a literature review of the scholarly field of gated community study, beginning with an overview of international works down to the discussion on gated communities and boomed suburbs in South Africa. In the same chapter, I then review literature concerning the conceptual and theoretical vehicles I make use of in the dissertation. These include hypogovernance, insurgent citizenship, borderlands, and works on the materiality of infrastructure and technology, including work on assemblages and affect. In Chapter Three, I introduce Pretoria-Tshwane as a city of and in boom, and describe the specifics of booming in this city, ranging

from involved actors and application procedures to renewal processes and arguments of those who oppose booms. It is in this chapter that I aim to answer the secondary research questions: Who are the actors involved in booming in Pretoria-Tshwane? What are the phases involved in the process of booming? What are the economic dimensions of booming? Why do residents choose to boom their formerly open suburbs? Why is Pretoria seemingly at the forefront of the booming of open suburbs in South Africa? Thereafter, in Chapter Four, I describe several drivers behind the proliferation of boomed suburbs, drawing from insights in the relevant literature as well as the data made in this study. As such, Chapter Four looks to answer and continue to answer the following secondary research questions: Why do residents choose to boom their formerly open suburbs? What are the drivers of crime? What are other drivers of booming? What are the roles of private security actors in boomed suburbs? What are the consequences of state absence, or hypogovernance, in relation to boomed suburbs? In Chapter Five, I begin to think materially with technologies and infrastructures by 'assembling' the boomed suburb in the context of a borderlands. The secondary research questions at hand in this chapter include: What infrastructures and technologies shape the changing landscape of booms and booming? What are the respective roles of these technologies? How are these technologies innovated over time? How are these infrastructures maintained? Who maintains these infrastructures? How do humans relate with the nonhuman technologies and infrastructures of boomed suburbs? In the penultimate Chapter Six, I explore the various affects of boomed suburbs in their relations with public infrastructures and different human actors in the borderlands, attempting to answer the questions: Who owns the infrastructure attached to boomed suburbs? What kind of infrastructural hybrids are boomed suburbs? If boomed suburbs are assemblages, what are their affects? How do humans relate with the nonhuman technologies and infrastructures of boomed suburbs? What kinds of knowledges and expertise do boomed suburbs harness and develop? How do boomed suburbs redraw understandings of citizenship and community? How have boomed suburbs shaped municipal legislation and the state's position towards enclavement? What kinds of hierarchies develop between different boomed suburbs? The Conclusion, Chapter Seven, reviews the descriptions and arguments pertaining to booming in Pretoria-Tshwane as presented in the study, while situating the findings in a context of Global South urbanism and suggesting avenues for further study.

Chapter Two: Literature Review

In this chapter, I review the literature on gated communities and enclavement from both the global and South African perspective. This is followed by a review of work into the concepts and theories that provide the analytical backbone to this dissertation, including state abandonment, what I deem 'hypogovernance,' borrowing from Stamatopoulou-Robbins (2019); insurgent citizenship, as introduced by Holston (2009) and since developed upon by other scholars; a variety of materialist literature regarding technology, infrastructure, and assemblages; and lastly, the concept of a borderlands.

2.1 Urban Enclavement: Historical and Global perspectives

The study of gated communities is only as old as these urban forms themselves. Enclosure and enclavement have long been topics of interest, but the creep of gated communities into the realm of contemporary Urban Studies only began in the late 1980s in correspondence with increasing private residential development in cities across the globe (Roitman 2010). Before this, these forms were mainly associated with walled and fortified settlements of history, such as early walled settlements at the Nile, enclosures such as Ancient Rome's stonewall pomerium, and fortified castles of the European Middle Ages (Bagaeen and Uduku 2015; Mckenzie 1994). Now facing changing, privatised urban landscapes towards the end of the century, scholars such as Mike Davis and Michael Sorkin kickstarted a refreshed study into enclaves in the era of private gated communities with their two books, *City of Quartz* (1990) and *Variations on a Theme Park* (1992).

Research into gated communities then gained traction in the 1990s via the pursuits of scholars from the United States, emblematised in Edward Blakely and Mary Snyder's *Fortress America* (1997). The geographical limits of the emerging field were short-lived in light of the rapid proliferation of gated communities around the world. Teresa Caldeira's *City of Walls* (2000), a comprehensive study of various forms of gated space in Sao Paulo, Brazil, is often identified as one of the seminal works in the study of Global South gated communities. In the years since, studies into gated communities have grown in a variety of disciplinary and theoretical directions, with internationally compiled editions such as *Gated Communities: International Perspectives* (Atkinson and Blandy 2013) and *Beyond Gated Communities* (Bagaeen and Uduku 2015).

A majority of scholars in the literature use Blakely and Snyder's early definition (1997: 2):

> Gated communities are residential areas with restricted access in which normally public spaces are privatised. They are security developments with designated perimeters, usually walls or fences, and controlled entrances that are intended to prevent penetration by non-residents. They include new developments and older areas retrofitted with gates and fences, and they are found from the inner cities to the exurbs and from the richest neighbourhoods to the poorest.

This definition is one that prioritises the physical dimensions of gated communities, namely the presence of walls, fences, and other security features. Other definitions focus attention on the internal governance structures and organisational arrangements, such as Homeowners Associations (HOAs) (McKenzie 1994; Le Goix and Webster 2008). One such example is Atkinson and Blandy's (2005: 178):

> Walled or fenced housing developments, to which public access is restricted, characterised by legal agreements which tie the residents to a common code of conduct and (usually) collective responsibility for management.

In both definitions, the presence of fortification technologies is what sets gated communities apart from other forms of non-gated residence. Scholars have settled on a combination of these definitions while adding to them along the way. Sonia Roitman (2010), for instance, has included the voluntariness of residents in her definition due to identifying its lack of mention in others. For the purposes of this dissertation, I pull from both of these definitions, as well as updates bestowed upon them, to focus on both the materiality of boomed suburbs (which I deem a type of gated community) as well as their internal governance structures. Unsurprisingly, there is considerable debate in the literature concerning the very term 'gated communities' itself. Argued by some to be a "euphemism," (Webster and Le Goix 2008: 1190), the problematics embedded in the term 'gated community' are by now far from novel contestations in the field. The term has been problematised for the sociological baggage it carries and projects - particularly, the wanton use of 'community' and its assumed presence behind enclave gates. Critics argue that uncritical use of the term influences how scholars conceptualise and conduct research into them. In response, scholars have introduced terms such as 'gated residential developments' (Smith-Bowers and Manzi 2006) and 'gated enclaves' (McGoey, 2003). Despite this, 'gated communities' continue to dominate, and the term is employed in this dissertation to refer broadly to the large, diverse family of residential developments characterised by gates, walls, and/or fences, coupled with various restrictions of access.

The term ‘enclave’ is utilised across a range of disciplines in the natural and social sciences. Shared among this usage is the basic understanding of an enclave as “a fragment enclosed in something of an alien nature” (Vinokurov 2007: 9). Political scientists and international relations scholars engage in studies of territorial enclaves - landlocked appendages of mainland states situated in foreign territories (ibid.). More recently in sociological, anthropological, and urban studies, enclaving pertains to “the hardening of socio-spatial boundaries with walls, fences and booms and the imposition of socio-legal agreements and specific governance regimes within” (Schuermans 2016: 184) and to “a distinct and internally homogeneous territorial unit dominated by specific social, cultural, or economic features with varying degrees of closedness” (He and Wang 2019: 1). This latter definition suggests that enclaves include not only residential gated communities, but other types of gated space as well. Enclaves can thus include fortified shopping malls and centres; parks; hospitals; office complexes; entertainment centres; schools and universities; technology and industrial zones; fortified ethnic and migrant communities; and gated communities (Caldeira 2000; Wissink et al 2012). In response to a shift in urban development towards enclaving, the concept of ‘enclave urbanism’ has emerged in the literature, defined as a form of spatial segregation instrumentalised through walls and fences (Caldeira 2000) that reproduces “an urban structure of distinct areas marked by specific cultural, functional, and economic groups or activities” (Wissink et al 2012: 161; Angotti 2013; Atkinson and Blandy 2016). The conceptual base of enclave urbanism can be traced back to Caldeira’s category of ‘fortified enclaves,’ an umbrella term for the variety of different gated enclaves both residential and non-residential. As such, I situate boomed suburbs as a type of gated community, the latter being one type of fortified enclave. Some scholars have also approached enclaving as a process (Nielsen et al 2021). For these authors, enclaving constitutes a utopian imaginary and orientation that materialises variously across time in different contexts, as a recurring instantiation of an ideal of separateness (Bagaeen and Uduku 2015). Enclaves migrate and move across the city, between different cities, and across time, consistently generating “new forms of urban positions, strategies, and ideals” (Nielsen et al 2021: 27), evidenced most recently in the rise of enclave urbanism and its materialisations as gated communities and fortified enclaves.

I now look to the causes behind the emergence of gated communities, as identified and argued by scholars. Scholars tend to coalesce on the point that gated communities emerge as a result of crime, or more specifically the fear of crime (Blakely and Snyder 1997; Soja 2000; Low 2003; Glasze 2005; Roitman 2010), even in countries where crime levels are relatively low, a dynamic for which Atkinson and Blandy (2016) find the media responsible. Crime fears are

related to a lack of trust in the state's public law enforcement capabilities (Caldeira 2000; Low 2003; Blandy 2018). Some scholars have argued that the fear of crime is not isolated to gated communities alone, but rather emblematic of a larger 'ecology of fear,' (Davis 1990) or 'risk society' (Beck 1992), of which these enclaves are one part. Caldeira (2000) stresses the role of what she calls the 'talk of crime.' The talk of crime includes sensationalist media reportage and the emotionalist advertising of security companies, both of which only reinforce fear and enclosure, as well as the dominance of crime as a topic in everyday conversation. From a broader socioeconomic perspective, scholars of enclave urbanism also trace gated communities and other fortified enclaves back to the onset of neoliberalisation, which is argued to have withdrawn the state from the domain of urban planning and public security provision, relinquishing it to private actors, interests, and market forces (Pow 2009; Blandy 2018; He and Wang 2019). Angotti (2013) identifies this trend as a form of conspicuous consumption, what he coins 'urban orientalism,' similar to Atkinson and Blandy's (2016) 'tessellated neoliberalism' or Vesselinov's (2007) 'gating machine.' Other scholars relatedly situate the proliferation of enclaves in a globalised economic context that has generated socialities premised on individualism, polarisation, and urban inequality (Sassen 1996; Low 2003).

Beyond safety, several other pull factors have been identified in the literature. Scholars have argued that aspirations of heightened social status and prestige also influence migration into gated communities (Davis 1990; Caldeira 2000; Webster et al 2002). Relatedly, others have looked towards appeals of luxury and exclusivity (Blakely and Snyder 1997; Low 2003; Roitman 2010). Increased property value is another noted factor (Le Goix and Webster 2008; Roitman et al 2010; Ajibola et al 2011). Some have also identified the appeal of living in and with a 'community' in the enclave (Blakely and Snyder 1997; Low 2003; Blandy 2018). These factors rarely operate in isolation, and developers market gated communities towards these ends, which is a shared finding in the literature (Caldeira 2000; Blandy 2018). Gated communities are advertised as "islands to which one can return every day to escape the city and encounter an exclusive world of pleasure among peers," in contexts of perceived urban disorder and decay (Caldeira 2000: 264). Scholars have also interrogated homogeneity as an integral appeal point (Low 2000; Arizaga 2005; Vesselinov et al 2007), although studies contrast regarding the basis of this homogeneity in either identity, age, or class (McKenzie 1994; Blakely and Snyder 1997; Svampa 2001; Rojas 2007). These contrasts are produced by the range of unique socioeconomic, spatial, racial, and historical contexts in which gated communities emerge. This consideration has become popular in the literature, namely

emphasising the locality of a given gated community and how its contextual situatedness makes it difficult to universally standardise or compare (Thuillier 2005; Webster and Glasze 2006; Wissink et al 2012). As put by Ivan Townshend (2006: 105), the "importance of local, regional, and national situation factors in the evolution of private communities makes a universal typology unattainable if not undesirable."

The literature also engages with the effects of these enclaves. Gated communities are usually disparaged and critiqued in the Western and Global North literature (He and Wang 2019). The most glaring critique is that gated communities hinder social integration and reinforce or aggravate the segregation of different race (Low 2009) or class groups in the city (Thuillier 2005; Atkinson and Blandy 2005; Blandy 2018; He and Wang 2019), although some scholars have found that gated communities in marginalised areas can reduce segregation (Smith-Bowers and Manzi 2006). Through segregation, enclave residents are said to inhabit separate, self-contained and privatised worlds. These arguments suggest that enclaves not only detract from socio-political urban participation, but also provide convenient escapes from the pressing realities of the unequal societies around them (Massey 1996; Caldeira 2000; Low 2003; Atkinson and Blandy 2016), fostering separate universes (Roitman 2010). Scholars generally agree that gated communities operate according to dynamics of 'othering' (Blakely and Snyder 1997; Blandy 2018), and insider-outsider separateness (Low 2009). Othering is materially instrumentalised via the security and access control apparatuses of the enclave (Low 2003). Under enclave urbanism, cities become both socially and physically fragmented (Ajibola et al 2010), 'splintering' (Graham and Marvin 2001) into "archipelagos of enclaves" (Bosma and Hellinga, 1998: 16) that inhibit diverse, vertical interaction between classes and reinforce economic inequalities (Low 2003; Vesselinov et al 2007; He and Wang 2019). Some argue further that mass enclavement reduces state legitimacy and democratic consolidation (Blakely and Snyder 1997; Atkinson and Blandy 2005; Rotiman 2010).

A few scholars have challenged the argument that enclavist segregation reinforces inequality by highlighting how gated communities can contribute to local economic generation. These takes highlight the arrival of new services and infrastructures (Foldvary 1994), provision of 'low-skilled' employment (Svampa 2001; Salcedo and Torres 2004); and increases in government tax revenue (Le Goix 2005). On the social hand, some scholars have explored the benefits of the sense of community that is established behind the gates of these enclaves (Arizaga 2005; Li et al 2012). These studies are challenged by literature that speaks to the dissatisfaction and discomfort of residents towards this sense of community (Blandy 2018).

Others counterintuitively argue that gated communities stimulate political participation and civil engagement (Lang and Danielsen 1997) and offload the state's responsibility for security and infrastructure provision (Barajas and Zamora 2001). Scholars have also disagreed as to whether the segregation that gated communities foster is an unexpected consequence (Roitman 2010) or an intentional practice of social differentiation (Csefalvay 2011; Blandy 2018). Scholars have also taken issue with the supposedly 'separate, self-contained worlds' of gated communities. Attractively, for the purposes of this dissertation which departs from a relational perspective, these arguments insist that gated communities cannot detach from the cities and societies that surround them (Amin and Graham 1999; Le Goix and Webster 2008; Tanulku 2012).

Another critique levelled at gated communities is that these enclaves, in fragmenting the city, have contributed to the 'squeezing out' (He and Wang 2019: 3) or decline of public space. Public space is generally understood as "space that allows all the people to have access to it and the activities within it, which is controlled by a public agency, and which is provided and managed by public interest" (Madanipour, 1996: 148). Scholars agree on the point that contemporary gated communities represent the privatisation of public space amidst a broader turn towards neoliberal urban planning (Atkinson and Blandy 2005; Roitman 2010; Low 2013) and the 'militarisation of urban space' (Davis 1990; Blakely and Snyder 1997; Coaffe 2009) amidst heightened class struggle in the city for space and resources. The decline of public space is also linked to the intensification of economic inequality (Low 2003; Thuillier 2005; Pow 2009; Angotti 2013). Other scholars argue that the privatisation and militarisation of public space defrays democratic ideals of citizenship, cross-class engagement, and equal rights. Widely shared is the argument that under enclave urbanism, "the quality and quantity of open, heterogeneous public spaces have declined, descending to refuges of the unprivileged and the unwelcome" (He and Wang 2019: 3).

The final point I want to discuss here is the ability of gated communities to reduce or prevent crime. Blanket empirical findings regarding this ability are rare, due to the rich contextualities out of which different enclaves emerge. In contexts characterised by a significant fear of crime, gated communities appear to fulfil this criterion, even if only in perception rather than outright statistical decreases (Atkinson and Blandy 2005). Some studies have noted these enclaves can instigate decreases in smaller-scale crime such as burglary (Atlas and Leblanc 1994; Addington 2019) and property crime (Branic and Kubrin 2017), although these arguments are met by findings of scholars that indicate otherwise (Blakely and Snyder 1997; Wilson-Doenges 2000;

Tanulku 2012). Others stress that while enclaves may enjoy isolated crime reductions, they also displace it upon non-gated residential spaces (Helsley and Strange 1999; Blandy 2018). Atkinson and Smith (2012) have highlighted the propensity for crime within the enclave itself, particularly in the form of domestic violence. Another point encountered in the literature is that the presence of gated communities as residential options increases the fear of crime in ways unrelated to actual crime rates or the ability of these enclaves to prevent it (Le Goix and Webster 2008). Scholars have further investigated how gated communities transform traffic patterns, diverting commuters and increasing the length of pedestrian routes (Blakely and Snyder 1997; Burke 2003).

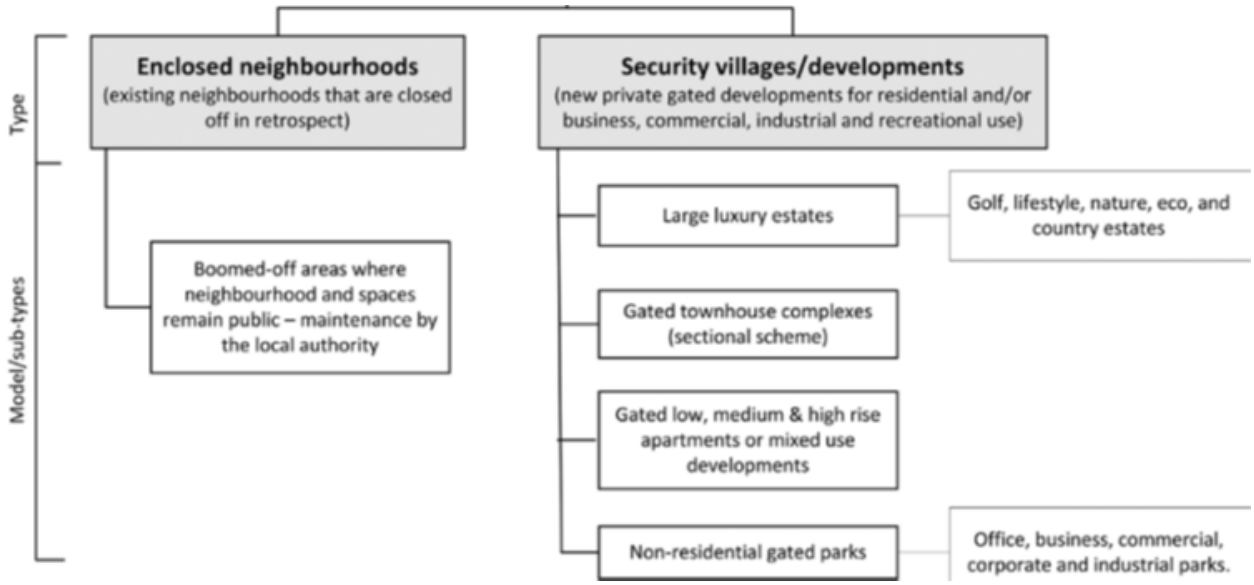
In closing, while some arguments in the field appear stable and overarching, there is considerable inconsistency regarding the specifics of these positions. This returns me to the point made by numerous scholars, namely that fortified enclaves are context-specific. In South-East Asia, for instance, gated communities rarely arouse the contention they do in the Global North. This is attributed to a lack of public streets and the presence of working compounds as an ingrained feature of the urban past (Hogan and Houston 2002; Wissink et al 2012). Elites in Singapore move into gated communities not because of state shortcomings but rather its overachievement in the provision of public housing (Pow 2009). In Malaysia, guarded neighbourhoods emerge despite enjoying some of the lowest crime rates in the world (Tedong 2014). In Lebanon, the proliferation of fortified enclaves can be traced back to civil war insecurities (Glasze and Alkhayyal 2000). These examples, drawn from the consistently expanding body of literature on urban enclavement, indicate that studying gated communities without a penchant for the local is to barely study them at all. Fortified enclaves are products of a combination of local particularities, global trends, individual aspirations, economic conditions, and, as will be shown in this dissertation, relations between humans and nonhuman infrastructures and technologies.

2.2. Urban Enclavement in South African Cities

2.2.2. Gated Communities

Gated communities in South Africa generally comply with international definitions. Scholars are comfortable with making use of the definitions reviewed in the section above. Typologies do differ, however. Karina Landman is arguably the nation's foremost scholar of gated communities. Her typology (Figure 1), developed alongside Willem Badenhorst (2014),

Figure 1: Types of Gated Communities in South Africa.



Source: Landman and Badenhorst (2014).

divides South African gated communities into two main types: security villages/developments and enclosed neighbourhoods. This section of the literature review speaks to the former.

Security villages include: luxury estates, presented and designed with exclusivity and the provision of amenities in mind, such as golf courses or nature reserves; gated townhouse complexes, usually more affordable and offering less luxury amenities and specific lifestyle appeals; gated apartment blocks or mixed-use developments; and non-residential gated parks, such as shopping malls and industrial or office parks. In the language of this dissertation, these are types of residential and non-residential fortified enclaves.

It is widely held in the literature that fortified enclaves take upon an especially unique if not ghostly role in South Africa, given the country's history of race-based segregation. The apartheid state engaged in practices of enclavement for over fifty years, albeit from the top-down and through infrastructural and spatial planning through policies such as influx control. The lingering presence of apartheid in relation to gated communities is a consistent theme in the literature. Scholars of enclave urbanism in the country suggest that South African cities have since become 'assemblages of enclaves,' (Murray 2017). Writing of neighbouring Johannesburg, Lindsey Bremner claimed as early as 1998 that the city was "becoming a giant theme park, an assemblage of fortified enclaves, residential, commercial, retail or leisure, to which access is guarded and selectively granted" (1998: 61). Only five years later would Andries Bezuidenhout and Sakhela Buhlungu (2015: 22) respond with an affirming argument

based on their research in Rustenburg to state that enclaving has become the "dominant social formation" and socio-spatial order. This latter study importantly sparked new life into the field by engaging with enclaving as a process, one which is taking upon cross-class forms in the face of severe crime and state shortcomings, evidenced by three dominant enclave types in the town of different 'textures:' luxury estates, retrofitted and gated mining compounds, and informal settlements. To these authors, enclaves in South Africa are popular "socio-spatial formations created by contending social forces in defence of their historical interests, in pursuit of new positions and privileges, and in defence against the erosion of their existing socio-economic positions" (ibid.: 4). More recently scholars have stressed, however, that "the fact that the poor do not always hate gated communities and appreciate them for the opportunities presented, does not refrain from the fact that gated communities also benefit from the poor" (Landman 2020: 67; Ballard et al 2021). Alongside informal settlements, GRDs are the fastest growing residential type in the country (Horn 2021).

The fear of crime is noted as the key driver behind the development of gated communities in South Africa (Landman and Schonteich 2002; Lemanski 2004; Cooper-Knock 2016; Durington 2009; Landman 2020). However, some scholars have stressed that crime fear in South Africa, as well in other crime-ridden countries in the Global South, is far more substantial (Caldeira 2000; Body-Gendrot 2012). The fear of crime is rarely approached with scepticism (like in Global North studies) and is generally taken as a justified response to levels of crime (Freund 2006). Scholars of South African gated communities have also investigated the racialised bases upon which crime fear rely (Beall et al. 2002; Lemanski 2004; 2006). Another meeting point for scholars is the tracing of this fear of crime to state shortcomings and lack of trust in the provision of policing (Landman and Schonteich 2002; Dirsuweit and Wafer 2006; Bezuidenhout and Buhlungu 2015). As Tshehla states, "The state fails, or is seen to be failing, to protect its citizens, driving ordinary people to take extraordinary measures to protect themselves – such as gating their communities. Proponents of gated communities – rightly or wrongly – perceive these enclosed spaces as secure and safe" (2003: 20). Scholars further note that realities and intensities of crime are experienced differently across the class spectrum, arguing that crime affects those living in impoverished areas more than wealthier counterparts (Mabin 2005; Freund 2006; Bremner 2010; Murray 2011). Speaking to Caldeira's aforementioned talk of crime, Bremner once again presciently noted almost fifteen years ago that:

> Not just crime, but the elaborate defence against it is becoming the base of the new social economy of the city, with huge interests vested in keeping it that way. Conversation is dominated by crime: after-dinner talk, braaivleis chatter, newspaper columns and political

> rhetoric all turn predictably to crime, its victims, its culprits, its consequences. Public encounter is marred by caution and suspicion (2010: 230-231).

That gated communities emerge because of the state's retreat in providing public services and infrastructures is a common finding in the literature (Murray 2011; Bezuidenhout and Buhlungu 2014; Landman 2020). There is some disagreement regarding the reasons for this retreat, with some stressing incapacity (Chipkin 2012), while others attributing it to neoliberal planning models (Freund 2006; Murray 2011; Herbert and Murray 2015; Harrison and Todes 2015). The dominance of the private property development sector, which has been granted expansive space to pursue projects, is another identified cause behind the proliferation of gated communities in South Africa (Murray 2011; Brill and Reboredo 2018). The similar dominance of private security forces is also related to the proliferation of these enclaves (Cock 2005). Goga (2014) attributes the explosion of gated communities following the democratic transition to rising crime, an incapacitated state, and bundles of over accumulated financial capital that found a home in private property development.

Even if crime is the most central cause, gated communities in South Africa emerge for other reasons as well. As put by Hook and Vrdoljak (2002: 202), "the retreat into luxury is the best escape from the threat of crime." Appeals to an exclusive lifestyle (Duca 2013; Spocter 2021), as well as the provision of sporting, shopping, ecological (Ballard and Jones 2011), or even schooling amenities are common in luxury estates - Landman and Badenhorst's (2014) first category of security villages (Landman 2020). These and other security villages are also often packaged with themes of community and neighbourly belonging, as well as idyllic family living (Durington 2009; Lemanski et al 2008). Scholars have identified that residents seek to lead individual, tranquil, withdrawn, and private lives on top of their feeling of security (Chipkin 2012; Duca 2013). Property valuation is another pull factor (Czegledy 2004; Duca 2013). A significant amount of earlier literature focused on the race-based homogeneity appeal of gated communities for wealthy, white South Africans in response to the 1994 democratic transition (Jurgens and Gnad 2002; Bremner 2010). Scholars of this camp argued that fortified residential enclaves offer a sense of control over urban realities and environments, specifically through isolation from them (Landman 2010) For example, Richard Ballard (2004: 68) framed gated communities as white South African attempts to reject the 'kraal' that awaits outside, one which was not a problem before it began to "bleed" into white domestic surroundings, corrupting the historically familiar "exclusion of otherness." This argument forms part of Ballard's his concept of 'semigration' (ibid.), a combination of migration, secession, and segregation through which enclaved individuals "opt-out of urban life as it currently exists in South African cities," and "secede from what is perceived to be the chaotic disorderly city

outside their gated compounds" (Rink 2020: 79). Under 'neo-apartheid,' white South Africans are said to withdraw from society and national ongoings, prioritising rights to privacy and property over civic duty through enclavement (Hook and Vrdoljak 2002).

These arguments are today complicated by what some scholars identify as a changing configuration of the relationship between race and class. The notion that social differentiation in the post-apartheid period has been characterised by a shift from race to class is well-established in social scientific literature and in works on fortified enclaves (Hook and Vrdoljak 2002; Dirsuweit and Wafer 2006; Lemanski et al 2008; Chipkin 2012; Bezuidenhout and Buhlungu 2015). Class has taken on increased importance as a relational point of difference in contexts marked by extreme inequality. Scholars note fortified enclaves as sites not only contextually situated in this shift, but indicative of it (Chipkin 2012). The post-apartheid period has overseen the growth of a vague and diverse middle class(es) (ibid.) and the diversification of elite clusters, while at the same time witnessing the swelling of poverty and inequality (Whiteford and van Seventer 2000; Seekings and Nattrass 2005). As such, the increasingly diverse demographic makeups of luxury and middle-income security villages (Chipkin 2012; Landman 2019; Letsoko et al 2022), as well as the proliferation of gated enclaves in poorer areas, unsettle the portrayal of gated communities as solely white or wealthy spaces.

In terms of effects, security villages are often associated with reduced levels of crime, although as Landman (2020) notes in her review, empirical evidence in the literature remains scarce. The parameters of this debate were set by Coetzer (2001) and Naude (2003), who at the start of the 2000s argued that South African gated communities do and do not reduce crime respectively. These were, however, majorly anecdotal findings based more so on resident perceptions rather than crime statistics. Zinn (2010) later agreed with Coetzer's earlier findings that gated communities can reduce crime. The key piece of literature regarding the crime question arrived in 2014 in Breetzke, Landman, and Cohn's statistical analysis of crime trends in and around gated communities in Pretoria-Tshwane, including boomed suburbs. These authors found that gating does not necessarily reduce crime rates, using burglary statistics as evidence, and may even attract it. The authors note, however, that the chances of decreased crime rates in gated communities depend on the physical characteristics of the enclave in question. Less ambiguous in the literature is the shared point that these enclaves displace crime onto surrounding, ungated areas (Tshehla 2003; Ballard 2004; Lemanski 2006; Breetzke et al 2014). Another shared point in the literature is that living in a security village reduces the fear of crime for residents (Bremner 2010; Lemanski et al 2008; Roitman et al 2010).

Another major effect of South African gated communities relates to their fragmentary, exclusionary, and segregating capacity (Lemanski 2004; Ballard 2004; Benit-Gbaffou 2008; Landman 2020; Paasche et al 2013). De Villiers (2014), along with others, argues that the fragmentation of South African cities, both in inherited and more recent enclavist forms, reduces opportunities for social interaction and economic opportunities for impoverished classes (Dirsuweit and Wafer 2006). Hook and Vrdoljak's (2002) work into processes of 'othering' reveal how these enclaves generate social resentment and distance between different, often economically asymmetrical groups. The literature upholds the tendency to frame gated communities as separate worlds within cities, as spaces that allow for "the reality of this place to be temporarily forgotten" (Bremner 2012: 91; Czegledy 2004). Gated communities offer a "retreat into sumptuous luxury [that] provides a perfect antidote to the harsh realities left over from the racist past" and the inequalities of the present (Murray 2004: 22).

Processes of exclusion and segregation are related to concerns regarding public space in South Africa. While most scholars agree with the argument that gated communities enable the privatisation and demise of public space (Czegledy 2004; Landman 2006; Dirsuweit and Wafer 2006), more recent developments suggest a shift may be underway. Gated communities are said to be "obliterating public space from the urban realm" (Bremner 1998: 64) and decreasing the availability of shared common spaces in cities, hindering and delegitimizing the post-1994 democratic project (Tomlinson 2013; Ramoroka and Tsheola 2014). Technologies of enclavement are said to mobilise against public space, deepening separations and decreasing heterogenous encounter (Bremner 2010), making such shared spaces fraught with "alienation, conflict, and anxiety" (Makakavhule and Landman 2020: 280). Landman's (2019) recent book offers a novel reading of the public space predicament, noting that public space in South Africa, in the present context of enclavement, is 'evolving.' In contrast to her earlier work on gated communities (2002; 2004; 2006), she found throughout fieldwork conducted in Pretoria-Tshwane that "common open spaces in many gated communities allow people from various backgrounds to come together, interact and enjoy outdoor spaces together" (Landman, 2020: 66). Alongside being preferred by residents, the 'pseudo-public spaces' that fortified enclaves produce and urban citizens consume have increasingly solidified as standard features of public space itself. In contravention of Bremner's (2010: 25) earlier verdict on the death of public space, evidenced in her finding that public urban life "takes place in the road and in the strip mall, or in the limited, controlled spaces of home, church, sports clubhouse or estate park," Landman suggests such sites are perhaps new types of public space emerging in South African

cities. Landman's refreshed argument may have been preceded by Freund's (2006: 303) postulation that scholars may be importing ill-fitting Global North understandings of public space to the South African urban context, wherein "it is questionable whether this ideal much interests South African suburbanites of any colour but the alternative ideal of carefree family existence is potent."

While scholars tend to agree that some form of 'community' is established in these enclaves (Landman 2020), literature has shown that these are rarely the idyllic type found on promotional brochures, if found at all. Beall et al (2002), for example, in an early study of two residential fortified enclaves in Johannesburg, found little evidence of a deep community dynamic at work within them. Federica Duca's ethnography of a luxury golf estate, also in Johannesburg, found that while the estate HOA's attempts to construct community from the top-down, residents generally think of community instrumentally as a means of securing personal safety and more so as the sharing of spatial proximities and interests, organised around individual motivations and a "politics of disengagement" (2013: 192). Ivor Chipkin discovered in his study of more diverse, middle-income gated complexes that different demographic and economic groups occupy these spaces with passing tolerance but not embrace - "groups are attracted by the promise of communal living; not because they are seeking community or non-racial conviviality. Rather, they are attracted to the security and orderliness of a regulated environment" (2012: 21). From these findings and in response to works detailing state absences in service provision reviewed above, he argues that gated communities are engaged in practices of alternative government, out of which new understandings of citizenship are emerging. Letsoko et al (2022) have recently offered a refreshed take on community construction in gated communities not dissimilar to Landman's (2019) evolving public space. They claim, united by a shared desire for safety, "gated communities are socially diverse living spaces allowing for interactions of individuals from various cultural, religious, racial and class backgrounds … these developments provide platforms for different races, classes, and cultures to unlearn past prejudices which has key implications in the process of re-building and uniting the country and its communities" (Letsoko et al 2022: 311).

2.2.3. Boomed Suburbs

Many of the arguments that are made of conventional gated communities in South Africa carry over into analyses of enclosed neighbourhoods, the second type of South African gated community as identified by Landman and Badenhorst (2014). There are, however, several

critical differences in definition, legislation, and conditions of access that must be reviewed to paint a clear picture of enclosed neighbourhoods, or what I refer to in this dissertation as boomed suburbs. Before clarifying my reasons for dispensing with Landman's (2000) term, 'enclosed neighbourhoods,' I first define this type of residential fortified enclave. Enclosed neighbourhoods are public residential areas, usually open, city suburbs, that residents retroactively enclose with booms, gates, walls and/or fences:

> Enclosed neighbourhoods are existing neighbourhoods that are closed off through road closures, and the erection of fences or walls around the entire neighbourhood. The roads within enclosed neighbourhoods generally remain public property. The local council usually remains responsible for the provision of public services, such as electricity, water and garbage collection, to communities living within enclosed neighbourhoods (Landman and Schonteich 2002: 73).

Enclosed neighbourhoods are distinct from estates, complexes, and other security villages which are private gated developments built on purchased land that offer no open access to the public. The legal term for an enclosed neighbourhood, or for a singularly boomed street, is a 'road closure' (CTMM 2008; Makhale and Landman 2018). Unlike in security villages, conditions of access into enclosed neighbourhoods are premised on undisturbed and free mobility for anyone looking to move through the suburb. This is a legal requirement in accordance with the legislation that governs these types of enclaves, namely the Rationalisation of Local Government Affairs Act 10 of 1998 (Landman and Badenhorst 2014). To add more detail:

> Roads and neighbourhoods are physically fenced, while the number of access points into the neighbourhood have been reduced as gates across some streets are locked permanently and in other cases controlled by private security guards. The entrance/exit points differ, ranging from simple gates to elaborate boomed entrances with fixed structures across the roads … the roads and other public spaces inside these areas remain public. Consequently, access into the enclosed neighbourhoods can only be monitored and not be restricted (Landman 2020: 58).

While some scholars have offered different labels for this type of gated community, such as 'gated neighbourhoods' (Minnaar 2010), Landman's term has proved most popular in the literature. But much like Pretoria-Tshwane itself and gated communities generally, these enclaves are also slaves to misnomer. The inconsistent variety of labels for this type of enclave, at academic, professional, and everyday levels, prompted discomfort in me towards an uncritical use of Landman's 'enclosed neighbourhoods.' Considering their free (but monitored) conditions of access, boomed suburbs are not really 'enclosures' at all. The legal term, road closure, has similarly never found stability, as evidenced in the double-barrelled title of the South African Human Rights Commission's (SAHRC) report on 'Road Closures/Boom Gates' (2005). Nor did the participants in this research study once refer to the enclaves in which they live as enclosed neighbourhoods. The various terms they did use are detailed in Chapter Three.

While I maintain the use of Landman's aforementioned definition of 'enclosed neighbourhoods,' I make use of 'boomed suburbs' for two key reasons. The first is to accommodate part of the most popular term - 'boomed areas' - as used by participants in this study and around Pretoria-Tshwane at large. I do so to ground the study in the voices of the everyday and those who made it possible. The second reason is to leave room for instances of resident-driven enclosure that take place outside of leafy suburbs and in various informal and rural areas (Harrison and Mabin 2006), such as 'DIY' gating with zinc sheets in the Diepsloot township (GroundUp 2023), or the resident-funded fencing of parts of Thembisa and Soweto (TimesLive 2023; Daily Sun 2024). These are all unique instances of gating and deserve considerate scholarly attention as such.

I now review the comparably smaller body of literature pertaining to boomed suburbs specifically. Internationally, similar forms of "retrofitted neighbourhood gating" (Le Goix 2008: 4) are referred to as 'security zones' and 'perches,' in the United States (Blakely and Snyder 1997), 'fortified suburbs' in Canada (Grant 1997), 'retro-gating' by (Blandy 2018) in the United Kingdom, and 'guarded neighbourhoods' in Malaysia (Tedong 2014). Scholars have also noted such gated neighbourhoods in Nigeria (Fabiyi 2006), and increasingly other African cities (Makinde 2022). These enclaves are "post-market products … they result from resident-initiated actions to impose makeshift boundaries and controls in older neighbourhoods" (Tedong 2014: 1005). What sets South African boomed suburbs apart from international equivalents are their legally-defined guaranteed conditions of access. The Non-Profit Organisations that administrate boomed suburbs have no legal rights to impose regulations on residents, as the space remains public (Landman 2004). The literature indicates that most boomed suburbs are found in Gauteng due to the availability of the most clear and operable legislation permitting their development in the country (Landman 2006; Lemanski et al 2008). Boomed suburbs are considerably rarer in the Western Cape and KwaZulu-Natal provinces (Lemanski et al 2008), subject to different provincial legislation. In the former, legal requirements include taking full financial responsibility for infrastructure and service provision after closure, which is not the case in Gauteng. Nevertheless, illegal road closures have been noted in these coastal regions (ibid.), as well as Gauteng (Makhale and Landman 2018). There is an option in Gauteng to fully enclose suburbs, although this similarly requires taking responsibility for service provision, and is considerably rare (Landman 2002; 2004).

The literature suggests that crime and the fear of crime is the core motivation behind the booming of suburbs (Landman 2006; 2010; Lemanski et al 2008; Breetzke et al 2014). This is consistent with the broader gated community literature, although aspirations of social status

and luxury play a less significant role in the appeal of boomed suburbs (Lemanski et al 2008). Boomed suburbs, as formerly open neighbourhoods, do not offer lifestyle imaginaries or amenities other than those already present before. Boomed suburbs may exhibit more diversity in terms of class heterogeneity (Tedong 2014; Makinde 2022). Notions of community feature in boomed suburbs, although these are usually tied to a united stance against crime (Landman 2020). Research into community-making in boomed suburbs remains quite scarce, a dearth to which this dissertation responds. Booming is also linked to perceptions of state shortcomings in security provision and a lack of trust in local authorities (Landman and Schonteich 2002; Harrison and Mabin 2006). Dirsuweit and Wafer (2006) frame booming in response as a form of self-determination, not unrelated to Chipkin's (2012) claims regarding alternative government.

Scholars have argued that boomed suburbs serve as means of maintaining power locally, rejecting the state, and even reinscribing apartheid (Landman and Schonteich 2002; Ballard 2004; Fabiyi 2006) Dirsuweit (2007) suggests that boomed suburbs are attempts at finding ontological security in defence against an unclear Other. Some scholars liken boomed suburbs, along with other gated communities, to a new form of apartheid (Jurgens and Gnad 2002; Lemanski 2004). The literature suggests further causes behind the proliferation of boomed suburbs: the lack of a unified national policy on gated communities and road closures (Harrison and Mabin 2006; Lemanski et al 2008); a lack of state capacity to monitor and regulate closures (Minnaar 2010); proactivity of boomed suburbs' residents and resident committees (Landman 2006); and more recently, the income boomed suburbs generate for municipalities in the form of application and renewal fees (Makhale and Landman 2018), a finding this dissertation later compounds upon.

Regarding the ability of boomed suburbs to prevent crime, some scholars note reductions in majorly small-scale and opportunistic crime (Cotezer 2001), while others claim that boomed suburbs have little such effect, and can even attract crime (Naude 2003; Breetzke et al 2014). Again, these scholars tend to agree on the point that boomed suburbs displace crime onto surrounding non-gated areas (Landman 2000; Tshehla 2003; Dirsuweit and Wafer 2006; Benit-Gbaffou 2008). Keeping with effects, the public space question takes upon heightened sensitivity in the literature on boomed suburbs compared to the literature on security villages. While gated communities are generally criticised for encouraging automobile travel and limiting mobility beyond the gates, boomed suburbs pose larger, city-wide challenges regarding mobility and access to public space (Czegledy 2004). Several scholars have noted the negative impact of boomed suburbs upon car and pedestrian traffic, contributing to

congestion and longer distances for both these modes of transport as certain routes are permanently closed-off in the process of their development (Landman 2006; Roitman et al 2010; Nel and Landman 2015; Smit et al 2015). Also noted are complications for municipal emergency service and maintenance vehicles, whose response times are hindered by the closure of public streets (Landman 2000; Lemanski et al 2008). More broadly, the SAHRC (2005) in its report on boomed suburbs claim that these enclaves engage in the privatisation of public space, contribute to socioeconomic inequality and exclusion (Benit-Gbaffou 2008; Ramoroka and Tsheola 2014). Scholars tend to agree on this point (Dirsuweit and Wafer 2006; Czegledy 2004; Landman 2002; 2006). The SAHRC report further concludes that these enclaves are violations of human rights, particularly the right to free mobility. As such, boomed suburbs are widely viewed in the literature as instigators of urban fragmentation and socio-spatial segregation (Landman 2000; Lemanski 2004; Dirsuweit and Wafer 2006; Dirsuweit 2007; Harrison and Mabin 2006), and the consequent sowing of race and class divisions (SAHRC 2005; Ramoroka and Tsheola 2014). They have been argued to thwart post-apartheid democratic social integration and equity by exacerbating "existing patterns of socio–spatial urban fragmentation and protecting the wealthy at the expense of the poor" (Lemanski et al 2008: 135; Dirsuweit and Wafer 2016). Much like in the broader gated community literature, relational and material work on boomed suburbs is few, particularly as hybrid urban forms that are at once both public and private. Another literature gap concerns the lack of significant inclusion of 'criminals' in studies of gated communities, often approached ambiguously rather than as actors in their own right.

2.3. Hypogovernance and Insurgent Citizenships

2.3.1. Hypogovernance

The review of literature above shows that the absence or abandonment of the state with regards to service provision (security, services, and infrastructure) is a key motivating factor behind the proliferation of residential fortified enclaves. These enclaves are "established in the absence of a state that is able to impose its authority and to regulate the daily lives of citizens" (Bezuidenhout and Buhlungu 2015: 2) In this section, I review the literature on state absence and introduce Stamatopoulou-Robbins (2019) concept, hypogovernance, to think about the type of state absence characteristic of South Africa's enclaved cities.

Neoliberal governance models withdraw the state from the realm of urban planning, management, and service provision (Wilson 2004; Harvey 2005; Brenner et al 2011). Under neoliberal urbanism, markets and finance capital take upon central, laissez-faire roles in governance and planning (Keil 2002). Cities have become focal points, if not "major laboratories" of the neoliberal project and its rolling-out (Keil 2009: 238). Formerly state-based practices of urban planning, management, and service provision have been forfeited to market forces and private actors (Peck 2014; Harvey 2005), of which the global sprawl of privately developed fortified enclaves is but one of many products (Soja 2000; Angotti 2013). This withdrawal includes deregulation (Brenner and Theodore 2002), the intensification of inequality through prioritisations of competition over redistribution (Wilson 2004), and the dilapidation of city centres and poorer city areas (Simone 2004), as well as their gentrification (Smith 1996). In the process of transforming cities into centres of neoliberal capital accumulation (Hall and Hubbard 1996), scholars have developed various concepts exploring how these governance models have redrawn fabrics of cities across the globe (Wilson 2004). It is important to note that neoliberal governance does not constitute a global, 'one-size-fits-all' phenomenon, and to stress, like scholars have, that it reproduces uniquely in different contexts (Watson 2014; Atkinson and Bridge 2008).

Harvey's concept of 'entrepreneurial urbanism' (1982) - as it has since been labelled by most in the literature (Wood 1998) – captures his arguments regarding the neoliberal urban shift, developed in response to the adoption of entrepreneurial approaches towards city-making and management by governments worldwide, premised on market rationalities and privatisation. Entrepreneurial urbanism was at his initial time of writing becoming increasingly visible through privatised governance functions, public-private partnerships, influxes of speculative investment, the commodification of movement and place, and more generally, heightened competition over public resources and consumption channels (Peck 2014). This final factor was related to the state's 'hollowing out' as a source of social redistribution, as "local government no longer solely acted on behalf of those who voted it into power. Rather, it was placing increasing attention – and spending more resources – on levering in various forms of attention-seeking investments" (Ward 2011: 730). The rise of entrepreneurial urbanism appeared to constitute a 'new urban politics' (Cox 1993), which took material form as the 'entrepreneurial city' (Hall and Hubbard 1996) in which private and public sectors exist in blur. What Harvey and other scholars once duly recognised as the emergence of a novel, neoliberal urban form is today an unremarkable mode of urban governance around the world, what Keil (2009) dubs 'roll-with-it neoliberalism:'

> The spectacles no longer seem that spectacular. The vision statements have become formulaic. Urban-governance 'innovations' are often mere variations on a familiar theme, or presentational makeovers. Life on the neoliberal plateau is dominated by the prosaic churn of routinized, 'everyday' entrepreneurialisms … perhaps the most ironic indication of this mainstreaming process is that Harvey's critique is now cited in OECD handbooks for competitive cities, where the transition is read – literally, affirmatively, and in a strikingly depoliticized way – in terms of a 'new entrepreneurial paradigm' (Peck 2014: 397-398).

Harvey's concept has over the years inspired two frameworks of relevance to this dissertation. The first of these is Goldman's (2011) 'speculative urbanism,' as developed from his work in Bangalore, India. Speculative urbanism refers to practices of 'world city' making across the Global South driven by globalised entrepreneurialism. Under conditions of speculative urbanism, "urban planning takes as its starting point the imperatives of the rapid turnover of capital," and the state is reshaped in ways conducive to this approach (ibid.: 230). Speculation becomes a governance rationality in relations with investment capital, while cities compete to attract said capital in their attempts at world-classing. Major institutions of global managerialism, such as the World Bank and International Monetary Fund (IMF) encourage such reformations. The concept has more recently been employed in the literature to describe the (re)construction of cities and satellite cities across Africa (Van Noorloos and Kloosterboer 2018), what Watson (2014) calls 'African urban fantasies' in light of the speculative and detached imaginaries on which these projects are based. Speculative urbanism pays attention not only to the state's neoliberalism but the horizontal reception and constitution of these processes by urban residents as well (Pow 2009; Chipkin 2012; Meth et al 2021).

Murray's 'privatised urbanism' follows Harvey and Goldman's concepts, although is based on data made in Johannesburg, specifically through his and Herbert's (2015) investigations of the luxurious, world-class Waterfall and Cradle Estates in Midrand, situated halfway between Pretoria-Tshwane and Johannesburg. First coined by Shatkin in 2011, privatised urbanism has gained traction in describing city contexts characterised by planning privatisation and abandonment, especially in the Global South. In these conditions:

> Private actors have taken over multiple tasks, responsibilities and ownerships that previously resided with the state, such as urban planning, urban land (including 'public' space), the provision of basic infrastructure and services, and city administration – on a citywide scale (Falt 2019: 441).

Privatised urbanism unsettles normative understandings of citizenship, private entrepreneurship, and state authority. Moving beyond mere laissez-faire approaches to developmental regulation, reproducing a particular "brand of planned and highly regulated real estate capitalism where necessary goods and services are packaged as commodities and bought

and sold in noncompetitive markets" (Murray 2015: 506). These three concepts speak to different albeit interrelated processes. Privatised urbanism speaks to the role of private actors and their influence on the reshaping and enclaving of the city, while the other pair are engaged with the states that pull away or withdraw to permit space in which privatised urbanisms can emerge.

The literature on state absence also discusses how citizens respond to neoliberal withdrawal across the 'everyday.' Scholars have sought to "turn away from accounts of abjection to focus on how Africans as agentive subjects fashion cities" (Gastrow 2020: 369). Labelled by some as the 'optimistic' camp in the literature (Diouf 2008), these scholars investigate ways marginalised actors operate on 'informal' bases, surviving and giving meaning to urban life by engaging in unsanctioned, unofficial, and provision practices in a process of 'urban becoming' (Simone 2004; Simone and Pieterse 2017). This is an attempt to forge connections between the necessary informality of the everyday and the (absent) state (Mbembe and Roitman 1995; De Boeck and Baloji 2016). In this framework, the state is reconfigured less as a static, top-down authority but rather a "bundle of actors" (Gastrow 2020: 370) engaged in hybrids of both formal and informal practice (Watson 2014; Murray 2015). These arguments inform attempts that seek to rewrite how African cities are framed in scholarship (Mbembe and Nuttall 2004).

Some scholars have also sought to shorten the distance between these strands. Gastrow's (2020) analysis of urban happenings in Luanda bridges literature gaps between state absence and the informal, yet-city shaping everyday. Her study is one that connects "the seeming divide between the everyday experience of 'state absence' and the nevertheless inexplicable strength of certain official institutions" in order to reassess "how state efficacy, presence, absence and weakness are described and understood in studies of African cities" (ibid.: 368). In South African urban studies literature, scholars similarly characterise the country's cities as products of privatised planning processes, deregulation, and speculative public-private development partnerships (Runciman 2012; Bezuidenhout and Buhlungu 2015), argued to be tied to the country's neoliberalisation and 'opening up' throughout the 1980s and 1990s, and its integration into a globalised economy (Freund 2006; Bremner 2010). The state is said to have 'loosened' its grip on urban planning (Harrison and Todes 2015). The result is a "geographically fractured pattern of development" that intensifies economic inequality (Brill and Reboredo 2019: 180). As stated previously, perceptions of state absence are a pivotal driver behind the proliferation of gated communities and boomed suburbs in South Africa.

In this dissertation I argue that relations between people living in South Africa and the state are characterised by *hypogovernance* (Stamatopoulou-Robbins 2019). Like Chelcea (2023), who makes use of the term to describe the unregulated terrain upon which private water filters are developed and sold in New York, the mobilisation of the concept in this dissertation is a 'borrowing.' The original concept arises from a particularly extreme case of hypogovernance, in which Palestinians are caught in binds of non-sovereignty between an oppressive, executive Israeli state and an incapacitated, absent Palestinian domestic authority (Stamatopoulou-Robbins 2019). I use the term to refer to governance characterised by absence, negligence, belligerence, and disconnection, offering up inconsistent and contradictory grounds of inclusion, exclusion, and citizenship (ibid.). Hypogovernance produces 'spaces of exception,' (Agamben 1998) and 'precarious citizenships' (Bear and Mathur 2015). My use of the term can only ever be a borrowing, in consideration of the grave incomparability of the Palestinian case. Indeed, there are instances in which Palestinian people experience realities wherein their state is quite literally and tragically absent. This is not the case in South Africa. I would say rarely the case, but even in instances of extreme hypogovernance (sites of inhumane poverty, abyssal inequality, corruption scandals), the state is still present in its either silent or vocal failure. Pulling from the field of medicine, it is the prefix 'hypo-' that attracts me to the concept, due to the South African state's presence as 'less than normal' although never absent in entirety. In South Africa, state absence most pertinently refers to the failure of the state to deliver basic services (Wafer 2020). 'Basic services' and 'service delivery' have "become part of the language that we use when we talk about cities and urban politics in South Africa, and both speak to the centrality of infrastructure to conceptions of citizenship and belonging in the post-apartheid city" (ibid.: 93). In this dissertation, hypogovernance specifically refers to state action or inaction in the provision of both basic and secondary services, and the conspicuous yet strategic or 'organised' (Harvey 1989) withdrawal of the state from arenas of planning, policing, regulation, and urban development. I do not discriminate whether an instance of hypogovernance is resultant of historical or structural causes, of personal pursuits of greed or accumulation, or of mere neglect and mismanagement, as they are quite often the products of all three and possibly more. I also limit the deployment of this concept to thinking about Pretoria-Tshwane and the CTMM. Hypogovernance reproduces and intensifies inequalities, hardens socio-spatial divisions, and existentially frustrates those forced to navigate lives around it. It is the governance of the state that is neither here nor there, neither what it was before nor what it could be. Hypogovernance makes people criminally vulnerable while also providing grounds for enclaving and alternative government and citizenship (Chipkin 2012), be that the grand golf and eco-estates of coastal developers (Spocter 2021), the residentialised

mining compounds of Rustenburg (Bezuidenhout and Buhlungu 2015), or boomed suburbs in Pretoria East.

2.3.2. Insurgent Citizenship

It has already been shown that conceptions of citizenship are redrawn through neoliberal state absence. Caldeira identifies the city's built environment as an "arena in which democratisation, social equalisation, and expansion of citizenship rights are contested" (2000: 4). Citizenships in countries across the world are being negotiated against a backdrop of neoliberal urbanisation in pursuit of the just city (Brenner et al 2011; Uitermark et al 2012). Holston's (2009) 'insurgent citizenship' forwards that citizens express their 'right to the city' (Lefebvre 1968) through material practices in spaces where democracies have suffered 'disjuncture,' both in citizen-state and citizen-citizen relations, seeing as the city is "the very abode where citizens are consistently being made, remade, and unmade" (Mitton and Abdullah 2021: 5). Uitermark et al (2012: 2547) clarify that "the central idea is that the right to the city entails the capacity to remake ourselves by remaking cities." Insurgent citizenships include grassroot mobilisations and other "heterogenous, everyday practices that parody, empower, or subvert state agendas and embody struggles over what it means to be a member of modern society … They are insurgent because they introduce into the city new identities and practices that disturb established histories. They are often disruptive or transgressive" (Bremner 2010: 40; Holston 1998).

This concept of insurgent citizenship has been deployed in the literature on South African cities (Miraftab and Wills 2005; Bremner 2010; Runciman 2012; Von Holdt et al 2011; Seekings and Nattrass 2015; Brown 2015). Chipkin (2012) considers 'partial citizenship,' stressing that citizenship at the local level does not imply national citizenship under the state, in which partial citizens may have lost faith. In this vacuum, drives towards alternative self-governance (e.g. through enclavement) are reproduced (ibid; De Certeau 1984). Duca's (2013) dual citizenship model reveals that private property is mobilised as a vehicle of citizenship as well. Order and citizenship are constituted from below due to failed integration from above. Of especial value to this dissertation is Lemanski's (2020) concept of 'infrastructural citizenship,' which draws from Holston's (2009) original formulation but encompasses more citizen-infrastructure exchanges. In absence of studies that explicitly connect infrastructure and citizenship, Lemanski has developed a critical tool for unpacking relationships between citizen and state as mediated through public infrastructures. She dictates that "citizenship is embodied in

infrastructure for both citizens and the state. For citizens, the state is materially and visibly represented through everyday (in)access to public infrastructure" (ibid.: 115).

Insurgent citizenships, as lenses, are generally angled in the direction of marginalised groups. The concept is presented optimistically, as led by grassroots organisations against negligent states and tides of dispossession and inequality. Lefebvre himself thought of the 'right to the city' less as a literal legal right than as an "oppositional demand, which challenges the rich and powerful" (Mayer 2009: 71). However, some scholars suggest that the 'right to the city' itself has been redefined in the direction of privatised and consumerist urban space (Keil 2009). Harvey (2009) agrees that the politics of citizenship has changed overall, with norms now drawn from neoliberal ethics of individualism and withdrawal from collective action. Others advocate caution "against taking the failures of the state as evidence that informal and illicit actors are purely oppositional; each context belies a far more ambiguous situation than state versus non-state, formal versus informal authority" (Mitton and Abdullah 2021: 7). In what is a theme across all the literature reviewed thus far, from gated communities to state absence and insurgent citizenships, local context plays a crucial role – violences and insurgencies of citizenship are always "city-specific" (Holston and Appadurai 1996: 202).

2.4. Technological and Infrastructural Materiality

2.4.1. Technopolitics and Infrastructure

In this section, I review works of various scholars in the fields of technopolitics, infrastructure studies, and new materialism to provide theoretical basis for analysis and arguments in Chapters Five and Six. I begin with literature on technopolitics and infrastructure, followed by a review of a broad base of 'new materialisms' before settling on the concept of 'political materiality' (Pilo and Jaffe 2020). Seeing as boomed suburbs are rooted-in and transgressive-of technological and infrastructural worlds, a materialist approach appeared applicable.

Infrastructures are said to be prime locations at which one can observe entanglements of the social, political, material, economic, and biological (Anand et al 2018). Social scientific literature on infrastructures is loosely divided between scholars of assemblages (Howe et al 2015; Amin and Thrift 2017) and more traditional interpretations of technopolitics and sociotechnical systems (Larkin 2013; Harvey and Knox 2015; Von Schnitzler 2017), although there is considerable overlap. The former suggests that "the urban citizen is enmeshed in multiple infrastructures, and their diverse and shifting materialities … infrastructural materials

– from concrete and steel to copper and silicon – enter into diverse assemblies that make up the life of the city and contribute to the emergence and constitution of political movements" (Barry 2020: 92, 99). This branch of the literature pulls from Deleuze and Guattari (1988) and Latour's (2005) concepts of assemblage, defined in condensed form as "a mode of ordering heterogenous entities so that they work together for a certain time" (Muller 2016: 28). Assemblages, constantly mutating and transforming, are: relational, in that "the properties of the component parts can never explain the relations which constitute a whole" (DeLanda 2006: 10); productive, in that they are not representational but rather produce new behaviours, expressions, and realities; and heterogenous, in ways that eschew the nature-culture binary and include nonhuman agencies (Bennett 2010; Muller 2016). This approach is captured in the concept of 'assemblage urbanism' (McFarlane 2011). Drawing from assemblage theory, particularly its emphasis on heterogeneity, contingency, and distributed agency, assemblage urbanism seeks to "consider the constitutive effects of materials in coproducing understandings of the urban" (Cheng 2021: 4). As heterogenous actors gather and relate across unequal topologies, including both humans and non-human materials, scholars argue that new urban agencies and politics emerge (Muller and Schurr 2016). These exchanges take place amidst everyday dwelling (Dovey 2010), lending to McFarlane's (2011) notion of the 'city-as-assemblage.' Investigations of assemblage urbanism focus on micro-scale social and spatial practices and the relations in which they are caught up (Cheng 2021).

The second literature strand emphasises the political more than the social, investigating the "political rationalities that are embedded in infrastructures" (Wafer 2020: 89). The 'technopolitics of infrastructure' (Larkin 2013) concerns how the technical functions of infrastructure are simultaneously functions of politics or governance, from above or below (Von Schnitzler 2017; Karvonen 2020). Infrastructures are both "things, and also the relation between things" (Larkin 2013: 329). Technopolitics most basically refers to "the ability of competing actors to envision and enact political goals through the support of technical artefacts" (Gagliardone, 2014: 3). Technopolitical thinking is not particularly novel (Winner 1980), although the concept has enjoyed wide employment across a variety of fields, including urban studies. One related concept of especial value to this dissertation is 'teichopolitics.' Teichopolitics is a 'neologism' developed by Ballif and Rosiere (2009: 194) that refers to "the politics of building walls for various security purposes." It is situated in the literature amidst a broader turn towards walls (Sferrazza Papa 2018), although is mainly geared towards the 'hardening' of international borders via walls and fences. The concept draws from Foucauldian notions of biopower and subjugation of the body through denials of movement. The concept

theoretically includes the walls and fences of gated communities, but not dedicatedly. It is also notably antagonistic towards such walling, tends towards marginalisation, and situates power quite comprehensively in the state. Employment of the concept outside the study of national borders is scarce and usually bereft of substantive material consideration (Brighenti and Karrholm 2020). In response to this disconnection in the literature, I think teichopolitics deserves proper consolidation in anthropological urban study, and suggest that it can be expanded by exposing it to ontological views sympathetic of nonhuman agency, such as assemblage thinking.

Scholars of South African cities have comprehensively engaged with technopolitics. One major work in this body of literature is Edwards and Hecht's (2010) piece on the role of technopolitics under apartheid, specifically the advancement of nuclear systems and computing. The authors offer their own definition of the concept: "hybrids of technical systems and political practices that produce new forms of power and agency" (ibid.: 621). They further argue that the political agendas of the apartheid state were displaced unto technological narratives, maintaining of social and national identities for some, while similarly generating technopolitical forms of resistance for others. The scholars remind that, "these technologies are not, in and of themselves, technopolitics. Rather, the practice of using them in political processes and/or toward political aims constitutes technopolitics" (ibid.: 256). Von Schnitzler (2013) is another scholar of South African technopolitics, with her focus particularly upon how democracy unfolds through infrastructure and technology after apartheid. Conducting fieldwork in Johannesburg by "following the travels of a small technical device" (2013: 672), namely prepaid water meters (and protests resisting their installation), Von Schnitzler produces an 'ethnography of infrastructure' (Star 1999) that reveals the role of infrastructure in the formulation of post-apartheid citizenship, much like Lemanski (2020) above. She argues that technologies are not merely tools or symbols for political expression, but rather that "technology itself becomes a political terrain for the negotiation of moral-political questions" pertaining to democratic citizenship (2013: 671). Wilhelm-Solomon (2017: 174) argues that infrastructural hypogovernance "invoke[s] an unstable ontological multiplicity oriented around the fragility of the urban form." His 'ruinous vitalism' highlights how the instability of infrastructures provoke "capacities for social relations and regeneration" (ibid). Wafer (2020) has more recently reviewed and collated these works while generally linking the technopolitical question in South Africa to matters of failed service delivery.

2.4.2. New Materialisms

As part of the 'material turn' in the social sciences, a product of its encounter with Science and Technology Studies, 'new materialism' has emerged as a mother term for various theories and positions united in their post- or more-than-human outlooks, material emphasis, relational appreciation, and recognition of social realities as "plural, complex, heterogenous and emergent" (Fox and Alldred 2018: p.3). In this conceptual landscape, "things other than humans (for instance, a tool, a technology or a building) can be social 'agents,' making things happen" (ibid). New materialisms generally align with Deleuze and Guattari's (1988) postulation that a 'capacity to affect and be affected' is a feature of all matter, human and non-human, and how shared worlds are produced in the relational interplay of these agents. Most new materialisms rely on decentring humans as foci of scientific and moral attention and employ inclusive ethics towards nonhuman life, collapsing long-held distinctions between nature and culture, mind and matter, and structure and agency (Dolphijn and van der Tuin 2010; Fox and Alldred 2018). New materialisms work against Cartesian dichotomies of nature and culture, and favour an ontological flattening of hierarchies between humans and nonhumans as related and agentive coproducers of more-than-human, shared worlds (ibid.). These ontological divisions and hierarchies have dominated how civilizations have interacted with nature throughout history, through exercises of control, manipulation, exploitation, and paternalism (Faier and Rofel 2014). Urban technologies, infrastructures, and objects are not passive (Coole and Frost 2010), but rather "simultaneously made and capable of making" (Gieryn 2002: 37; Thrift 1996). Behind this lens the city transforms into a 'political ecology of things' (Bennett 2010), a lively, relational whole composed of human and nonhuman actors. New materialisms generally look to avoid "the disappearance of the material world behind language" (Mukerji 1997: 36) and are conceived in response to postmodernist obsessions with discourse that have "hijacked" (Kirby 2017: 8) the ability to engage reality otherwise. As such, new materialisms do not focus on "discursive statements nor individual bodies, but rather on actor-networks, entanglements or assemblages of relations between bodies, things, ideas and social formations that affect each other" (Monforte 2018: 380).

Anna Tsing's (2014) new materialist method of 'following' objects and technologies, as well as general attentiveness to the specificities and properties of technologies (Dolphijn and Van Der Tuin 2010), inspired me to hop into the flowing river of boomed suburb relations, by following the technologies that sustain them (Deleuze and Guattari 1988). Here, the electricity grid, the booms that facilitate entry and exit of suburbs, the municipal inspector, and the crime-

fearing resident are all agents, or in Latour's (2005) terms, 'actants,' reshaping the socio-material futures of Pretoria-Tshwane in everyday agentive friction. Regardless of their status as public or private (boomed suburbs mobilise both), functioning or failing, infrastructures actively inform and operationalise the political perceptions and behaviours of human urban agents in relational exchange. Access control and security technologies, the foundational infrastructures of boomed suburbs - boom gates, pedestrian gates, fences, sensors, cameras, guardhouses, and more - those technologies I intimately did anthropology 'with' (Ingold 2013) during this study, play inescapably sociopolitical roles in Pretoria-Tshwane.

Vague new materialist attributions of agency to nonhuman objects – what is sometimes understood by 'ontological flattening' – have been subject to critique in the literature. Contestations over the degree to which nonhuman materials and species can be attributed with agency have been central to the field (Gamble et al 2019). Vitalist new materialisms, engaged in arguments towards ontological and agentive horizontalization, tend to side-step the material specificity and politicality of objects and technologies. By thinking of agency as a 'metaphysics' (Braun, Whatmore, and Stengers 2010), the specificities of materials and their historical and contextual situatedness stands to be overlooked. So too is the monitoring, regulation, and operation of these technologies, as well as responsibility for their emergence (Anand et al 2018), forgotten in the raising of their ontological status. Vitalist materialisms are vulnerable to apoliticisation, often "fail[ing] to address the ways in which materials are made political, along with the specificity of politics as a set of practices, techniques, institutions, and forms of enunciation" (Barry 2020: 96). This study heeds these critiques, and responds to the need for "further analysis of the situated and relational properties of particular materials" (ibid), and attentiveness to how infrastructures are governed, regulated, monitored, and made political.

Concepts such as 'subjunctivity' (Fontein and Smith 2023) and 'agencing' (Ingold 2017) stabilise the theoretical butting of heads that characterise the agency question. In these frameworks, agency is not a preordainable domain but rather a product of human and nonhuman relations that is always active and unfinished. Important to these scholars is recognising the uniqueness of human agency *while* including nonhuman objects in the agency conversation, which by virtue of their inclusion fundamentally reshapes it (Fontein and Smith 2023). Whether objects are referred to as agents, actors, actants, or even beings, or whether these objects 'have' agency, is of little importance, and corrupts the gravity of what the materialist turn can provide. What is important is how by taking materials, objects, and technologies seriously, without conducting any long jumps concerning the humanness or

sentience of their agencies, the city is revealed as a site not of human main characters but of relations between differently affecting and affected bodies, both human and nonhuman, who interact with varied levels of intensity and force (Springgay and Truman 2018). Pilo and Jaffe's (2020) 'political materiality' is another example of this approach. Political materiality suggests that the happening of politics in the city is a more-than-human, material process, the product of "socio-material *coproduction*" between human and nonhuman entities (ibid.: 8). It is less concerned with the disputed bells and whistles of nonhuman agency, although generally embracive of it, and more with how nonhuman materials and technologies actively reshape the city as relational coproducers alongside humans. If urban materials, objects, and infrastructures are not agents or actors in their own right, then they are at least active participants in the "mediating" of power contestations between humans (ibid.: 9). Political materiality is further angled to shed light on how citizenship and legitimacy is negotiated in urban space with and alongside nonhuman objects and infrastructure. Choplin (2023), who conducted a similar, affect-based analysis of infrastructure to mine in her study of concrete in West Africa, showed through her work that it is possible, practical, and beneficial to employ a broad base of materialisms without getting bogged-down in theoretical battles. As for materialist studies pertaining to urban enclavement, the literature offers scant examples. Tanulku's (2012) analysis of gated communities in Istanbul identifies these enclaves as 'active urban agents,' although is not grounded in any particular new materialist or technopolitical lens. Weinfurter's (2024) recent foray into a retirement enclave in Florida, U.S.A, looks to expand ontological security theory by integrating a relational and new materialist approach. He argues that ontological security in the gated community cannot be viewed in isolation and is instead produced by an agglomeration of bodies, spaces, and atmospheres.

2.5. Frontiers and Borderlands

Scholars often describe spaces characterised by state absence as 'frontiers.' The frontier concept, at least in accordance with its origins in the Western imagination, is:

> A paradoxical space of both romantic conquest and unbridled dangers. It serves to showcase both the potentialities of futures that can be created and also the inherent dangers present in those spaces that are yet to be conquered. The frontier is uncharted territory for some, and relinquished territory for others. The frontier marks movement – forward and backward – for differentially positioned peoples (Appleton 2018: 242).

Some have angled the concept towards citizenship (Roy and Ong 2011), capitalist extraction (Tsing 2003; 2014), indigenous resilience (Bodley 1975), and even as a term for describing borders between scientific disciplines. Nevertheless, 'frontiers' have majorly remained loosely

glued to a statist lens and "the particular institutional conditions that characterise and delimit state agency at state margins" (Geiger 2009: 10; Swift 1978), as "loosely-controlled spaces characterised by a tension between hegemonical state designs and indigenous autonomies" (ibid.: 26). Much like enclaves, frontiers are "durable and resurgent phenomena rather than one-time occurrences which owe their existence to a particular world-historical constellation" (Geiger 2009: 27; Nielsen et al 2021). As stated, frontiers are also sites of citizenship contestation, economic exchange, and of human resistance to administrative practices (Scott 1999), reproducing new rules and institutions (Swift 1978). I follow the latter in thinking of frontiers less in terms of individuals and institutions, and more in terms of "broad economic and political processes" (ibid: 6). Tsing (2003: 5100) defines frontiers as:

> An edge of space and time: a zone of not yet – not yet mapped, 'not yet' regulated. It is a zone of unmapping: even in its planning, a frontier is imagined as unplanned. Frontiers are not just discovered at the edge; they are projects in making geographical and temporal experiences. Their 'wildness is' made of visions and vines and violence; it is both material and imaginative.

The frontier concept has been employed in urban studies, particularly in describing Global South cities and conditions of "historical and present-day colonial encroachments" (McGregor and Chatiza 2019: 1557; Rosler and Wendel 1999). Pullan's (2011) concept of 'frontier urbanism' describes a model of city planning that aims to settle populations at urban margins – frontiers – and make use of urban spaces to instrumentalise particular political goals, usually segregation. In the South African literature, Bremner (2005: 132) has described the fortification of Johannesburg as "transforming life in the city into that of a permanent frontier zone." Other implementations of the frontier concept include analyses of rural-urban divides and capitalist extractions occurring within them (Agergaard et al 2009). Simone (2007) suggests that urban frontier spaces are suffused with plural imaginations and aspirations in which citizens negotiate conditions of mobility and horizons of possibility.

Borders and borderlands are related to the frontier concept. In social anthropology, 'borderlands' have served to spatialise frontiers and anchor them in territory. As such, most work using this concept focuses on regions of social exchange and encounter at the sites of modern state borders (Sahlins 1989; Parker 2008; Scott 2020). I instead look towards interpretations of borderlands that shake-off the notion of a delimited line or front, and more specifically refer to fluid, uneasily defined zones in which social actors engage in relations of "negotiation and force," in contexts "governed by interactive, overlapping, and incomplete authorities" (Landau 2010: 3). I prefer this interpretation because of the freedom it extends towards describing spaces with frontier-like relations without tying them to edges or sharply defined physical demarcations, seeing as boomed suburbs are not situated at urban peripheries

but rather central areas of Pretoria-Tshwane. The borderlands I make use of in this dissertation is less a physical border space than a multi-actor social space at which various material and immaterial borders - economic, racial, ideological - are pulled together.

The borderlands concept has received attention in the literature on urban enclaving, as through Iossifova's (2013; 2015) 'borderlands urbanism.' Against a backdrop of urban borders in the form of enclaves (Soja 2005), Iossifova attempts to 'see between enclaves,' instead arguing that while the borders that enclaves pose may promote inequality and segregation, they are also "interfaces of interaction and exchange … providing means to establish common ground and dialogue between highly diverse communities and interests" (Scott 2020: 16). Based on over five years of participant observation, interviews, and statistical analysis in Shanghai, she argues that urban borders can generate senses of belonging and coexistence between different gated and ungated neighbourhoods. She attempts to challenge the perceivably "set in stone" segregationist arguments that scholars of enclave urbanism have settled upon, stressing that gated communities are not always as "unifunctional" or "monocultural" as they seem (Iossifova 2015: 105, 104; Wissink et al 2012), by considering how livelihoods and identities are negotiated in spaces between enclaves. She includes enclaves in the everyday reality of the city and looks to move beyond their geographic understanding as merely bounded spaces, "to acknowledge the forces, dynamics and emerging possibilities for alternative urbanities and urbanisms on the borders, boundaries and borderlands between adjacent, sociospatially differentiated urban enclaves" (Iossifova 2015: 104). Her borderlands is one of amplified difference and "contestation and dismantlement" (ibid.: 104), where political will and power is negotiated amidst the everyday as different actors encounter one another and the past, present, and future of the city. This is not unlike Tsing's (2005) 'friction:' "the continuous coproduction of cultures through interaction and the awkward, unequal, unstable, and creative qualities of interconnection across difference" (Scott 2020: 15). Iossifova stresses that these borderlands are not marginal, occupying central spaces in the city, and that "borderland urbanism reads and protects the spaces in-between as moments of assemblage—of actors, actions and activities across social, temporal, cultural, economic or plain spatial divisions; it includes the possibility of the alternative, the otherwise" (Iossifova 2015: 105). Some scholars also approach African cities as laboratories for urban experiments, on the part of ambitious postcolonial governments, free-reigning property speculators, or disenfranchised citizens defining new modes of citizenship. These are experiments in urban change, global capitalism, neoliberalism, democracy, and citizenship in different but not dissimilar contexts across the continent (Balandier 1985; Beauregard and Body-Gendrot 1999; Karvonen and von Heur 2014; Choplin

2023). Scholars of South African cities have found resonance with the laboratory approach, producing insightful works on how unique urban experiments play out across the everyday, lived ground (Lemon 1995; Parnell 1997; Mabin 2005; Herbert and Murray 2015; Murray 2022). In this dissertation, I mobilise Iossifova's (2013) borderland urbanism in two ways, while also pulling from the literature on borderlands, frontiers, and the city as laboratory. While boomed suburbs undoubtedly engage in border-making, they are also *products* of a relational borderlands stimulated by different human and nonhuman actors, contextual conditions, political wills, and histories. Borderland urbanism attractively describes the rich relationality that characterises the spaces in-between enclaves in Pretoria-Tshwane, although in being drawn from a context unhindered by world-leading socioeconomic inequalities and lingering apartheid histories, the concept may be overly enthusiastic about the possibilities of coexistence that Iossifova (2015) argues stands to emerge. I instead look to re-orientate borderlands urbanism as a means of describing the contextual container in and out of which boomed suburbs emerge, as a relational assemblage of differently positioned actors, both human and nonhuman, that engage against a backdrop of hypogovernance characterised by inconsistent service provision, severe criminality, unclear regulations, and loopholes. Such a framing of the capital city as a borderland laboratory allows me to see how different actors push to experiment in trial and error with multiple strategies, technologies, and modes of engagement to secure enclavement, further sparking innovation both technological and institutional. As Landman (2019) notes in her argument of evolving public space, new urbanities are being shaped in the borderlands through processes of "experimentation and innovation." The city is the antithesis of the frontier (Geiger 2009), and yet the worlds of boomed suburbs operate much like them, even if not situated at edges or peripheries. Hypogovernance and socio-economic alienation come together to produce a frontier space not *in* but rather *of* the city, in which daily life becomes a frontier experience. Drawing from Francesca Pilo and Jaffe's (2020) political materiality, the borderlands I deploy is a technopolitical frontier of the everyday in which diverse, hypogoverned, and unequal human and nonhuman actors relate to coproduce technological innovations, citizenships, communities, and expertise that reshape the city *in toto*. In the borderlands, the state is both absent and eternally present, expanding, contracting, and masquerading all at once. In the case of boomed suburbs, the borderlands consists of: city residents; pedestrians; domestic workers; police; security guards and officers; CTMM officials and inspectors; ward councillors; project managers; contractors and labourers; committee chairs and members; engineers; criminals; municipal legislations; public built environments; and technologies of enclavement. These actors engage in coproductive relations of tension of ironic reliance, learning from and about one another in the making of tomorrow's city.

Chapter 3: Introducing Pretoria-Tshwane and the Field of Booming

In this chapter, I introduce Pretoria-Tshwane as a city of and in boom, and describe the specifics of booming in this city. I also provide a brief history of enclavement in Pretoria-Tshwane.

3.1. Introducing Pretoria East and Field Sites

3.1.1. Pretoria East

> Conveniently situated outside of Johannesburg, your Pretoria East property choice will be away from the fast-paced city lifestyle – this is a worthwhile investment. The leafy streets and well-established gardens give the area a sedate, village-like feel. Everything is close-by and residents don't have to go far for shopping or recreation. It's a popular suburb, largely because of easy accessibility from major highways - the N1 and the N4. This neighbourhood attracts a good mixture of young professionals and young families, with child-friendly activities widely available. There are large, open spaces in this area, allowing for big gardens and freestanding houses. However, this area also offers a wide variety of townhouses, clusters and security estates … The area has recently been compared to Sandton in terms of its sophistication, world-class entertainment, upmarket boutiques and gourmet restaurants. Pretoria East is fast outpacing Sandton as Gauteng's most sought-after area for property investment … Pretoria East has become one of the most valuable pockets in Gauteng and we expect this trend to continue with buyers and investors alike drawn to its high-end, central and convenient lifestyle offering (Leapfrog Property Group 2024).

This ethnography took me across five suburbs within the labyrinth of Pretoria East, all of which were either boomed or in the process of becoming so. These included: Waterkloof (SafeWaterkloof); Lynnwood Ridge (Ridgefield Security Estate); a nameless suburb between Faerie Glen, Boardwalk, and Bronberg (Faeriedale Security Village); Lynnwood (Lynnwood Gardens Estate); and Groenkloof (Groenkloof Security Initiative). Due to the proliferation of fortified enclaves and the walking methodologies employed, the field also included boomed suburbs and city spaces located in-between these primary fields sites.

The area commonly identified as 'Pretoria East' spans Regions 3 and 6 of the CTMM, covering the eastern and south-eastern portions of the city. Geographically, the east begins with the suburbs of Sunnyside and Arcadia, although these are rarely included in imaginations of what is 'Pretoria East,' usually included by developers and residents as part of the city centre. Older, particularly white residents of the more distant east today are former residents of these suburbs who relocated in response to the perceived decline of the centre during the transition period (Horn 2020; 2021). Pretoria East continues into the suburbs of Hatfield (home to the University of Pretoria) and Muckleneuk before lower-density sprawl with the suburbs of Brooklyn, Waterkloof, Groenkloof, Menlo Park, Lynnwood, Hazelwood, and to a lesser but increasing extent, Monument Park and Erasmusrand. There are, in fact, two Pretoria Easts. Altogether,

the suburbs listed above are the Old East, named as such by realtors, property developers, and residents alike. The border of the Old East is the busy, bisecting N1 highway. The New or Far East thereafter is characterised by more expansive sprawl, younger, diverse developments, and mixed income bases. The pearl of the New East is the illustrious Menlyn Park Shopping Centre, one of the largest malls in Africa (BusinessTech 2024; Statista 2024) and an economically stimulating "metropolitan node" in the CTMM's Integrated Development Plan (IDP) (2023: 137). The recently developed Menlyn Maine precinct includes Africa's first state-of-the-art 'green' private hospital, luxury apartments, a smaller boutique mall, as well as the continent's second-largest hotel and casino complex in the form of Sun International's Times Square (Sunday Times 2016). The ascent of Menlyn since its single-story beginnings in the 1970s has almost single-handedly generated the development of the New East (Badenhorst 2002; Horn 2021), which includes the suburbs of: Faerie Glen; Moreleta Park; Garsfontein; Constantia Park; Equestria; Silver Lakes; and at its quickly expanding bounds, Mooikloof and Tyger Valley. These suburbs existed before Menlyn's ascent, but they were far less dense and developed (Badenhorst 2002).

To move between the Old and New East is to poetically cross over the very infrastructural river that developed both, the N1 highway, as the city's suburbanisation is linked to its construction and increased automobile use (Czegledy 2004). One can do so by taking one of four roads, namely Lynnwood, Atterbury, Garsfontein, or Solomon Mahlangu Drive. These all dually serve as developmental "spines" (CTMM 2023: 126), upon which shopping centres and various residential enclaves are lined, ranging from low-cost gated apartments to luxurious golf and lifestyle estates. Even though a wealthier part of the city overall, both Easts express demographic and economic heterogeneity. Their populations have become increasingly diverse (Horn 2021), while numerous informal settlements in the area serve as stark reminders of the city's inequality (Kriek 2021). Like frontier prospectors, property developers survey and stretch city limits, capitalising upon the elite and the aspiring, seeking affordability, safety, exclusivity, or property portfolio expansion:

> All over the city, the post-suburban reformation has become noticeable in the activation of various enclavisations, such as: Office/corporate parks; regional shopping; transport hubs; campus districts as well as hybridised blending of these with residential typologies. The main drivers of this outer surge have been the weakening central-city, the building of the N1 highway and the catapulistic building boom towards the south-eastern outskirts (Serfontein and Oranje 2008: 24).

Simultaneously, old and newer residents of older, open suburbs, collectively labour and organise to boom, gate, and fence those suburbs to secure themselves and increase the values of their properties. 92% Of Pretoria-Tshwane's boomed suburbs are located in southeastern

regions of the city (Nel and Landman 2015). Enclaves across the city and particularly in Pretoria East have become “the new gravitational nodes of shoppertainment, post-suburban employment, sport and recreation, and cultural expression” (Serfontein and Oranje 2008: 24).

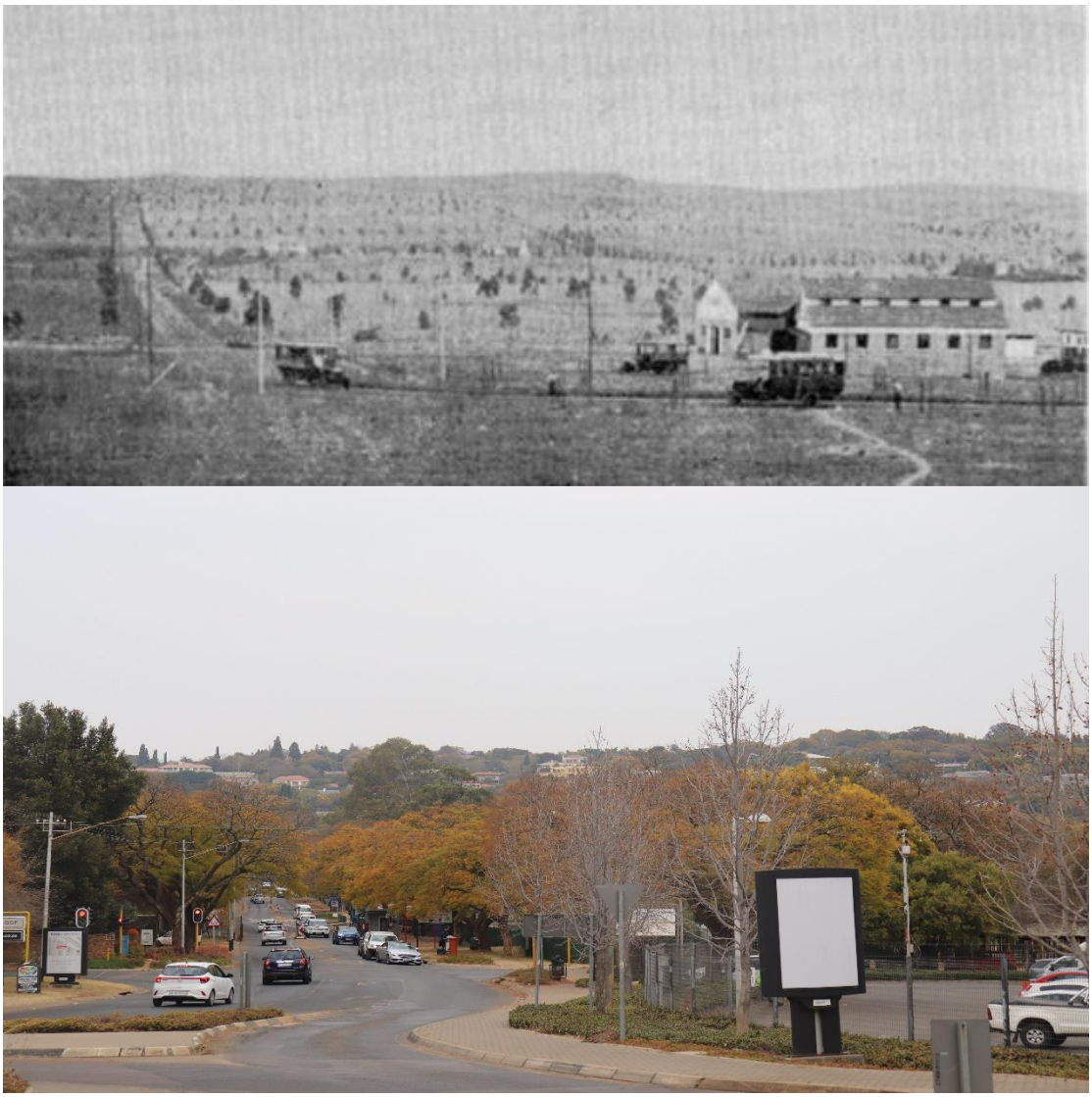
3.1.2. Field Sites

The Waterkloof suburb was established in the first decade of the 20th century (Figure 2). It only took on typical suburban figure following WWII, as houses increasingly replaced large plots that predominated until then. Waterkloof today presents a topographic cascade of high-walled homes and gardens of diverse architecture, including a concentration of embassies, ambassadors’ residences. It further hosts several luxury guesthouses, two shopping centres, a primary school, a large, snaking dog park, more recently a padel court, and a church or two. It borders boomed-off Groenkloof to the south and booming Brooklyn to the west. It neighbours younger Hazelwood, which offers some of the trendiest consumption experiences in the city. Participants living in the suburb informed me that murmurs concerning its closure circulated throughout the 2010s, initially materialising with StellaClose, a resident-driven initiative of only a few streets. In 2020, StellaClose merged with the SafeWaterkloof project. which has overseen the booming of the suburb in its entirety (Figure 3: 1). The booming project was expensive and tenuous, not least affected due to its comprehensive size, its diversity of security providers, and the COVID-19 pandemic. SafeWaterkloof constitutes one of the largest road closure initiatives in local history.

As the crow flies exactly 4.75 km from here, she hovers over the Ridgefield Security Estate (2). The project successfully ‘dropped its booms’ in 2023 and blankets a large portion of Lynnwood Ridge in the New East. The suburb lies just off long Lynnwood Road and three shopping malls surround it. Alongside neighbouring Murrayfield, also on path to booming, Ridgefield notably occupies a corner pocket at the intersection N1 and the N4 highways. The latter connects the east with the city centre and serves as the de-facto northern boundary of the New East. A group of residents in the suburb had attempted to spearhead closure since 2007.

Further beyond the concrete curtain of the N1, in the distant east, an unnamed suburb at the feet of the Bronberg mountain range has also recently boomed. Far smaller than the two above, this quiet urban cove occupies a geographically promiscuous point between the suburbs of Faerie Glen, Olympus, and Boardwalk. The suburb is sandwiched between two shopping centres. The Faeriedale Security Village (3) is the product of multiple failed attempts at booming, stemming from 2018. It became operational in 2023 after pursuing an unconventional

Figure 2: Crown Avenue, Waterkloof, Then and Now. c.1912.



Source: Above, Pretoriana (1969); Below, author.

and independent development path - the committee did not contract any project managers to facilitate enclosure.

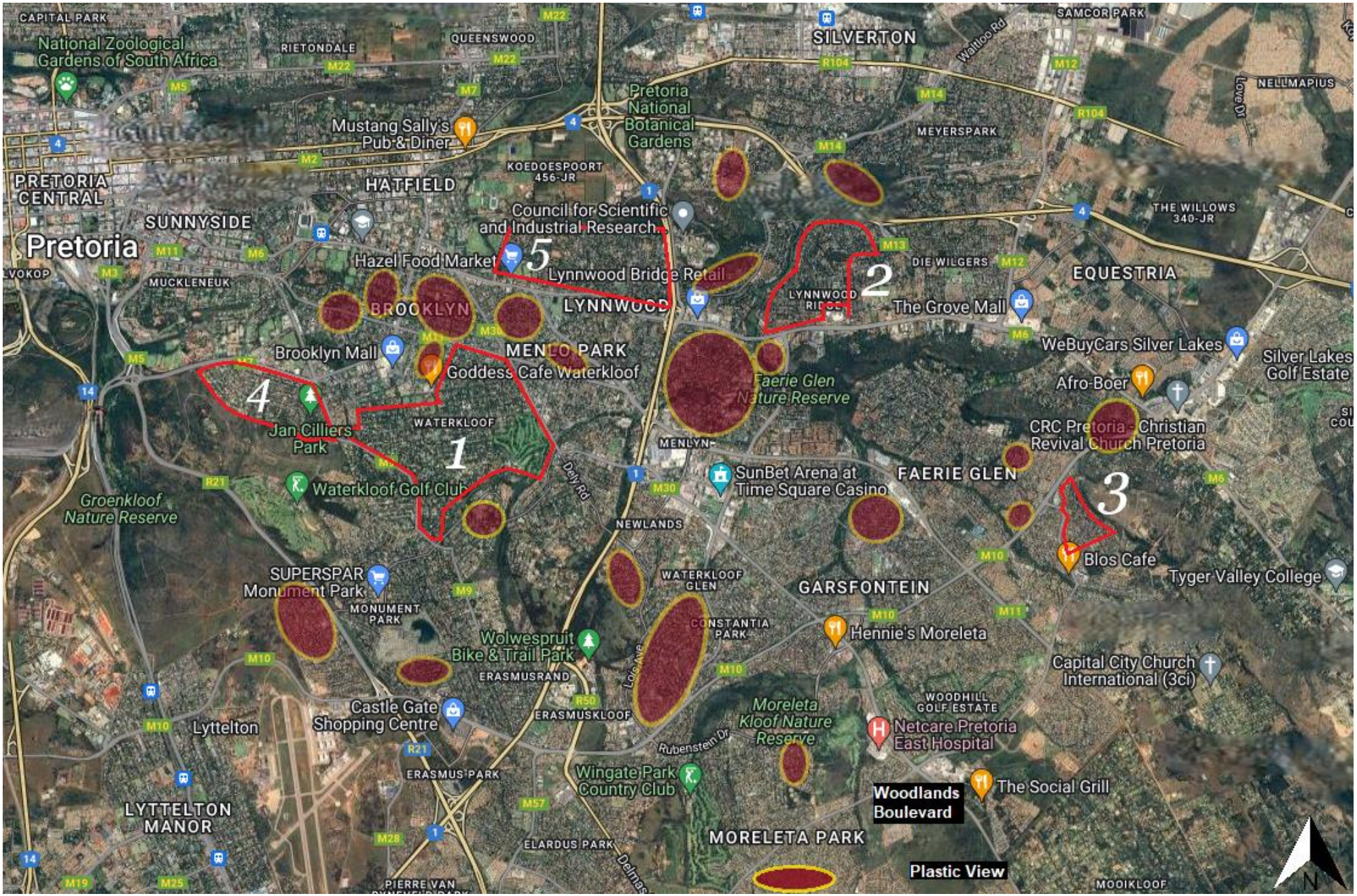
Set in diagonal opposition across the Old East are the established boomed suburbs at Groenkloof (4) and Lynnwood (5). These historic suburbs are hailed for pristine natural environments. They are older than the suburbs thus-far described and products of near-decade battles with crime and attempts at enclosure. Lynnwood is notable as an emblematic if not ideal 1940s Pretoria suburb:

> Lynnwood was lavishly endowed with open spaces. Many of those spaces were developed as mini-parks, invariably colourful playgrounds for children … families would walk their children from playground to playground, from one end of Lynnwood North to the other … Homes had the feel of independent dwellings on a great farm. Boundary fences were uncommon, and the children from the neighbourhood wore footpaths through each other's properties on their daily ventures to school and elsewhere (Lynnwood Gardens Estate 2024).

The suburb was themed in accordance with George VI and Elizabeth II's royal visit in 1947 (LGE 2024). The Lynnwood Gardens Estate (LGE) is also not the only boomed area in Lynnwood - just across the highway lies the Lynnwood Glen closure, and within the suburb itself lay three smaller boomed suburbs. Groenkloof is a similarly historic Pretoria suburb. It sits at the feet of Klapperkop Mountain on a sharp downslope, once one of the city's founding farms. The Groenkloof Security Initiative (GSI) hosts Herbert Baker Street alongside its uppermost fence, noted as one of most beautiful streets in the world (CNN 2019). These two latter suburbs, as well as Waterkloof, enjoy high property values relative to the rest of the city due to large garden sizes, luxurious architectures, and enclosed status. Both the LGE and GSI are highly successful examples of booming following respective closure in the late 2010s.

The key sites of this research study are not isolated developments. In the city space between, around, and increasingly far beyond them, boomed suburbs have proliferated, not to mention security villages and other fortified enclaves. The neighbouring suburbs of research sites were unavoidable in a study based on walking, often engaged in successful or stalled attempts at booming themselves. These boomed suburbs, as well as others in the process of development, are highlighted in maroon on the map. These include those I encountered in my walking of the Easts and those to my knowledge - many smaller and more distant boomed suburbs, not to mention other enclaves, have been excluded. I recruited several interviewees from these suburbs who expressed interest in the research. Part of the reason why Pretoria-Tshwane appears to be at the forefront of booming in the country is due to, as shown in this description, the makeup of the city's built environment, which appears less as a traditional urban 'city' but rather one that consists of a plurality of far-stretching suburbs that are more readily capable of being successfully enclosed. Another reason, as is also revealed throughout the dissertation, is the centrality of family and child rearing in Pretoria-Tshwane and how boomed suburbs promise to make idyllic such desires by providing safety. As a politically conservative city of suburbs (Hamann and Horn 2015), once the acropolis of apartheid as its Capital, and a city in which the safe raising of a family is entangled with its urban imaginary, it is little surprise that Pretoria-Tshwane appears to be at the forefront of the turn to booming.

Figure 3: Pretoria East, Old and New. Source: Google Maps, overlays by author.



3.2. A Short History of Enclavement in Pretoria-Tshwane

At the dawning of the 20th Century, earlier settler Pretoria was rapidly changing from a ruralist scene characterised by walls in the form of rose-hedges (Allen 1971) to one, along with the rest of the country, defined by an onslaught of walls and fences and a teichopolitics that would stretch into the next eighty years and beyond. The teichopolitical purpose of these fences and walls was namely the segregation, displacement, and dispossession of Black and other South Africans of colour, first beginning with the Native Urban Areas Act (1923). Enclavement would later emerge as a formal, state-driven model of urban development under Apartheid with the formalisation of the Group Areas Act (1950). These legislations were instrumentalised through influx control, which prevented the movement of South Africans of colour into white urban areas, and later through the formation of 'ethnic homelands.' Following the neoliberalisation of the 1980s, urban planning slid under the private property sector (Harrison and Todes 2015). Contemporary gated communities and fortified enclaves first appeared during this 'apartheid emergency' period, with Anglo-American pioneering one of the first of these developments for white-collar employees in Johannesburg (Bremner 2010). At the point of the democratic transition in 1994, Pretoria was a "spatially disformed, administratively complex, and operationally dysfunctional" city (Horn 2021, p.85).

Following the transition, models of participative governance appealed to the state. These models complied with democratic aspirations of collaboration and equality that were to characterise the new South Africa. Regarding safety, municipalities across the country advocated community policing, public-private partnerships, and joint decision-making. Policing and urban planning in South Africa was set to enter a new, demilitarised age, unshackled from its oppressive history, premised on fresh democratic ideals and civilian values (1998 WPSS; Minnaar 2005; 2010; Bremner 2010). One vehicle of this change was the community policing forum (CPF). CPFs are compulsory implementations in each police precinct, mobilised to establish collaborative forums through which communities, the private sector, and the police can engage to combat and prevent crime altogether (Benit-Gbaffou 2008). Many of these transitory goals did not materialise, nor did CPFs rollout as successfully as hoped (ibid.; Ngoveni et al 2022). Over time, opposites of ideals ascended to norms, be they failures in police accountability or the rise of private enclaves (Freund 2006). Residents of suburbs who were unwilling or unable to relocate into proliferating security villages mobilised to establish street patrols, vigilante groups, and neighbourhood watches voluntarily dedicated to protecting the suburb, even if most held individual private home security plans already. In Waterkloof, corroded remnants of signs bearing the names of these resident groups can still be

found, even if fairly difficult to spot. Residents also engaged in DIY micro-fortifications of their properties with technologies not excluding gates, fences, burglar bars, Trellidoors[3], barbed wire, metal spikes, CCTV cameras, and alarm and intercom systems. Bremner (1998: 58) paints a faithful picture:

> Entry into houses and even passage through them is barred by burglar-proofing of prison-like dimensions and layer upon layer of metal security gates, which divide various sections into secure zones - to pass from sleeping to living to kitchen areas may involve unlocking three security gates.

The remnants of these earlier attempts, such as faded, scattered signs calling residents to join street patrols and community watches, are still visible in the streets of Pretoria East. Walking these streets transforms them into an open-air, living museum of the ongoing war against crime. Across many of Pretoria-Tshwane's suburbs, boomed or not, one encounters faded, elementally-damaged signs of resident security initiatives that ultimately fell short, revealing the urban borderlands as a space of negotiation and change.

The increasingly visible failure of the state to manage crime also created an Eden for private security companies to flourish: "Private policing services also infiltrated the terrain of the traditional public police by responding to alarms, patrolling, and even investigating crimes. Much of this growth was related to public perceptions of the police's poor service delivery and their virtual absence in many suburban areas" (Minnaar 2010: 199). There was no clean break between resident security initiatives, such as vigilante groups or street patrols, and the mass proliferation of private security. These processes occurred in parallel and enmixing flows, although over time residents came to rely on the private sector more than communal initiatives, beginning with the purchase of alarm-based armed response plans.

Amidst this background of proliferating private enclaves, private security influx, and community mobilisations against crime, some residents of open suburbs also began to close the streets leading in and out of their areas with booms, gates, and fences. Soon thereafter, a legal means of enclosure arrived in the form of Chapter 7 of the Gauteng Rationalisation of Local Government Affairs Act 10 of 1998. This legislation provided grounds for residents to apply to their designated municipalities for 'security access restriction' through 'road closures.' Still in-use today, the early years of Act were notably tumultuous. At the time of the first

[3] Long-trusted and established provider of home-based security barriers, most known for type of fortified sliding door or corridor gate. Its products can be found across the world.

booming at Gallo Manor, Johannesburg, in 1992 (Dirsuweit 2007)[4], there was no national or provincial legislation for road closures or security access restrictions (there is still no national legislation today). Road closures and gated communities were novel concepts in the rainbow-reeling South Africa of the 1990s. Notions of access control and enclosure were anything but novel, but appeared differently in this democratising context. Before the passing of the Act, numerous suburbs across the Gauteng province engaged in pre-legislative, illegal processes of enclosure. Without solid policy to draw from, metropolitan councils treated early closures on case-to-case bases and according to different levels of leniency. Boomed suburbs increased and quickly became a policy challenge. Strangely enough, the legislation that laid strictures for boomed suburbs originated not here but from conversations held across conference roundtables in Canada. This is at least according to the common folk tale I heard from several professionals in the field, which posits that a government research group attended a meeting in Canada in 1997, returning with insights to form the bases of the Act. While this story has been difficult to verify, and not for a lack of trying, the close semblances between the Act and Canadian legislation on City Improvement Districts (2015) suggest that it may possess some elements of truth. The inclusion of a chapter on road closures and security access restriction in the new Act not only centralised booming processes but made many of them illegal, and some were promptly destroyed by municipal maintenance teams.

At the other end of the spectrum, a market and entire field of legal road closure in Gauteng was born. Colonel Malan founded Streetsafe in 1998 and would not have done so without the passing of the Act. In what is an unlikely but fitting coincidence, BoomGateSystems (BGS), the leading provider of boom gates in the country, was also founded in 1998. The Act alone did little to allay the difficulties city councils were facing. Requirements related to access restriction were unclear, and both legal and physical conflicts between residents, security guards, and pedestrians became increasingly common, especially at illegally boomed suburbs. Councils were under strain as public disputes spread, while crime increasingly continued to wreak havoc (Harrison and Mabin 2006). Authorities were complicatedly caught between fulfilling the rights to free movement and the rights to safety and life, as evidenced in the words of a CTMM planner in the 2000s:

> If people are getting murdered and property are getting stolen on a monthly basis, would one still argue that free flow of movement and integration is so important that it actually outweighs

[4] In consultation with historical sources, I contest that the first attempt at neighbourhood enclosure may have taken place in an area of Scotttburg, KwaZulu-Natal in 1982 (Sunday Times 1982).

> the right to live? Sometimes the value of integration is small as it gets compared to the value of human life (Makhale and Landman 2018: 12).

In the years following the passing of the Act, "numerous communities flouted these conditions, or even illegally implemented gating and road closures and their accompanying security measures [due to] a lack of official capacity to monitor the myriad of closures that occurred in Gauteng Province from 2000 onwards" (Minnaar 2010: 209). Between the closing years of the millennium and 2003, the number of boomed suburb applications in Johannesburg almost doubled from 360 to little less than 600 (Landman 2000), the majority of which were illegal, and also included closures in the townships of Soweto and Lenasia (Harrison and Mabin 2006). The CTMM had at this point received 75 legal applications for road closures, which excluded many illegal iterations spread out across the city (Landman 2004). Pretoria-Tshwane's first legally enclosed neighbourhood, Wapadrand Security Village, emerged around the same time the CTMM was formed, although various illegal closures were active before then. Illegal closures can still be found today but are considerably scarce (Makhale and Landman 2018).

The battle of the booms on both the ground and in policy culminated with its escalation to the SAHRC in September of 2004. Municipalities instituted a moratorium on all boomed suburb applications in 2003. The bringing of boomed suburbs before the SAHRC was also the result of a failed policy drafted in 2000 (Harrison and Mabin 2006). That this deeply technocratic document failed reveals the nuanced socio-political considerations involved in the borderlands of boomed suburb development. Politically, boomed suburbs were also becoming sites of abstract splash paintings - cases in which supporters of the liberation-bearing, anti-privatisation African National Congress (ANC) favoured closures, and the central-conservative Democratic Alliance (DA) opposed them, were reported (ibid.). This all contributed to a particularly tense scene at the SAHRC hearing in 2004. Over two days, various proponents and detractors of booming presented oral arguments to Jody Kollapen's[5] commission panel. These included city municipalities, governmental agencies, technical and planning experts, security professionals (including Streetsafe), committee chairs, and loggerheaded residents' associations, the largest two being Residents Against Crime and the Open City Forum. Many of these actors and organisations were already familiar with one another, if not by this stage outright rivals, having engaged at multiple public fora before the hearing. The commission was critical of road closures, operating in the sensitive human rights landscape of post-apartheid South Africa. Under especial spotlight was the right to freedom of movement on public roads, expectedly so

[5] Esteemed judge, then the Chairperson of the SAHRC. Currently seated as a judge in the Constitutional Court.

considering historical restrictions on mobility (Landman 2020). So too were its participants "fighting like cat and dog," in the words of Col. Malan.

The SAHRC released its Report on Road Closures/Boom Gates in early 2005, including its findings and recommendations. It stipulated that the SAHRC was generally unsupportive of boomed suburbs, that these enclaves stand to infringe on several constitutional rights, make the city dysfunctional, and contribute to social division and polarisation (SAHRC 2005). The recommendations did not clearly state whether boomed suburbs should be permitted or prohibited, but importantly concretised the rule that ultimately stabilised their development Gauteng: "Restriction of access shall mean restriction is limited to access control, no denial of access and no discriminating actions nor infringements on the rights of individuals." (SAHRC 2005: 8). As such, the mobilisation of security guards, guardhouses, CCTV cameras, and boom gates under the premise of 'guaranteed but monitored access' (coined by Col. Malan) was legally acceptable according to the commission, even if not preferred. The SAHRC report only minimally assisted municipal authorities in being "lurched from difficulty to difficulty" in managing boomed suburbs (Harrison and Mabin 2006: 18), even if it did generally formalise and standardise booming practices. Stuck between a variety of multi-directional pressures, the Gauteng Provincial Government landed on a beige policy position that "attempts to discourage security access restriction but which nevertheless provides a mechanism for accommodating such restrictions in circumstances where they do not have a major negative effect on the functioning of the city. The policy has a `no' tilt, but is not far from the middle point of the spectrum" (ibid.: 17). In the years since, boomed suburbs have become widely common, are subject to comparably muted opposition, and form consistent part of the mosaics of fortified enclaves that characterise South Africa's post-apartheid cities. Today, Pretoria-Tshwane is currently under a spell of feverish boomphilia, and in the words of Cathy, boomed suburbs "are booming!"

3.3. Actors and Languages involved in booming

Boomed suburbs involve a wide variety of differently-positioned actors in their developmental unfolding and reproduction. Here I list and describe these actors and their roles and perspectives on booming and its processes, in order to set the scene for the dissertation ahead and to answer these questions: Who are the actors involved in booming in Pretoria-Tshwane? How do these actors refer to these processes?

Residents:

Residents of open suburbs attempt to retrofit streets with booms, gates, and fences to feel safe, and collectively gather funds to do so. Every boomed suburb begins with a community of residents looking to fortify the suburb they live in against the threat of crime. Rarely ever in total unison, a group of residents in the open suburb will band together and begin to plan the closure years before the enclave comes to material fruition. It is a legal requirement for the residents of such suburbs to form a 'residents committee' and register it as a Section-21 Non-Profit Organisation (NPO) to lead the suburb in engagements with the municipality, service providers, and residents. These committees consist of a chairperson and several committee heads who are responsible for different functions in the suburb's development and reproduction, from marketing and communications to security services and infrastructural management. Occupants of these seats are usually those who spearheaded the closure in the first place, although can include residents recruited along the way. Ideally, a given committee member holds some experience in the role they have been asked to fulfil, usually drawing from the field in which they are employed. Excluding estate managers, who undertake daily care and management of the suburb, membership in the committee is a secondary task, and these actors are not employed by the NPO. It is the responsibility of the committee to serve as the key point of contact for both the municipality and residents, and to comply with all legal regulations in attempts to successfully enclose.

The first step of booming a suburb taken by these actors is to spread the news of the plan to form a closure and attempt to convince suburb residents to support it. This is imperative, as every boomed suburb is legally required to attain at least 67% consent from the suburb's residents to be approved. Some residents may be outright supporters of the closure, and financially contribute as such in the form of capital contributions and monthly 'levies.' Other residents may not be as supportive, but if the committee has attained 67% consent, there is little that can be done to prevent the closure besides not contributing levies. Without these levies, which are funnelled towards infrastructural development and service provision, as well as application costs, the boomed suburb will not see the light of day and remain an unfortified suburb. For residents on the proverbial fence, who are neither passionate enclavists or detractors of the closure, an air of apathy pervades and the project unfolds as a background process to which they may or may not be contributing, depending on amounts of personal disposable income available. On the whole, residents are generally supportive of these closures,

and often outnumber detractors, especially if they are raising families or have endured criminal experiences in the past.

Criminals:

Without 'criminals' and their creative machinations, there is no reason to boom a suburb. Often overlooked or approached vaguely in studies of gated communities, 'criminals' are the ultimate drivers behind the development of boomed suburbs, and express deft skill in penetrating public suburbs, to the extent that residents feel it necessary to fortify these in entirety. Approaching 'criminals' and crime as a vague, collectively mashed phenomenon is a common practicality in social scientific studies not specifically engaged in research of criminal worlds. I suggest that thinking of crime as the product of a vast and knotty web of relations between individuals and city materialities, and not as a shady, unclaimed, generalisable force, is a productive if not necessary intervention. In this dissertation, crime is the name for an agglomeration of diverse practices that a variety of human actors enact. By simply and vaguely referring to crime as just that, 'crime,' this army of diverse actors stands to be overlooked. Even if not directly included as research participants in this study, I have looked to include such actors within its relational scope, as their agencies are a constant affectual factor in the development and daily reproduction of boomed suburbs. From decisions over which streets should be enclosed to what types of fencing ought to be employed, 'criminals' are major role-players in booming even if often invisible. 'Criminals' stand to gain from open suburbs due to their vulnerability in comparison to security villages, extracting income in the process.

Facilitators:

Residents and committees, as nonprofessional suburbanites, cannot successfully enclose suburbs on their own. Facilitators coordinate the development of boomed suburbs, often working from years of experience and pulling from long-held relations and connections with municipal officials and various service providers. Contracted by the NPO, facilitators guide the suburb through its closure application and infrastructural development while working within its budget, determined by the amount of residential contributions. Facilitators may be lone project managers or project management firms, as was the case with the key research participant in this study, or legal-administrative companies. While project managers earn income by providing these services, they are also often motivated by strong beliefs in the idea of booming.

Security companies and service providers:

Much like residents, technologies of enclavement, namely boom gates, fences, cameras, and guardhouses, cannot work on their own either. Every boomed suburb requires a contracted security provider to function. In the process of attaining a contract with an emerging boomed suburb, the chosen private security company offers a package to the suburb based on its budget which details operational hours, guard allocations, resident benefits, and patrol car designations. Most focally, the security company places guards at the gates of boomed suburbs. These entry-level, unarmed guards are tasked with overseeing these access points, observing for suspicious activity, and guaranteeing free flows of entry and exit in and out of the suburb. Their superiors consist of teams of security officers, who are armed and tasked with responding to criminal activity in the suburb. Security companies regularly oversee multiple boomed suburbs at once, not to mention their contracted engagements at other fortified enclaves and clients across the city.

Boomed suburbs further require a range of service providers to function. These include: contract managing agents, usually administrative or realty firms contracted to organise the collection of levies and maintain insurance compliance; waste removal companies, tasked with removing guards' waste at guardhouses; various building contractors and engineers, who via the project manager-facilitator, are tasked with constructing and maintaining gates, fences, and guardhouses; and companies who manage the visual data processed through the boomed suburb's various security cameras. Both security companies and service providers stand to financially gain by establishing contracts with emerging boomed suburbs.

Municipal officials:

The final set of actors involved in the development and reproduction of boomed suburbs is the city municipality itself, in this study the CTMM. Operating in accordance with the Rationalisation of Local Government Affairs Act (1998), the CTMM is the ultimate decider on the fate of boomed suburbs across the city. The municipality and its officials, consisting of administrators, engineers, inspectors, and town planners, receive and process closure applications usually via the suburb's project manager-facilitator. Given the uniqueness of each boomed suburb, these officials may make specific demands concerning the closure's design or operation. These officials also route the application through various secondary departments and agencies to maintain compliance with the stipulations of the Act. If all approvals are attained after these various exchanges, a process usually taking up to two years, municipal engineers and planners attend to the suburb in-person to conduct a final inspection of its legal

and infrastructural compliance before providing it with a green light for operations to commence. While the South African Police Service (SAPS) is an extension of the municipal apparatus, it does not take centre stage in this study precisely because boomed suburbs, both before and after their closure, are characterised and motivated by policing absences or shortcomings. Unlike other actors, CTMM officials do not gain income from booming suburbs beyond their regular salaries, although may exhibit differing personal views towards these enclaves.

3.2.2. Languages

A majority of research participants in this study live, move, and work in a city they call 'Pretoria.' For developers of boomed suburbs, 'The City of Tshwane,' or 'Tshwane,' refers to the governing municipal apparatus with which they engage in pursuits of enclavement, sometimes also referred to as 'the city council,' or simply 'council.' Within all legal documentation, the city in which these retro-fortifications are being developed is not Pretoria but Tshwane. For residents of boomed suburbs, the City of Tshwane is to most not more than the heading on monthly utility bills. It is not the city in which they live, and yet quite literally is. 'Tshwane East' does not exist. For other, mainly younger participants, the City of Tshwane is both *the* and *a* name for the city in which they live. These participants interchangeably refer to this city as Tshwane and Pretoria in different settings and for different conveniences, usually without vigorous political intent. It should be noted in passing, however, that Pretoria, or *Pitori*,[6] persists as the most common name.

As stated in the literature review, boomed suburbs are referred to in wide variation by professionals and residents alike. First and foremost, these developments are officially, 'road closures:'

> I call it a road closure because that's what the law calls it. But the method used is guaranteed but monitored access. Now, in actual fact the name is a misnomer. It's not right. They should call it a gated community, that's what they should call it because that describes it. Because if you say a road closure, it means the place, the roads, are closed. I think a boomed-off area may be a better description. A boomed-off area where there's safety that is provided (Col. Malan).

But 'road closures' more commonly refer to protest or event-instigated road diversions. Residents of these enclaves do not live in road closures, nor do they live in 'enclosures' at all. Individuals across the country make use of terms such as 'gated communities,' 'security

[6] Sesotho, Sepedi, and Setswana name for 'Pretoria.' Also, SePitori or S'Pitori, a widely-spoken, 150 year-old language of the city composed of a mix of these and other South African languages.

estates,' 'boomed estates,' 'boomed areas,' and 'boomed-off areas,' to describe formerly open suburbs now subject to access control. Participants in this study and other city folk refer to these areas inconsistently:

> "I'm not sure what I would call them actually! Um, gated communities maybe? That's what they are, right?" (Marten, student).
>
> "Whatever you wanna call it, road closures, boomed areas, gated communities … [for our community to be] gated or boomed-off" (Committee chairman).

The namelessness of these proliferating developments in a city just as nameless is indicative of a borderlands of encounter in which the state, residents, private security, industry professionals, and enclave technologies themselves negotiate relations with one another in spaces of the urban unknown.

3.4. Booming in Pretoria-Tshwane

Booming in Pretoria-Tshwane entails the fortification of public streets, roads, and sidewalks with boom gates, steel gates, fences, and in some cases pedestrian turnstiles to 'guarantee but monitor' access. For a suburb to be successfully boomed, the actors described above must all be enrolled in the process and labour in accordance with the Act and the various material and social contexts that their suburbs present. The Act, as mentioned, stipulates that: at least 67% of the suburb's residents consent to the closure; that it maintains monitored but "full, free and continuous vehicular and pedestrian access" to the public; that the closure be advertised for public participation and objection; that traffic impact studies be conducted to determine its mobility impacts; that a Section 21 NPO is established to administer the closure, usually in the form of a committee; and that boomed suburbs are temporary security initiatives whose application must be renewed every two years (CTMM 2008: 9). Drawing from the recommended standardisations laid out by the SAHRC in 2005, it is imperative that:

> Security access-restriction points should not be implemented if they denied or hindered access to public spaces, including roads, nor should they require anyone to furnish private information (for example, destination, purpose of visit, or identity document). Moreover, they should not allow arbitrary searches of persons or vehicles, or the detention (arrest) of anyone, or deny any entry (other than serving as a security measure delaying open entry or acting to deter the movement of criminals). If any of these enclosed neighbourhoods operated in such a manner this would be a violation of the rights of those affected (SAHRC, 2005: 4).

Unlike in the early days of booming, developers of boomed suburbs today take these requirements seriously. Here, Col. Malan highlights the differences between boomed suburbs and security villages:

> You must just remember there is a difference between a road closure and an estate. An estate was developed from a piece of farmland. [The developer] buys farmland and he rezones it into

> a township, and then he puts in all the services. Because he does that, the roads are all private roads. And he services the stands. That's why your rights at the entrance are different. Because this is private space, you cannot go there. But in a road closure, the roads are all public space. Therefore I'm not changing the zoning of the roads. So it remains public space. And therefore in our country, in our Constitution it says you can go wherever you want. You've got a legal right of movement (Col. Malan).

Because boomed suburbs are legally construed as temporary solutions to crime, residents' committees must identify and prove a significant crime threat in their area to be considered for approval, as "such closures are only allowed as a security measure and can only be approved if it is demonstrated that they are in the interest of residents' safety and security. Enclosure applications can be approved only as a last resort to curb crime in a specific area" (Minnaar 2010: 201).

To submit a formal application for security access restriction, the suburb's NPO must advertise the closure for public participation, hold community meetings, and attain 67% of the suburb's residents' consent. After satisfying these criteria, the NPO can begin asking residents to make capital contributions towards infrastructural development. These are once-off voluntary payments made long before the booms, gates, and fences arrive, pre-supplementing the monthly levies that the NPO hopes to collect from residents after operations commence. Over the course of the next two years, the road closure application will travel through eighteen different municipal departments and agencies before a verdict is returned, finalised with a physical inspection of the suburb's infrastructures led by municipal officials. If successful, the boomed suburb becomes a legal closure, complete with all security technology and infrastructure, and must thereafter apply for renewed approval every two years. In an example of hypogovernance, I was informed that two-year renewal processes are inconsistent and something of a lucky draw. While the municipality may demand of one boomed suburb to renew an application, others can be left unregulated and forgotten for years. As an operational boomed suburb, streets leading in and out of the area are fitted with either 24-hour accessible boom gates, temporarily accessible boom gates (usually 12 hours per day), or permanently closed steel gates. This entire development process, from the initial demonstration of a need for safety to operations, is centrally facilitated by actors such as Col. Malan and other project management service providers. It is a time-consuming process that enrols all sorts of human and nonhuman actors in its unfolding, extracting labour, money, time, and paperwork along the way. Below, I summarise the phases of boomed suburb development from the perspective of project management, but not before providing insight into the economic dimensions of booming.

3.4.1. Economic Dimensions of Booming

The development of boomed suburbs, from application phases to daily maintenance, is a costly operation. The current fee payable to the CTMM at the lodging of an application begins at R11,000-R12,000, although this figure is subject to increase based on the amount of houses included in the enclosure, as shared with me by developers, based on municipal documentation, and appearing in news reports (Pretoria News 2018). This figure recurs every two years as part of required renewal applications. Unless a committee chooses not to bring a facilitator on board to manage the development process and instead do so themselves, early costs will be dedicated to these service providers. Facilitators of boomed suburbs charge affordable fees due to experienced familiarity with the costs that NPO committees accumulate in the unguaranteed journey towards booming their suburbs. After receiving preliminary approvals from the CTMM – I found, drawing from participant observation of the development process from early days to finalisation - the committee must also fund and manage: the purchasing of booms, gates, fences, guardhouses, and cameras and the installation of these technologies in the public road reserve; the enlistment of a security service provider to operate these technologies and cater to the suburb; agreements between the committee and the neighbouring buildings from which technologies will pull electricity; and the insuring of all these technologies, another council requirement. The costliest infrastructural development of a boomed suburb in this study amounted to R12 million. The CTMM also requires a 20% deposit or 'reinstatement fee,' made use of in the case the suburb fails approval or renewal, covering the cost of infrastructural deconstruction. During field research, I was told that a security guard (those posted daily and sometimes nightly at open gates – 'access points') would regularly cost a boomed suburb around R22,000 monthly. I was also informed, reliably or not, that actual guards receive not even half of this figure. Administrative fees are another factor to consider - one suburb in this study paid R345,000 in administrative fees alone to the CTMM and service providers, and this only halfway through development. The committee must also lease the public spaces and street corners resting immediately outside the suburb's gates from the municipality, although for a comparatively low cost of R2000 every two years.

How do boomed suburb NPO's attain this capital? What participants called "contributions" are the lifeblood of boomed suburbs, and for this reason committees throw their weight behind attempting to convince suburb residents to financially contribute to the enclosure project (Figure 4). Non-residential properties, such as shopping centres or office parks in the suburb, are also approached to contribute. Committees stylise and label these contributions as 'levies' and accumulate these through monthly debit orders. Levies, in the words of one committee

Figure 4: Contribution Appeals and Contributor Map.

Source: Author.

chairman, "pay our bills," ranging from infrastructural development and electricity to security guard salaries. Contract managing agents like Cathy collate total contributions in a 'levy roll.' This spreadsheet lists the contributions of all erven in the suburb, and some committees make a variation of the document available on suburbs' websites to reveal contributors and non-contributors. Before the instantiation of a monthly 'levy,' the committee also requires large, once-off capital contributions to kickstart development. During our interview, Cathy clarified yet another misnomer in the borderlands of booming in Pretoria-Tshwane. What committees call 'levies' are more so "subscription fees, like a gym membership." I found this clarification vital in undressing the voluntary bases upon which boomed suburbs must legally operate, that committees sometimes tactically occlude.

The consistent and enduring collection of resident contributions fluctuates. Construction and bureaucratic setbacks sway contributions. The committee, project management, and building contractor teams work against the clock to provide material evidence of where money is going. Contributions directly determine the success or failure of a boomed suburb. As I was informed by committee members, the most established and successful of these enjoy contribution rates

between 80 and 90% or more. Suburbs with less favourable rates of contribution may engage in partial operations (e.g. guards man gates only between 18:00 and 06:00) or may never come to material fruition. The following statements made by a committee chairman during a community meeting provide insight into this microeconomy:

> It's simple maths. You need to say to yourself, 'I'm willing to pay that, because I value my life and my family's life' … We cannot lower booms, put up cameras, or close gates until the money is in the account of the NPO … *The success of the gated community, whether you stay in ours or you moved to another or you have friends in another, is the contributions and the frequent paying thereof* … They [levies] go towards paying them to literally keep the lights on, to also make provision for expansion and renewal of infrastructure. The last thing that we want to see is this whole thing fall flat, and that we need to suspend these services that we have started, because then we'll have very fancy booms, that you can Christmas decorate, but we won't have security and won't have peace of mind. And that peace of mind is not only for myself but for my next-door neighbour, for everybody here, because you've got a role to play, you're here for a reason. Otherwise, you would have sat at home and had a blanky enjoying a good TV show or a cup of coffee or whatever (Committee chairman).

It is a widely held truth in the field of booming that the amount of monthly levies collected – the "contributions" – positively correlates with a decrease in the cost of the levy itself, a point that committee members vehemently stress, although often to little avail due to distrust among residents. Levies themselves vary widely, especially as figures relative to numbers of contributions. The lowest levy I encountered in the field was R380 per month, the highest, R1150.

3.4.2. Processes and steps

Below I offer a description of the phases of booming from the vantage point of facilitative project management, specifically Col. Malan's technique, as project management sits at the very centre of the actors and processes enrolled in booming.

1: Demonstrated Need: "There must be a need. And the need arises in the community, then the community looks for someone to help them make a plan, and that's when they start with me" (Col. Malan). A municipal requirement, the 'need' for security access restriction is usually backed by the provision of crime statistics. If these statistics are not severe, the CTMM may reject the application from the outset.

2: Reconnaissance: "My first step is, I do a reconnaissance. I go and drive through the area to get a feeling of the roads, a feeling of the houses, what that area can pay, where is it vulnerable. I actually go on the maps as well before I even drive out there to see where it is situated, where they will have [criminal penetration] problems." Col. Malan also counts the number of units in

the suburb during this pre-planning phase, which provides a sense of the suburb's possible budget based on capital and levy contribution.

3: Safety Plan: Colonel then drafts a 'safety plan' based on the information retrieved from the reconnaissance phase. A safety plan is a mapping and elaboration of the best ways to close and secure the suburb, including on which roads to place either open or permanently closed gates.

4: Plan Costing: Making use of software he built on his computer, Col. Malan then conducts in 'plan costing.' This serves to provide the committee a general picture of how much the booming might cost. He also consults with residents involved in the aspiring closure about their ideas of the boomed suburb's design, "because they know their area better than I do, which is great." His one request is that he meets with one small group as opposed to numerous different individuals.

5: Community Organisation: If the last four steps have been traversed successfully, Colonel now looks to coordinate community organisation to spread the news of the closure, attain 67% consent, and begin to convince residents of the benefits of contributing to the project. His method is one that asks the committee to divide the 'community' into 'blocks' of 20-30 properties on a map. He then instigates a search for individual volunteers to facilitate community organisation based on the blocks or streets in which they live. These actors are called 'street captains,' tasked with advertising the closure and convincing neighbours of its benefits.

6: Contract Managing Agent and Streetsafe: The managing agent is the administrative contractor dealing with finances in the boomed suburb, including documentation, levies, and compliance. While Colonel distributes a Power of Attorney document (an indication of consent to the closure, a voluntary willingness to contribute, transferability to the next owner, and the vesting of legal powers with Streetsafe) and documents containing information and a map of the closure - ideally "a one or two-pager that you can hand out" - the contract managing agent provides residents with a debit order form for capital contributions and levies. "Without that documentation, don't go to your community."

7: Public Meeting: This is a prerequisite of the city council. A venue, date, and time is arranged, often advertised through placards placed around the suburb inviting residents to attend. "What works very well is at the public meeting to have tables with the captains there, and one big map at the entrance with the chairperson welcoming the people." Residents register attendance and receive a welcome pack. Crowds are dispersed, seated, and Colonel gives a presentation detailing everything residents need to know about the proposed closure. Thereafter

it's all about people signing up – "once we get the support base, then the debit order starts running and I kick in."

8: Traffic Impact Study: With contributions now ideally streaming in, Colonel gets to work by contacting private traffic engineers to consult with himself and the committee to ensure compliance with all city regulations pertaining to traffic, for both vehicles and pedestrians.

9: Compile and Submit Application: Composed of all the requirements met thus far, an official road closure application is compiled by the Colonel and sent to 'city council.' Now begins the usually two-year wait for a response from the CTMM. In some exceptional cases, this process can be shortened to eight or nine months.

10: Public Participation: In the meantime, the closure is advertised for public participation. It must appear in the provincial gazette as well as two newspapers in both English and Afrikaans. As per requirements, opportunities for public participation must be made available for a period of no less than four months.

11: Wayleave Approval: A 'wayleave' is required for construction. Specifically, this is a formal permission to conduct construction work in the public road reserve and engage in adaptations of public infrastructure. Contracted engineers offer detailed plans, and the proposal passes through all relevant service providers, including Eskom,[7] internet companies, and municipal water services. It then once again moves through 'council,' usually taking around three months.

12: Bill of Quantities: The bill of quantities forms the basis of the tender. The tender/s encompasses legal agreements with selected security providers and construction contractors (chosen in deliberation between the committee and Colonel), as well as other service providers, such as the contracting agent and companies that deal with waste. It is Colonel's technique to complete these last three steps simultaneously, in order to save time.

13: Final Approval: If there are no issues or objections throughout this process, a final approval from the council serves as the administrative finish-line ribbon for a hopeful boomed suburb.

14: Physical Construction: Tendered building contractors now construct the boomed suburb, including the placement of booms over the roads at access points, as well as the erecting of fences, pedestrian entrances, permanently closed gates, and guardhouses.

[7] National parastatal electricity provider.

15: Wayleave Sign-Off and Council Inspection: After construction, the CTMM council sends municipal engineers to conduct a tedious inspection and make sure all stipulations of the wayleave have been adhered to. This municipal team is tasked with inspecting a variety of infrastructures, including steel work, traffic design (roads and sidewalks) and signage.

16: Operations: If the inspection does not return any incompliances, the suburb can now begin operating access control measures, and the process is complete.

3.6. Public debate: Supporters and Opponents

As stated above, most residents of boomed suburbs are supportive or at least apathetically accepting of the closure of the suburb they live in, citing safety as a primary reason. Developers are also supportive of these closures, exhibiting passion for their professions and full belief that boomed suburbs are beneficial for the city, from Colonel Malan to Cathy. For the most part, I encountered little resistance to the booming projects taking place around Pretoria East. This was of course related to my positioning and upward gaze in and of the world of boomed suburbs. Resistances I did encounter were usually rooted in practical matters, such as the placement of a gate, their hours of operation, or the blockading of traffic shortcuts. This was the case for one of Zuki's friends in the suburb, who found frustration with the placement of a permanently closed gate beside her property, requiring her to reroute her daily commute out the suburb to a main gate. Take as another instance a meeting that took place between several Waterkloof embassies and developers of the then still boomed suburb to-be:

> To my surprise, this meeting had nothing to do with organisational or ethical concerns, and rather revolved around the surmising question, in Colonel's words, "How are we gonna get out?" Embassies were concerned that in an emergency their safe passage out of the suburb may be hindered by the gates and booms. Only the German embassy raised a moral argument in a later meeting, which was corroborated by the Councillor and summarised as "We built walls, we know what they do" (Field writing excerpt).

Ideological arguments I encountered mainly emanated, again in wary consideration of my participant base, from Pretoria-Tshwane's intelligentsia, with one university professor-activist calling them "laagers" and "a total onslaught of the past." Take this field excerpt from an interview with the ward councillor as an example of detractors' political arguments:

> His gripe is not so much about the concept itself but rather about the "commodification of fear" and how vulnerable residential fears are artificially intensified by what he would call in a later meeting, "fear mongerers" and "fear entrepreneurs," in search of profits. He speaks about the pressure tactics of the committee and their unrelenting push for funding, jokingly (but not so jokingly) labelling them and their initiative as "the antichrist." He speaks of how non-contributing residents are increasingly demonised and defamed, reminding me of the democratic procedures that underlie the booming of the suburb, and that residents have the right to refuse. Committee members get lost in power trips and neighbours quickly turn to enemies.

> He argues that a certain "classism" is emerging due to the desires and pressures of these fanatical "fear-mongerers." He tells me of some unsavoury experiences he has had with them, such as shouting matches in the street and arguments at community meetings (Field writing excerpt).

The few residential participants who held reservations about the booming of suburbs were similarly uncomfortable with the committee's pressure to contribute and expressed suspicions over possible corruption. Others expressed sympathies with worker-pedestrians and complained how these enclaving projects reminded them of the sort of separateness that characterised their childhoods and younger years under apartheid.

To understand opposition to booming, one must return to the earlier days of road closure and the SAHRC hearing. No discussion of boomed suburb opposition is complete without mention of Nick Karvelas, the figurehead of the anti-booming camp at the hearing and leader of the Open City Forum. Karvelas was a school principal and activist from Johannesburg. At the commission, Karvelas' argument stressed the exclusions that boomed suburbs intensify, recounted unsavoury conflicts between residents, pedestrians, and security companies, and provided photographs of shotgun-armed chairmen and fences separating black domestic workers. In what is no direct quotation, Karvelas asked the commission, "Is this what you want, do you want this separation in South Africa?" Karvelas' arguments embodied much of the anti-booming argument circulating the country at the time, drawing from its history of segregating enclavement under apartheid and how boomed suburbs appeared at odds with post-1994 democratic ideals. Karvelas was later murdered in his home in 2007 under suspicious circumstances, in what SAPS deemed a botched robbery. The case remains unsolved. It is now quite rare for detractors to passionately protest boomed suburbs. This is unlike the first two decades of democracy, that saw contention reach peaks as high as the SAHRC. Reasons for the deafening of opposition are explored in Chapter Six.

3.7. The Lowering of a Boom

I close this chapter by providing a vignette written during my time in the field, inspired by Max Gluckman's (1940) 'Analysis of a Social Situation in Modern Zululand,' in which he recounts the ceremonial opening of a bridge in colonial Mahlabatini, and complex social exchanges observed throughout the day. Caught in a constant process of becoming, however, it should be noted that the lowering of a boom does not constitute an end for a boomed suburb, but rather the initiation of new instabilities and beginnings, as explored later in this dissertation.

On April first I awoke comfortably and prepared myself for the lowering of a boom in a long-anticipated, recently completed suburb in the far reaches of Pretoria's east, over the busy N1

highway that separates the old east from the new. Thankfully not too busy, however, on this sunny early-winter morning, even if pacey as always. I drove to the event alone in my tiring old car and pulled-up along the half-grass half-dirt embankment directly outside the park where the Flea Market and Fun Day was being held. On the way in I noted that the entrance was still unmanned and the booms were upright, a sign that operations were yet to begin, but also that the signboard detailing municipal statutes had been erected upon and between two aluminium poles dug into the soil beside the gate. This is a figurative seal of approval for boomed suburbs in terms of municipal governance and legality. The committee had advertised the event to residents as a chance to "celebrate the coming down of the RSE boom gates and to enjoy a morning out with your friends in the park!" It should be noted that the "friends" mentioned here referred to nonhuman pets, of which there were many dogs in attendance. I did not encounter a cat on this day, however, despite the warm invitation extended to them. The significance of a ceremonial lowering of a boom was that it was the culmination of attempts to enclose the suburb that began as long ago as 2007. In previous conversations with residents I was told that a tragic murder took place at this time, prompting the efforts, further compounded by consistent criminal activity ever since. The suburb's vulnerability is related to its geographic location, located within the dense natural overgrowth of a nearby spring and beside the large N4 highway. Such features aid criminals in attempts to access, hide in, and escape the area. Previous efforts to boom the suburb were met with numerous challenges and failures over the years, particularly from a residential support and fundraising perspective. Today's event celebrates the committee's triumph over these long-standing challenges and a promising, hopefully crime-free future for this large suburb. The small park is of especially conventional design, enclosed by dark-green palisade fencing and populated with two steel benches of matching colour that face each other diagonally across the slowly yellowing grass of the park, with a rusting but functional merry-go-round and swing set between them. To the east of the park's boundary is a popular shopping centre and on the road hosting it, one of the boom gates of the suburb. The immediate space beyond the eastern fence is dominated by the back end of a double story cycling shop, offering the park some shade spare for the few trees that already do so. It is neighboured by complexes to its west, and by a church's auxiliary parking lot to the north. Complete with traffic cones, parking lines, and poles, local driving schools regularly use this space to teach parking methods to students. At that time, it cost thirty Rand to practice parking for two hours. I had arranged to meet an old schoolfellow at the event who I knew was a resident of the suburb, living in an enclosed complex directly across from the park entrance. At the time of my arrival he was still getting dressed. I opted to wait for him at the entrance of the park and gather observations in the meantime. I was also hoping to see and continue

developing rapport with the estate manager, who when I saw last mentioned doubtfully that he would attend if he was not too busy. He very likely was as I did not see him, which was understandable given the various logistical operations taking place on this day, many for the first time. A number of cars, now including mine, were parked up on the street's embankment, more than I had ever seen before at this particular site. On other days, this short strip of land is usually the domain of security patrol vehicles and their operators resting in the shade, UberEats delivery drivers waiting for orders, waste pickers looking to secure discarded materials of value, and of the suburb's various workers who often chat away sitting on plastic beer crates. In fact, conversations I held with residents of this suburb in the past revealed a hesitancy to park here, in fear that motor cars be stolen or broken into. It is clear then that not only has the event enjoyed relatively decent attendance, but that the booming and fencing of the suburb is already instilling a sense of safety in the residents. The surrounding soundscape is almost completely engrossed by the sound of the whirring diesel generator providing electricity to the event, but for the muted laughter of children playing in the park under its din. In light of the national electricity crisis, the clamouring sound of a running generator has become unremarkable in Tshwane and probably the country at large. Olfactorily I am met with a unique smell, dually produced by the choking fumes of said generator and the bellowing smoke of a boerewors *braai*[8] near the park's entry. The braai is manned elegantly by a volunteering resident and father, grilling the *wors*[9] to it to be sold to attendees in the hope of raising some money for the suburb and the treacherous financial terrain over which it will have to cross in the next year. He unsuccessfully invites two male teenage residents passing the park on the sidewalk to come and try some. In total, attendance at the event was minimal when considering the suburb's high population, but this did little to dampen any enthusiasm on the day. I realise I am still waiting and enter the park.

Extending into the middle of the park, a collection of gazebos and small marquees have been arranged to form a right-angled market corridor beginning near the entrance. The stalls underneath these, operated by volunteers and small businesspeople, sell various goods. Two real estate stalls display properties for sale and rent in the suburb and its surrounds, with free refreshments on offer for those looking to enquire. I first visited a stall selling eats run by a cheerful group of volunteering women and girls, who all appeared to be friends and some kin. Here I bought a Coca-Cola and was referred to as *meneer*[10] by the young girl who served me, a title that forced me to reflect on my age before heading further along down the corridor. On

[8] Afrikaans: Barbecue.
[9] Afrikaans: Meat sausage.
[10] Afrikaans: Mister, Sir.

my walk and browse through the small, idle flea market, passing all sorts of crafts and wares, I stopped twice to have a small discussion with a woman selling dog beds and to examine the tall foldable listing boards put up by the local realty companies. I note that prices of houses in the suburb have slightly increased following the finalisation of access control, and that the companies make use of terms ‘gated estate’ and ‘boomed estate’ to describe the gated suburbs in which these properties, and others like it in nearby boomed suburbs, are located. Exiting the market corridor, I walked in a semi-circle across the park and planted myself on an empty bench to finish my drink and take some notes, depending on how long I still had to wait for the research participant to show.

Children run and play in the park as parents stand and speak at length about neighbourhood gossip and personal news, to such length that even their dogs have become tired and now just lay by their feet, no longer interested in greeting and sniffing their fellow canines. Dogs that have arrived later are full of energy and either excitedly socialise with others or engage in play with their owners and passers-by. All in all, the park is livelier than it would be on any other Saturday and full of characters who would likely have not appeared in it without the event taking place. I am still found to be waiting for my accompaniment, who has rarely if ever attended a community event of the sort before. After collating my notes and disposing of my bottle in the nearest dustbin, another green icon of park infrastructure in South Africa, I decide to exit the park and go and fetch him by calling on his house number at the complex intercom. This not before encountering the committee chairman on the way out, who I had met only a few weeks before while tending to the site with Streetsafe, after a complicated and somewhat unsuccessful attempt to recruit him as a participant on a previous, unrelated occasion. We exchanged pleasantries and he informed me that operations were expected to commence that evening, fully deflating my naïve and already faded hopes of a ribbon-cutting, clap-inducing physical lowering of a boom to take place. After waiting for the gate of the complex to slide open from a button inside the house, I arrive at my participant’s home and quickly discover the reasons for his delay when observing his room. He had, in a fit of innocent excitement aimed at the prospect of the communal event taking place, both so local and so unfamiliar at once, begun to worry about his choice of dress for the occasion, and eventually snowballed himself into an anxious paralysis at the thought.

Chapter 4: Drivers of Booming in Pretoria-Tshwane

If the previous chapter was geared towards answering the secondary research question of what is booming in Pretoria-Tshwane, then this chapter looks to answer questions about the drivers of booming. It has already been established that crime prevention and safety are key motivations behind the booming of suburbs, but in this chapter I further explore: What are the drivers of crime? What are other drivers of booming? What are the roles of private security actors in boomed suburbs? As such, the chapter begins with a description of criminal statistics and realities in South Africa and Pretoria-Tshwane, particularly as they pertain to the proliferation of boomed suburbs, followed thereafter by an unpacking of the relationship shared between crime and hypogovernance. It is revealed that boomed suburbs, from a structural perspective, emerge due to policing and planning hypogovernance. I close by reviewing several secondary reasons as to why residents choose to boom their suburbs.

4.1. Crime in South Africa and Pretoria-Tshwane

Crime and the fear thereof, real or perceived, is generally taken as the main driver behind the proliferation of gated communities and boomed suburbs. Crime in South Africa is a cross-class, reality-defining feature of everyday experience (Body-Gendrot 2012), and the widely-held fear of it is far from irrational (Freund 2006), unlike in safer contexts around the world. South Africa consistently competes with other world leaders in crime statistics, most recently ranking fifth in crimes per 100,000 people (Numbeo 2024). At last calculation in 2021, it was also the international bronze medallist in intentional homicide (UNODC 2021). On average, between 70-84 people are murdered per day in the country (SAPS 2023). South Africans identify crime as the biggest problem they face, second only to unemployment (Citizen Surveys 2019; Afrobarometer 2024). Over 67% are seriously worried about crime and violence (Statista 2024). These are not new sentiments. Surveys conducted in the early 2000s similarly found that "the public exhibits high levels of insecurity and fears for their personal safety and rank high crime levels as their number one concern. Ordinary citizens face a high probability that they will be victimised at least once every three years" (Minnaar 2010: 200). The frequency of violent crime and murder were concerns even before then (CSVR 1998). While crime undeniably affects those living in impoverished areas more than wealthier counterparts (Mabin 2005; Freund 2006; Bremner 2010; Murray 2011), it is clear that individuals, communities, and businesses across the class board are at least strategizing, if not fortifying, against it (Landman and Badenhorst 2014; Landman 2020). Baked into daily experience, the 'talk of crime' (Caldeira 2000) only reinforces crime fears and is one of the most widely spoken *lingua*

francae of South African cities. Crime talk in South Africa is heavily laced with notions of class, difference, and exclusion (Lemanski 2006; 2007; Durington 2009; Falkof and van Staden 2020). Race categorisations of the past have combined with criminal realities of the present to produce a popular image of the conventional criminal as a collectivised silhouette of the young black male (in security speak: a *bravo*), with little concern for private property, morality, or the lives of targets (Bremner 2010). Crime and the fear thereof reshapes the urban environment and language of the city (Murray 2022). This is more than visible in South African cities through fortified enclaves of all facades and functions, in road signs (that indicate one is entering a high-jacking hotspot), public infrastructures and offices (many of which are fenced), and microfortifications of individual houses discussed in previously. The proliferation of fortified enclaves after apartheid is inseparably tied to South African criminal realities (Freund 2006). Crime has moulded South African cities into cities at war with themselves, under siege from within (Murray 2011; 2022). Crime fear is transposed into aesthetic principle, the material result of which is a city of enclaves (Lipman and Harris 1999). Crime also undermines sociability, and has concretised paranoia, suspicion, caution, and avoidance as orders of the day (Czegledy 2004; Falkof and van Staden 2022). Public space is engaged and imagined with agoraphobic anxiety (Murray 2022). Crime and its mirror reflection of security have become a 'way of life' (Bremner 2010). As put by one participant security officer, in sighing acceptance of the flooding of community WhatsApp groups with residents' tip-offs, "But you have to be paranoid, you're in South Africa."

Pretoria-Tshwane ranked third and second as the most criminal city in the world in 2021 and 2022, ranking first in Africa in 2023 (Numbeo 2024; Statista 2023). Journalists have not missed the yearly publication of these statistics as opportunities to contribute to the talk of crime (The Citizen 2016; Rekord 2023; BusinessTech 2022; IOL 2024). Regarding a more recent ranking that pitted Pretoria-Tshwane as the second most dangerous city in the world, however, IOL released a follow-up article (2024) clarifying the details of the statistics after social media users raised concerns about its validity. These statistics were revealed to be modelled on crime indices that were based on *perceptions* of crime in the city, surveying a sample of little more than 2000 respondents. In terms of more serious contact crimes such as murder, Pretoria-Tshwane does not breach the global top fifty. Even in its potential to be misinterpreted, however, these statistics still shed light on the prevailing fear of crime in this city. Based on these statistics, it may be said that Pretoria-Tshwane is the second-most scared or crime-fearing city in the world. Across the country, crime stats are skewed due to victims' inconsistent reporting of incidents, who have little faith or reason to do so. Experts in the field, employed

by the state or in the private security industry, have developed knacks for working within this skewness. Col. Malan explains the reliability of crime statistics in Pretoria-Tshwane:

> If you ask the neighbourhoods, they will provide you with stats, but it's not verified, you don't know if it encompasses everything. But here's our problem. It seems that the SAPS statistics have about a 60 to 70 percent accuracy, meaning there's not less incidents, those incidents at SAPS definitely happened, but it doesn't include everything that happened. Because if you don't go and report it to SAPS, how will SAPS know there was a break in? And if you don't have insurance, why on earth would you go to SAPS? The only reason why you go and report it is because you've gotta put in an insurance claim. It's not as if you think you're gonna get your stuff back. Nobody gets their stuff back. So if you take our murder rate, that's probably close to a hundred percent accurate. If you take vehicles stolen, I would say that's about 80 percent accurate. Vehicles broken into, probably about 60 percent accurate (Col. Malan).

He and other experienced professionals prefer to use SAPS statistics, as these are ultimately the official source. Nevertheless, Pretoria-Tshwane is a dangerous city. SAPS recorded 38695 contact crimes, 26570 property-related crimes, and 848 murders in the last year (SAPS 2023). Petty crimes outweigh those involving firearms and vehicles, although around 25 motor cars are stolen per day in the city, with the East a major target of this crime type. Brooklyn police station, one of the two stations that cater to the suburbs anchored in this study, was in 2023 the thirteenth busiest in the country, fielding 6489 reports of serious crime alone (SAPS 2023). Like in other South African cities, but extensively here, the material result of the war against crime is the development of fortified enclaves, gated communities, and boomed suburbs. It is not as though these are failsafes, however, and security is unendingly upgradable.

4.1.1. Participants' Experiences with Crime

Behind every boomed suburb is a story of crime, tragic or gratefully only almost. Disclosing these stories when justifying the necessity of enclosure is a common social ritual in boomed worlds, especially for residents' committees. For one participant committee member, it was the poisoning of his two dogs that pushed him to throw full support behind closure. For another, it was being held up and robbed at the gate of his private home. Residents hold similar motivations for living or moving into boomed suburbs and contributing to upkeep. Ingrid, who resides in a security village (complex) within a boomed suburb, what one suburb chairman deemed "the best of both worlds," had the following to say:

> That was the whole appeal as well, moving away from our old house that was stand alone, just there in the 'naked' suburbs (laughs). There was always security concerns, we had a couple of incidents at that house. It was a worry for my parents having a lock-and-go that was vulnerable, so it needed to be in the complex, it was definitely gonna be in a complex. And like I said the boomed area added this like extra layer of comfort and reassurance … but there is this sense of peace that comes with just knowing at least there's just measures in place (Ingrid).

Rhulani, a participant who at the time of our interview was living in one of the New East's larger estates with his mother, recounts a story from childhood when residing in a complex nearby. Staying home from school for the day, he was surprised to see a group of repairmen (who he recognised as those working on the house a week before) attempting to skirt the garden's walls. When the men noticed the boy's gaze, they claimed to be friends of his father with a delivery for him. Rhulani's father had passed away several years before. After this experience, imaginably traumatic for the young man and his mother, "it was always estate, estate, estate. It had to be." The direct, corporeal link between crime and boomed suburbs was reaffirmed during my interview with the chairman of Pretoria-Tshwane's oldest boomed suburb, Herman:

> The suburb and those around it suffered extensively from crime in early period, with the chairman citing his personal experience of 28 burglaries at his home in 10 years. It was not until a beloved architect in the suburb was shot and paralysed in his driveway upon returning home from work that bridgeheads towards enclosure took form. "Then the whole community was up in arms, and we decided to close our area … crime was just so out of control that we were basically forced to do it" (Herman; field writing excerpt).

Pretoria-Tshwane's criminal and hypogovernance realities reproduce, in the words of this study's participants, a logic that there is 'no choice' but to boom suburbs or relocate into security villages. As part of the ritual of retelling crime stories, another committee chairman provided his own in order to justify why he sought to "gate our community, for safety, for all of us." He speaks of a pair of masked men who scaled his home's walls, attempting to gain access inside with only his wife and daughter on the premises. His wife's quick shutting the corridor's Trellidor and pressing the home's panic button ultimately saved the two from becoming victims of crime. But little has assuaged the trauma of the near invasion, and his daughter still struggles to sleep alone in her room following the event. Not all are as lucky. At another boomed suburb, its finalisation was seen as long-sought closure for the murder of a chairperson's son, which sparked the initiative in the first place more than ten years before. While these ritual recollections of crime are at times strategic appeals to emotion, they are also difficult, life-changing memories, and some speech givers well-up when giving presentations. The data made in this study suggests that residents do not actually want to live in boomed suburbs, but that they are proclaimedly forced to, and have 'no choice' otherwise. They want to live in suburbs free of crime and suburbs that they think resemble those of the Global North, 'as seen on TV,' although infused with elements of South African nature and bush. The quotes below shed light on the logic of 'no choice:'

> It is wrong that South Africans should be faced with this, order is missing. It's not fair that people have to pay for these things … People don't like pain. People are not stupid. People protect themselves, they always have (Col. Malan).

> I don't like the idea of living in a boomed suburb, it feels like you in a prison, but you have no choice (Security officer).
>
> People resisted constructing security fences long after it became fashionable in neighbouring suburbs, and to this day, the people of Lynnwood have often avoided high walls in favour of transparent fencing, or even employed some derivative of fortress architecture, where part of the home is designed to be secure without the need for fencing or walls … The quintessential Lynnwood property is perhaps one that appears relatively open and accessible, but where privacy is more likely to be provided by mysterious garden layout than impenetrable walls; and security by the dog (LGE 2024).

The data suggests that residents of boomed suburbs, at heart, want to live in something like Jane Jacobs' (1961) suburb of functional (although not particularly social) diversity, limited but wholesome neighbourly sociality, and 'eyes on the street.' But faced with less-than-light criminal realities and bereft of the social ties that underline Jacobsian urban space, eyes on the street are outsourced to private security guards and camera and other technologies.

In closing, boomed suburbs are premised on making the fight against crime, which can be quite lonely, a shared one. They allow residents to bypass the unsightly DIY contorting of homes to accommodate different security technologies and microfortifications. The proliferation of fortified enclaves is also not expected to seize any time soon, as crime is unrelenting (Makhale and Landman 2018). More passionate developers of boomed suburbs also mobilise and imagine these enclaves as part of a broader, city-wide developmental effort: "The focus must not be on security, the focus is on development. The lady working in my house today, she works hard, I pay her. If she leaves with a taxi to Mamelodi and they steal her money, it's totally unacceptable" (Col. Malan). As such, Col. Malan and others have forwarded visions for a boomed city in which different areas, via reduced crime and enclosure, are able to harness localised economic development in the face of state abandonment. Enclaving, once again, is shown to be a historically mobile orientation and practice (Nielsen et al 2021).

4.1.2. Private Security, Vigilantes, and Onions

South Africa's high crime rates and consequent anxieties, coupled with policing inefficiencies and low trust, has provided fertile ground for one sector to boom, protecting those who can afford to pay for it – private security. There are now over 2.7 million private security guards in the country, some half-million of which are stably employed. This constitutes a 400% increase in the number of private security guards since 1997 (Associated Press 2024). Since 2014, registered private security companies have increased by 86% (BusinessTech 2024). In total, the private security industry is now worth over R50 billion (ibid.). In the words of a Minister of Police himself, "the private security industry continues to play a significant role in the South African economy and it is by far one of the biggest suppliers of entry-level jobs in the labour

market" (ibid.). The growth of private security starkly mirrors the state's failure to effectively manage public safety. As of 2023, there were 145256 police officers in South Africa, representing an allocation of one officer for every 427 people (ibid.; Associated Press 2024). One encounters private security in every corner of Pretoria-Tshwane, be they the heavily-armed soldiers of elite service providers, baton-bearing mall cops, or street CCTV cameras. Private security is unequalising, in that it leaves those with less income more vulnerable to crime, although various affordable and smaller-scale services are also on offer. Pretoria-Tshwane is today militarised with the presence of privately trained and employed security guards and a variety of faceless, infrastructural robocops, such as cameras or booms (Murray 2022).

Private security complicatedly acts as both a saviour of people the state has left behind and an actor capable of exploitation, brutality, and murder, as evidenced through incidents such as the 2021 Phoenix Massacre (Washington Post 2021), or G4S'[11] use of torture methods in Bloemfontein (BBC 2013). What remains undeniable is the absolute infusion of private security into post-apartheid daily life, well expressed in the state's mobilisation of this sector and its technologies as well. Its pervasive presence is normalised as part of a 'banal militarism,' consisting of "prosaic routines and rituals [that] make war, weaponry and violence appear natural and inevitable" (Cock 2005: 801). Private security forces often operate alongside SAPS and other public police forces to curb social unrest and solve crimes. City residents purchase private security plans that guarantee armed response or assistance in the case that their home is breached, their car is stolen, they are kidnapped, or in other physical crime encounters. Most homes in suburban Pretoria East are fitted with alarm beam systems that are connected to security provider control rooms, from which rapid armed response is dispatched. As stated, the over 10,000 registered private security providers in the country offer a variety of products that cater to different consumers situated at different locations in the class spectrum. At the heights of this market are elite companies who boast sophisticated arsenals of weaponry and some of the most advanced, cutting-edge security technologies on the planet (Bremner 2010; Murray 2022).

As regimented paramilitaries, these firms are also structured according to internal hierarchical orders. Many security guards across Gauteng are not armed. Superiors and officers usually are, however, and have been trained and certified in this regard in accordance with regulations set out by the Private Security Industry Regulatory Authority (PSIRA). This organisation serves to monitor and standardise the private security sector, which is not only prone to transgressions

[11] G4S is a large, multinational security provider based out of the United Kingdom.

of the monopoly of violence, but also vulnerable to exploitation, challenging working conditions, low pay, and employment insecurity (Sefalafala and Webster 2013). Currents of racism flow across the industry between white and black guards and officers, shaped by internal power structures and more than a few socio-historical inheritances. One 'joke' heard during my time spent in this arena of the field was, "*Wat kry Sipho vir sy verjaarsdag? Jou fiets*."[12] But even the most bigoted of private security officers are capable of expressing sympathy for entry-level guards' low pay in relation to the risks involved, as per interviews I held with such participants. The precarity that abounds in the private security profession is evidenced in a story I came across while exploring one of the older boomed suburbs. It was one of James, a security guard who had, since starting his short term of employment in the suburb, rapidly ascended in reputation to residents and security superiors alike. Loved for his friendliness and lauded for his skill and work ethic, a bitter scene unfolded when he was arrested at work for falsifying his identity documents and security qualifications. It was later revealed that the beloved guard had supposedly purchased an identity from a farm worker in the Free State province after migrating from Zimbabwe. It should be noted that despite the persistent vibration of racial undertones in this industry, differently raced actors must and do work in close cooperation in defence of the lives of the employer's clients as well as their own. In these high stakes, relations characterised by shared stress, camaraderie, and understanding if not intimacy unfold upon a groundwork of racial undertones in ways that can and sometimes must mute them.

Private security companies and employees perform a set variety of functions to maintain the everyday security of boomed suburbs. These include more conventional techniques of suburb patrolling and general surveillance, but also: manning guardhouses, booms, and camera systems; manning control rooms; locking-down the suburb in criminal emergencies; responding to criminal incidents; attending community meetings; and developing collaborative (and profitable) relations with committees. The general approach to security in boomed suburbs is premised on the popular yet ambiguous 'onion layer' or 'circle' model. Just about every participant involved in the securitisation of boomed suburbs referred to this model. My attempts to trace the origins of the onion layer in the criminological and security literature were unsuccessful. It appears to be a long-held, 'trademark-free' approach available for all security practitioners to use:

> I don't know where I learnt it. As I went along and had to explain to people how to protect themselves, I started using this. I'm not sure I ever learnt it from anybody … I think it's just a

[12] Afrikaans: 'What does Sipho want for his birthday? Your bicycle.'

> description that people use, of the onion. I don't use that term. I say it's circles. I use the circle (Col. Malan).

The approach forwards that security best operates in concentric circles that expand from a central point of utmost safety and defence. Depending on the level of detail rendered in the model's interpretation, this central point or circle may be one's bedroom or the physical walls of the house proper. The following, surrounding circle may be the garden or fences of the property at large, and so forth. In the onion layer model, boomed suburbs offer resolve for what happens after "private property stops." The model reflects working truths of developers and private security actors in Pretoria-Tshwane, namely that crime cannot be eradicated, but it can be displaced. As one security officer put it, "Crime doesn't stop, it gets pushed away." The broader criminological purpose of boomed suburbs is "to force criminals to be channelised into a space." Col. Malan offers a veteran interpretation of onion layers below:

> Your first circle is your room, that's where you sleep. That's why in your room you lock the door, you've got an (alarm) eye, and you've got the (alarm) keypad. The next one is your other rooms, where you put a fence in your passage, so it's the kids and you in this next circle. Then your inside of your house, this is where you have either a dog or you would have little eyes looking at movement. Then your wall. And the last circle is now the streets. So you add out of your private circles, you add now a layer which is the public roads that you close. Don't make any mistake, there's circles outside of that as well (Col. Malan).

He, like others, reminds that "A road closure does not stop crime, but prevents it."

There are other ways residents of Pretoria-Tshwane tackle crime as well. Here I reroute one of the larger points of this chapter, that being that crime and security suffocates daily life, and in the process reshapes the city. For residents without the legal, financial, or social means to move into gated communities or collectively boom areas, matters must be taken into their own hands. Across both urban and rural spaces in contexts of privilege or precarity, vigilante and activist groups, resident patrols, and community watches constitute diverse resistances against crime. These collections of amateur crime-fighters, whose battlegrounds may be the narrow walking paths of informal settlements or the open plains of white farmlands, operate in ways that blur the law but whose momentum makes them difficult to control. One of these fighters, in a BBC expose on vigilantism in South Africa, pleaded that "We are living in cages and that is abnormal. It shouldn't be like this. If one thing can get changed in this whole country is that crime just has to disappear" (2024). Many boomed suburbs are now-bloomed flowers of amateur, residential security initiatives that began long before. For years before Lynnwood was successfully boomed, for example, a team of more than 170 residents collaborated with SAPS and the designated CPF to conduct nightly patrols either on foot or in private cars. Some of the security professionals in this study expressed frustration with the involvement of residents in crimefighting, particularly due to their propensity to "get in the way," lack of professional

training, and tendencies to relatedly relish in the Dunning-Kruger Effect. In another boomed suburb under scope in this study, I was fortunate enough to attend several meetings of a suburban vigilante group that was active both before and after the suburb was boomed. Their continued presence after enclosure reinforces the point made at the end of the last chapter, that the lowering of a boom does not constitute an end or a guaranteed reduction in crime, due to contextual conditions faced by different suburbs. In the case of this group, a collection of suburban fathers, low financial contributions and the presence of geographic vulnerabilities required of them to continue vigilante efforts even after booms were dropped. The members of this group sleep with radios at bedsides awaiting a transmission in the dead of night, much to the dismay of their wives, who in some cases eventually barred husbands from meeting with the group during my time in the field. The group would meet weekly or bi-weekly to discuss the shortcomings of their suburb's particular installation of the booming model, strategize tactical responses to ongoing crime threats, and share amateur security knowledge amongst each other.

4.2. Hypogovernance and Boomed Suburbs

It is at this point I ask, what are the drivers of crime and its consequent responses in the form of enclavement and domineering private security? Scholars have consistently argued enclaving and fortification are less products of crime than they are of state failure, or in the language of this dissertation, hypogovernance. Boomed suburbs develop in parallel with discourses of state failure, embodying sentiments of self-determination (Dirsuweit and Wafer 2006). People are left to fend for themselves under conditions of hypogovernance, and the market and private sector become arms with which to conduct this defence. Policing hypogovernance disproportionately affects the poor (Mabin 2005), but this has done little to tame the tsunami tide of enclaving in response. According to one leading survey, half of South Africans have little to no trust in SAPS, and 73% feel that the government is 'very bad' at reducing crime (Afrobarometer 2024). Security and safety shortcomings of the South African state are visible to more than just its citizens as well. The World Bank's (2023) recent report, aptly titled 'Safety First: The Economic Cost of Crime in South Africa,' estimates that crime forces GDP losses of at least 10% (ibid.). In another example, the South African state asked Google to remove a specific route from Google Maps, as it runs through the infamously dangerous Nyanga township on its way to Cape Town International. Two international tourists have been killed in incidents related to the use of this route (DW 2024).

Scholars suggest that the state has been unable to keep up with crime (Chipkin 2012). In this vacuum, private security has emerged as a costly but reliable means of securing oneself and one's property. The explosive growth of private security and the private property sector, is, however, not as sudden as some analyses suggest. The apartheid state was long open to the marrying of private interests with state objectives. What differed after 1994 was that objectives had changed, and flood gates were opened (Rehbein 2018). The government's policy shifts on crime between 1994 and today indicate that the state recognises its loss of control, and has resorted to more conservative, as well as openly privatised security methods in the process (WPSS 2015; ICVPS 2022). For instance, Vumacams[13] populate the Gauteng province with little regulation on part of public law enforcement or municipal authorities (Murray 2022). Crime and crime fears, experienced and reproduced due to hypogovernance, are the primary drivers behind boomed suburb development. The SAHRC hearing and resultant policy on road closures is perhaps the most formative example of the relinquishing of security provision to private actors and residents' committees, particularly the 'cautionary but not restrictive' approach taken by the state.

But hypogovernance is not limited to policing alone. The realm of urban planning is another victim of state absence, specifically its forfeiture to private actors. Early goals for the Capital included integration, consolidation, densification, and compaction of already sprawled and sprawling city space under historically-informed premises of mobility and equalisation of opportunities (GSDF 2000; 2010; CDS 2005; MSDF 2012; Horn 2021; Rwelamila 2022). Generally, the CTMM aims to both densify and expand the city "into open spaces to foster social capital and address socio-economic inequalities and [to] counterbalance the dominant urban sprawl and shift to new urban edge settlement" (Giddings and Rogerson 2022: 254). In working through Pretoria-Tshwane's planning documents, one can trace the contours of its urban hypogovernance in the post-apartheid context (Mashiri et al 2017). Taken temporally, these documents reveal the extent to which private property capital has swallowed the urban planning authority, and the gradual concretisation of this state of affairs.

Most ambitions of the CTMM's early planning documents have not come to fruition (ibid.). Consultations with later planning documents indicate that the City has withdrawn from the pursuit of these ideals in favour of private, growth-based development, even if maintaining a rhetorical stance still somewhat reflective of these earlier urban designs (Makhale and Landman 2018). Today, Pretoria-Tshwane is a city that is less the child of the state than the

[13] Highly popular private CCTV provider, often contracted to install cameras in public spaces.

adopted child of the private sector. The reshaping of the city, like others in the country, has been characterised by the privatisation of planning, development, and maintenance processes, by the deregulation of private development, and by highly speculative, large-scale public-private development partnerships (Bezuidenhout and Buhlungu 2015). Bremner noted this trend earlier in its unfolding:

> The result has been uncontrolled speculation across the city. From the hasty conversion of garages on suburban streets into shops or laundries, to the reuse of retail space in the inner city for housing or manufacturing, or the explosion of new suburban office parks, control of development is no longer in the hands of the city's officials. Instead it is in the hands of entrepreneurs: the hawker eking out a living selling tomatoes and bananas, the Senegalese trader making cross-border deals from Johannesburg's east end, the casino developer pouring billions into the theme parks. Everywhere development is taking up the slack, working through invisible networks of associations in the spaces between what was and what is still to be defined (2010: 212).

Citizens have not overlooked these "contradictory" policies of urban development (Freund 2006: 318). In the early 2000s, waves of anti-privatisation initiatives sought to challenge the blazing but officially silent selling-off of their cities and lives (Runciman 2012). These brave movements have over time become scarcer, constituting a scattered "popcorn politics" (Dwyer 2004: 28). It is evident that "the state tends to ride the horse of private enterprise which often continues, and even magnifies, existing disparities" (Freund 2006: 325).

At the other end of the spectrum, urban hypogovernance has incubated the development of fortified enclaves and suburban sprawls strong enough to create new cities, e.g. Midrand. In Pretoria-Tshwane, the dream for the city has shifted from one centrally dedicated to addressing historical socio-spatial exclusion, to one insistent on city 'growth' and that "the urban system is kept tight and an outer development boundary is placed on outwards sprawl" (GSDF 2010: 41), and most recently to one embracive of regional developmental nodes centralised around private consumption spaces and enclaves, many located within sprawl, with Menlyn serving as one example (Horn 2021). Power struggles within the multi-party coalition that recently led the city has made urban (hypo)governance in Pretoria-Tshwane no less complicated (Makole et al 2022). So too is public participation stifled through fractures of urban governance (Molepo et al 2015). The foregoing of equalising, liberatory urban ideals, the perceivable privileging of the grievances of the wealthy, and the dancing of the municipality to reverberations of property capital again force the consideration of who the city is really for (Bremner 2010). I once again remind that the privatisation of urban governance in post-apartheid South Africa is not without historical precedent, as "historically, big business has influenced the state in South Africa more than the other way around" (Chabane et al. 2006: 17).

I now provide several examples of urban hypogovernance in Pretoria-Tshwane to provide context regarding the conditions out of which boomed suburbs emerge. The first of these is the young Adopt-A-Spot Policy (2018). The CTMM's 'Adopt-a-Spot' is a municipal initiative that enables "industries, companies, and residents to adopt any open space belonging to the City at no cost. Once approved, the adoptee becomes responsible for maintaining and clearing the area of any alien vegetation and illegal dumping" (CTMM 2018). Several green spaces in boomed suburbs have been recently transformed in accordance with this policy, most successfully in the Lynnwood boomed suburb. While the committee and residents were already engaged in practices of self-funded, guerilla maintenance, unweeding and repairing broken sidewalks and generally keeping the suburb clean, the Adopt-A-Spot Policy has offered a formal avenue for residents to fill gaps of hypogovernance. As a flagship opportunity for policy implementation, the City offered plants to the suburb to be included at its Adopt-A-Spots. This decision was reverted soon after, the council citing a lack of funds. The policy is a CTMM admission and concession that it is unable to comprehensively manage the city's open spaces, encouraging independent or private engagement of these processes.

The second example consists of textual analysis of an online MyBroadband[14] forum thread. Titled 'Tshwane wants to phase out gated communities,' the thread hosts discussion of a now-removed article from IOL News claiming the CTMM would soon begin dismantling boomed suburbs (2019). The posts in the public thread are consistent with the generalised, pessimistic critique of the state that is related to the talk of crime and hypogovernance more broadly:

> "Gated communities are a response to crime. If they simply sorted out the crime, people would get rid of them themselves as no-one likes having to drive 3 km extra to get to where they want to go."
>
> "Then phase in at least 2 TMPD 24/7 vehicle at minimum, per suburb. Otherwise *Tsek*!"[15]
>
> "I used to be against these gated communities. Not anymore though. **** whomever doesnt live in your neighbourhood's 'right to move freely in public spaces.'"
>
> "How about this Tshwane... sort out crime and the gated communities will phase themselves out over time. Trying to legislate away the self-protection that ordinary citizens have organized for themselves as a direct result of government being unable to deal with our crime epidemic is disgusting."

What forum patrons failed to recognise are the extensive distances between official stances and grounded realities under conditions of hypogovernance. Not two weeks after the release of this inflammatory article, Radio702 conducted an interview with a city official who quickly

[14] Large, local technology news website and forum.

[15] Originally derived from Afrikaans, now a common slang term: *Voetsek*: 'Get away/Bugger off.'

clarified and reassured that the CTMM does not wish to 'phase out' gated communities at all, and was merely engaged in policy review (2019). This affair offers insight into the contradictory urban landscape in which boomed suburbs have been able to emerge. The unpredictability of hypogovernance can leave even the most vitriolic of residents stumped.

The final example is a material one, found when walking or driving along the long, winding De Villebois Mareuil Drive in Moreleta Park, Pretoria East. Along this road, one passes one of the largest church complexes in the city (gated and fenced), the quaintly refined Woodlands Lifestyle Estate, the upmarket Woodlands Boulevard and Parkview shopping malls, the older Woodhill Golf Estate, and several older boomed suburbs. Further along the road, after passing the mall and heading north, one is met by sights of large swathes of unkempt but gated and walled land. This is until one reaches The Wilds Estate, a wildlife-themed enclave which is really an estate of many smaller estates and complexes, also recently expanded to include a petrol station and small shopping centre. To cherry this gated scene, lofted gently on a heath that overlooks these various fortified enclaves, is the informal settlement of Woodlane Village, more commonly referred to as 'Plastic View:'

> Less than a mile away from where the settlement is located, there are state of the art golf courses, shopping malls, office parks including Parkview Centre, Woodlands Boulevard, private schools, and the state-of-the-art NetCare Pretoria East hospital. The settlement is home to households of diverse national and ethnic backgrounds including South Africans, Zimbabweans, Mozambicans, Malawians, BaSotho among others. As a result of its location, the residents of the settlement are in an apprehensive interface with the surrounding communities. Despite providing 'cheap' labour as handymen, security guards, garden boys, domestic helps, and childminders among other menial jobs, the residents of Plastic View are regarded as vermin, criminal elements, and a constant nuisance to the neighbouring communities" (Nyamwanza and Dzingirai 2020: 4).

Moving along De Villebois Mareuil draws double-sided maps of hypogovernance. On one side, a Moreleta Park of luxurious consumption and gated residential space is plotted out. On its reverse, a map of the spaces and socialities in-between these enclaves, and the exploitative antagonisms between residents of enclaves of differing textures (Bezuidenhout and Buhlungu 2015). The state is not here for anyone. Not in limiting suburban sprawl as per planning goals, nor for the marginalised in Plastic View, nor for the wealthier residents who expect the state to dismantle it. These are matters that these urban actors, with the help of the private sector, will need to solve themselves in the urban borderlands. And yet the state is also very much here. The presidentially-endorsed Mooikloof Mega City sits just down the road from sleek Woodlands Boulevard, and just around the corner from dusty Plastic View.

In closing and in consideration of the examples above, I situate the state's abandonment of the urban realm to private actors as a legal and material space out of which boomed suburbs

emerge, even if not traditional private developments, but as developments that necessarily rely on the private sector to form. The beige, fence-sitting position of the state with regards to boomed suburbs (as established after the SAHRC hearing), a lack of stable national policy, and inconsistencies regarding their regulation (such as with two-year renewals mentioned in the previous chapter), are all indications of how urban hypogovernance generates incubatory space in which boomed suburbs can emerge, often at odds with stated policy and planning initiatives.

4.3. Other Drivers of Booming

Even if the primary driver of booming, the desire for security resulting from policing hypogovernance is not the only reason why residents choose to boom. One key secondary motivator is the accumulation of assets and private capital. Both in the world of boomed suburbs and in the literature, it has been established that residents stand to gain from increases in property valuation endowed via a suburb's closure (Paetzold 2011).[16] Real estate agents and companies sometimes sponsor booming projects towards this end. One telling case is found in the case of Stefan, the chemical engineer who lives in Faeriedale. Stefan was always notably and openly apathetic towards the booming project, as well as the safety and community consolidation it aimed to deliver. He did not believe that his suburb was an especial victim of crime, even though he was once burgled here quite brazenly, and yet nevertheless contributed a generous if not excessive sum to the committee upon its request for a starting capital boost. His core motivation for contributing was, admittedly, the increase of his property's value and the future price for which it could be sold. Stefan exemplifies the calculating and speculative economic mindset that characterises residential contribution. Residents similarly benefit from reductions to insurance premiums held on houses and cars, and discounted home security plans:

> People have already approached their insurance companies and they have already reduced their monthly premiums. If yours isn't willing to do that, you are with the wrong company. All the other major insurance companies are willing to pass down a credit to you to lower your premiums, and that should go for your vehicle as well, because you're now staying in a gated community. The added benefit, if you eventually want to sell your house, your house will be more valuable because it's in a gated community. I've been in contact with a number of estate agents that operate in our area, and there are more people wanting to buy into our area for one simple reason: security. They see the booms are there, they see it's active, they see guards, they want to stay, because security is still one of our biggest issues in our country that we face, apart from all the other stuff like loadshedding and watershedding or whatever [examples of service delivery hypogovernance] (Committee chairman).

As for other drivers of gated communities identified in the literature, such as the appeal of 'community' living and achieving social status and lifestyle aspirations, boomed suburbs offer

[16] Incidentally, Paetzold collected data from Pretoria East to prove property value increases post-booming.

an inconsistent picture. Despite the centrality of appeals to community in the promotional efforts of the committee, the data made in this study suggests that most residents are not particularly attracted to the formulation of 'community' as a reason for supporting and contributing to the closure. It may be seen, however, as an added benefit that arrives after booms have been lowered and safety has been secured. Zuki and Ingrid's comments below provide different perspectives on the 'communities' in which they live in their respective boomed suburbs, cautiously reminding that committee efforts at community-making in these enclaves are not received or engaged homogenously by residents.

> To him, there is some degree of community in his suburb, even if quite antisocial, citing how residents are unlikely to greet one another, and individuals "agree without agreeing." He is aware that his placement among a minority of black individuals and families in the suburb may bear influence on his perception of said community. "I don't know how my neighbours look" (Zuki; field writing excerpt).

> It almost like romanticises it as well, it's like this is now … it becomes that thing of like, we're this little community, like there's physical barriers for this little community. So you walk past and you know your neighbours. It makes relationships by pushing [keeping] people out, which is weird. Cause suddenly you're on the WhatsApp groups with the street, and the way you interact with people within it, that changed for me as well. We never really interacted with our neighbours in the stand-alone house (Ingrid).

I later return to Ingrid's comment here to discuss the types of communities that boomed suburbs coproduce alongside fortification infrastructures, but for now it is important to note that the degree to which a 'community' forms in the enclave, either from the start as a promotional appeal point or after operations as the result of socialisation, differs across boomed suburbs.

Excluding passionate supporters and volunteers, street captains, or committee members, most residents are fairly apathetic towards the construction of community and the project on the whole. As put by one resident, the main purpose of his suburb's enclosure was to "slow down potential robberies or whatever," and not particularly to generate a sense of community. As for lifestyle and social status appeals, boomed suburbs differ significantly from fully enclosed security villages. Due to the lack of specific design themes or amenities that boomed suburbs offer, other than those already present within the suburb when still open, this is a significantly less important if not unapplicable driver behind the development of enclaves. Aspirations of social status similarly do not feature as a driver behind boomed suburbs, unlike in luxury estates or complexes, seeing as residents seeking heightened social status are more likely to move into such security villages rather than contribute to the straightforward and comparatively bland booming of their suburb, which is perceived to be a cheaper means of securing safety for oneself and their family.

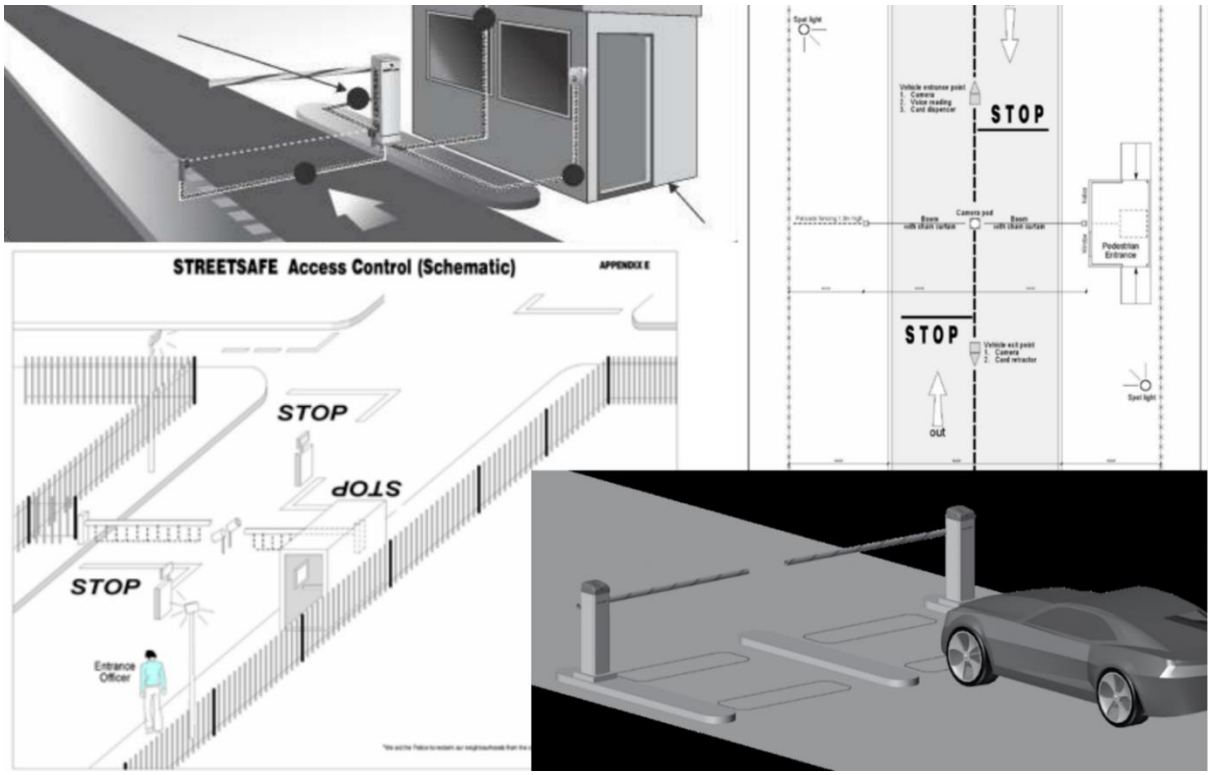
Chapter 5: Assembling and Innovating the Boomed Suburb

Thus far in this dissertation I have conducted a review of the literature pertaining to gated communities, boomed suburbs, and the conceptual and theoretical vehicles I have employed towards analysing these enclaves; provided background and orientating information regarding the city of Pretoria-Tshwane and the details of booming in this city, as well as the actors involved in this process; and in the previous chapter, shed light on the various drivers behind the proliferation of boomed suburbs. I now look to apply the reviewed conceptual and theoretical vehicles thus far withheld, namely technopolitics and political materiality, to introduce the various technologies and infrastructures that complete the boomed suburb assemblage as socio-material coproducers of enclavement, hoping to reveal the roles these technologies and infrastructures play in the reshaping of the city amidst the borderlands more broadly. I begin this practice of assembling the boomed suburb by describing in detail the key technologies and infrastructures upon which boomed suburbs rely: booms, fences, guardhouses, cameras, and signs. While describing these components, I further reveal how these technologies and infrastructures are innovated over time through processes of trial and error, borderland experimentation in their relations with humans and nonhumans, as well as residents' and pedestrians' interaction with these nonhuman coproducers. I then close with an unpacking of the life cycles of these technologies to illustrate of their liveliness in the city that is being made. From this point on in the dissertation, I present the visual data made during fieldwork in the technique of collage, this in attempt to highlight the ubiquity of boomed suburbs and technologies of enclavement across Pretoria-Tshwane.

The first step in taking the constitutive infrastructures and technologies of boomed suburbs seriously – that is to "enliven" (Hitchings and Jones 2004: 16) these as coproducers and not merely passive backgrounds upon which humans perform agency - is to describe these in careful and specific detail (Figure 5). Below, I assemble the technological components of booming and begin to reveal their coproduction of various processes of development, maintenance, and city reshaping, towards which enclaves are playing an unignorable role. I follow these technologies from points of inception to mobilisation out in Pretoria East as faceless warriors in the fight against crime, and in doing so reveal relational interconnectivity.

The most essential and unmissable technology involved in boomed suburbs is "the boom," or "boom gate," a cylindrical pole that is raised or lowered to permit or deny access. Across both entry and exit lanes, a boom delimits access. Rudimentary boomed suburbs have booms that are manually operated, simply suspended upon a forked metal stand. This model has become

Figure 5: Boomed suburb access point schematics.



Source: Streetsafe (2005), Centurion Systems (n.d.).

archaic. Today, "control boxes" of about hip height power booms and hold them upright. Inside this box one finds a small control board and CPU, the 'logic' that instructs the boom's movement, along with a crank handle (to operate the boom in case of power failure) and the spring which powers the boom arm. Control boxes are rooted in faux-concrete steel or rubber road islands that separate entry and exit lanes. Islands hoist one to three steel bars that extend vertically far beyond the height of most vehicles, but not in all cases. These are, most importantly, to host the "goosenecks" on which access technologies can be attached, the most common of which today is a "hand sensor," which the driver must wave over to operate the boom. A gooseneck is simply a horizontal addition to a vertical pole that holds a form of access technology, although can appear in a variety of designs. In more advanced installations, these poles also host floodlights and cameras that record facial, overhead, and licence plate footage of the driver and vehicle. There may be up to eight cameras at a single access point of a boomed suburb. The "boom island" also hosts two opposite-facing traffic chevrons as a legal requirement. On one side of the road one will, and must, according to legislation, find a "guardhouse." The guardhouse may be very basic or may host "substantial" facilities. The unarmed guard conducts his working day from here, although is often up and about assisting with entry and exit and standing at post. Within the fencing beside the guardhouse is the "pedestrian gate." The pedestrian gate, in the words of one chairman, "is for our … people on

foot." Some of these gates – "access points" – (both vehicular and pedestrian) remain 'open' 24-hours a day, while others for only half this time, thereafter unmanned and shut (Figure 6). Some roads are also permanently closed in boomed suburbs or are permanently inaccessible without a personal remote (Figure 7). The boom itself cannot be closed shut, of course. This is the job of large steel gates placed before the booms, that are swung open in the day and closed at night. On the opposite side of the road of the access point and pedestrian gate, a fence is elongated between the wall of the nearest private property and a metre from the roadside. A suburb or street may have only one access point, depending on its size, while larger suburbs may have up to ten. This does not include other, less primary streets that are permanently closed in the closure. Placing a closed gate on these streets is coupled with the fencing of the immediate spaces between the roadside and the nearest private property wall. Some of these gates can be operated with specialised residents' remotes, although these are, legally, completely different types of closed gates and bear different signage. Most permanently closed gates, which can be opened in case of emergency, are also coupled with pedestrian gates or turnstiles cut into fencing. These are legally required to remain open between the boomed suburb's approved hours of operation, usually between 06:00 and 18:00. Each boomed suburb is different and a product of its diverse economic, geographic, and contextual circumstances. So too do different suburbs have different means of accessing gates after closure hour. Companies who provide booms, such as the aforementioned BGS, must often produce bespoke versions to accommodate for the unpredictable complexities of boomed suburbs.

5.1. Booms

I begin with a following of "the boom" itself from its birth at the BGS factory in Florida, Johannesburg. Many technical aspects of the description I offer here were drawn from a research visit I paid to BGS' head office in Roodepoort, Johannesburg, something like an emporium of booming. Every boom is firstly, a type of gate. In South Africa, the gate is the ultimate material symbol of both criminal creativity and of the contemporary urban order of fortified living. The gate is both a locus of concern and a fundamental feature of mobility for homes and properties across the country. 'Did you lock the gate?' or 'Is the gate still open?' are deeply-ingrained, worry-sparking phrases common to the everyday. The gate is the highly normalised material form of access or denial to property in South Africa, private or otherwise. They may be basic padlocked gates of farm plots, sometimes even kilometres from the property's house; simple bolt lock gates that accompany wire fencing in 'townships;' or the scarily fortified, Gothically decorated gates of wealthy suburbs, some with guardhouses built into walls beside them. Booms are only one instantiation of a much larger process of gating

Figure 6: Boomed suburb access points by day and night. Note the missing boom in the fourth image down from the top right corner. Source: Author.

Figure 7: Permanently and Remote-Controlled Gates. Note the South African flag in the sign on the gate three down from the top right corner. Source: Author.

and enclaving, that is at this stage deeply threaded into the fibre of South African living. It is, to clarify, rare to see a boom gate in the defence of a home. Boom gates have their roots in malls, airports, and other pseudo-public spaces (Landman 2019), but have since migrated to residential spheres as boomed suburbs have emerged as legal, effective consumer options. Again, the mobile and persistent nature of enclaving is echoed (Nielsen et al 2019).

Booms conscripted for the war against crime, sent to the urban battlefields of boomed suburbs, usually begin their lives in small, in-house factories of gate producers here in South Africa. Most are made of aluminium, or rather sheets of aluminium that have been rolled and moulded cylindrically. Fibreglass booms are also available, but are more expensive. Booms are always painted in traditional candy cane pattern with shades of red closer to traffic and hazard signage than to Christmas. Boomed suburbs in Pretoria-Tshwane engage two main service providers to attain their booms, these being BGS and Centurion Systems, the latter a large, established company supplying gates, gate motors, and alarm systems nationwide. The booms that these companies provide can be distinguished by the colour of the boom control boxes, of which BGS' is a white-grey, and Centurion a mustard yellow. The most popular BGS model also has a circular screen upon its control box that displays a green arrow or red stop signal to the driver. Booms installed at these suburbs are juvenile compared to those BGS provides to various diplomatic and government buildings across the country. These grizzly, impenetrable gates are designed to withstand terrorist attacks, and consist of spike barriers, hydraulic bollards, and rising, ramped curbs built into the ground beneath the entry lane. A basic boom gate and control box starts around R10,000, although can exceed this figure based on additions to the model.

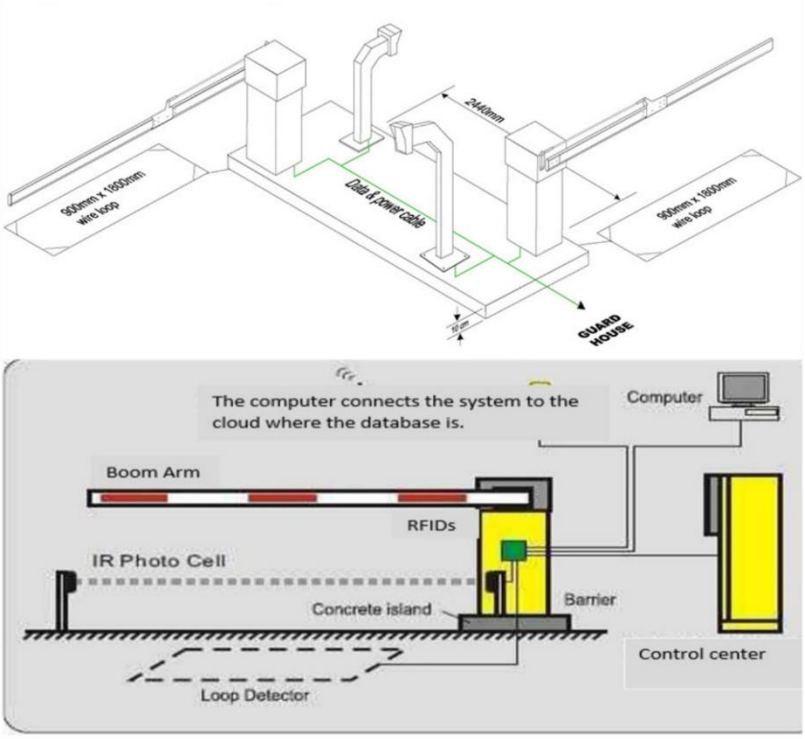
When "the boom" arrives at the sites of boomed suburbs to-be, they are usually met with a regular suburban road flanked on both sides by grassless macadam so typical of construction space, and the (ideal) presence of some building materials that suggest the early makings of a guardhouse. They would have been driven here in a BGS truck or in the back of a contractor's bakkie who opted against delivery. Installation is straightforwardly procedural, and this is part of the appeal. Installation involves the lowering of a long-sided, octagonal boom 'island' into a pre-cut slit in the road. The methodologies of installing boom gates in the public road reserve are products of experimentation over time. In the early years of booming in Pretoria-Tshwane, I learnt, much was unclear about how to physically and legally root booms in the roadway, for both the municipality and enclaving practitioners. In response to the difficulties involved in reinstating the road in the case of a suburb's de-booming, and the cost of establishing concrete structures, Col. Malan recollected the following:

> Where do you think the steel islands came from? I sat and said to myself, 'If I cut in the middle of the road, if I cut into the tar, the tar is only 40mm thick, then you go into all the lower works, into the compact work that they do before they put the tar … if I reinstate that what will it cost?' That's where the idea came from. If I put a steel island here, I don't have to break the roads and I don't have to reinstate, so I got somebody and said, 'Listen let's build a steel island' … One thing is the reinstatement but the other problem is that it takes so long to cut the roads and do all the concrete works. If that is a very much used road, where do you take the traffic? So that makes it much easier … And the other thing was, I can sell that stuff. Remember if I break a lot of bricks up, I've got to sell rubble. Now I can sell an island (Col. Malan).

The island is placed into the ground and its various goosenecks, poles, cameras, and booms, are attached. Contractors fuse it into position with the use of chemical resin anchors that bond the rooting poles of the island into the ground below street level. When these processes are coordinated, the installation of the island, the booms, and the control boxes should not take more than one day. To function, the boom assemblage must be connected to the guardhouse for electricity. Shallower, horizontal road cuts that extend out from the island carry electrical wiring, but also contain a 'ground loop.' The ground loop is one of several technologies that boom gate engineers have innovated to prevent booms closing on vehicles passing through (Figure 8). First-timers are often seen warily moving the vehicles they drive through the open passage: "I remember when I first moved-in being very wary of this thing like falling on my car, like I just did not trust the mechanics of this thing, I was a bit nervous" (Ingrid). Ground loops, or inductive loops, are conductive coils of wire protected from water by PVC, epoxy, or bitumen, placed into the cut road slits that coordinate with visual sensors attached to the control box: "The detector electronics energise the inductive loop with an AC signal that causes a magnetic field around the loop conductors. Changes in this magnetic field due to the passage of a vehicle are processed by the electronics to provide vehicle detection," (Nortech Detection 2019) which guarantees the boom's upright position as the vehicle moves through it. These are innovations of basic motion sensors, which are prone to malfunction, although still in use in older boomed suburbs. After all these technologies are set in place and electrified, the boom assemblage requires only a guard to begin operations.

Boomed suburbs are best served neatly. That is, the presentation and neatness of the entire boom gate assemblage, from the gated sidewalk to the guardhouse and boomed roadway itself, is imperative to their success on multiple levels. Keeping the boom gate clean increases the trust of contributing or contributing residents to-be, shines favourably in the eyes of CTMM engineer-inspectors, and prevents unnecessary hamperings of emergency response. At the first "inspection" I attended with Streetsafe, the stated goals of the session were to "to get things neat and working." Project managers lead these "inspections" with increasing frequency as a

Figure 8: Ground loop system at boomed suburb access points



Source: Ashesi 2019.

boomed suburb nears completion, the strict requirements they adhere to the result of years of experience and engagement with the CTMM inspectors. With clip-boarded checklists and spreadsheets that indicate percentages of progress of different gates, Col. Malan (and on several fortunate occasions I as well) reviewed the varied preparedness of boomed suburbs for official council inspection. His rigorous attention to detail and order is unmissable. Rubble, discarded building materials, fallen autumn leaves, protruding weeds, pedestrian waste, are all to be removed on sight upon their breach of the access point. Lehmann, the traffic engineer who has worked with Col. Malan on numerous occasions as a consulting advisor, stressed the importance of neatness as a factor to council inspectors. Unlike luxury or themed security villages, this neatness is the limit of aesthetic intervention applied to access points and gates of boomed suburbs, both due to the need to save costs and because boomed suburbs do not offer any particular lifestyle image or appeal.

Once the booms of a fortified suburb are operational, the booms begin new lives as mobility-defining actors of their own. As stated, opening the boom requires a driver to wave a right hand over a sensor protruding from the gooseneck. Residents and transients of the suburb altogether evoke thousands of boom rises and declines in the course of a day. The following is an excerpt from field notes I took after a long day of walking through and across the boomed suburbs of Pretoria-Tshwane:

> I see that the booms bounce when they reach their full extension of ascent and descent. I notice that drivers have become quite skilled at raising the booms, with calculated and naturalised movements of the hand over the sensor, allowing them to move faster through them. The movement is almost possible in one motion of not-stopping, although falls just short due to the time it takes for the sensor to register and boom to open. Mobility does come to a halt. The sensors are more challenging for trucks and drivers from elsewhere. The guard at Dorado [street] steps up to save a traffic jam by opening the boom permanently for a good minute, letting cars through (Field writing excerpt).

Some contributing residents of certain boomed suburbs bypass the need to roll down their window and extend their hand, with a paid-for, committee-provided remote. Residents in other, more upmarket boomed suburbs can enjoy automatic raising of the boom as their vehicle approaches, via a camera's reading of the car's front-facing license plate. But for most, resident or not, getting through the boom requires waving one's hand over the sensor, or in some rudimentary cases the pressing of a button, which became unpopular after COVID-19, after both the public and developers of boomed suburbs became more alert to the risks of touching shared public objects. This is but one of many innovations that emerge amidst the relational interplay between humans and technologies of enclavement in the unpredictable borderlands. While users have taken some time getting used to the hand sensor, and users less familiar with the suburb or with its technologies may struggle at access points, the technology has for the most part become naturalised, as one resident explained:

> In terms of daily routines, especially if I don't have the bunch of keys with the special remote on, what a hassle (sarcastic). Roll down my window, do the little wave. People don't know how to use these sensors, everyone wants to touch the button even though it says don't touch, just wave. So that can be fun, getting annoyed with other people that don't know how to use it. But not like, it doesn't kind of make or break my day, just a little moment of frustration. But a lot of the times they malfunction and they just end up tying them up anyway, the booms. They've been doing a lot of maintenance on it lately (Ingrid).

When someone is struggling with access, the result of unfamiliarity with the sensor or poor stopping position (from which the driver's hand cannot reach close enough to the sensor), the guard is first to the scene. The guard is responsible for maintain free flowing traffic in and out of the suburb, and is therefore required to keep an eye out for traffic buildup at the boom caused by, amongst others, sensor-waving failures or delays further down the road. Some access points also require bespoke traffic management techniques on the part of the guard, discussed in further detail in the next chapter. Only once did I see a security guard become frustrated with a driver who had parked at careless distance from the sensor.

During peak traffic hours, booms are left open and upright – "non-operational" – and are lowered thereafter to resume function. There are legally-mandated stop signs before each boom, but drivers rarely heed or even recognise them during rush hour(s) with the boom ahead of them left openly and invitingly upright. Rush hours, and thus the hours during which booms

remain open, are products of hot negotiations between the City, the committee, residents, and non-resident commuters, as seen recently in the case of a boomed suburb in Killarney, Johannesburg (Rosebank-Killarney Gazette 2020; 2021).

The pedestrian gate is rarely the site of such socio-material engagements. The pedestrian gate is simply a doorway cut into the fencing that extends from the guardhouse to the adjacent property wall, in some cases hosting a turnstile. Here, thousands of people make their ways in and out of the suburbs with little to break their momentum other than "traffic jams" that can occur at these gates in the mornings between domestic workers and joggers, as reported to me by one research participant. Cleaners, gardeners, security guards, dog-walkers, fitness junkies, schoolchildren with nannies and au pairs, and even waste-pickers, with their large, makeshift trolleys of recyclable or otherwise valuable waste (Reyneke 2016), all move through pedestrian gates at both temporarily and permanently closed access points with little issue. While exceptions are possible, guards and security companies generally comply with the legal prohibitions of requesting identity, frisking, or searching upon entry to boomed suburbs. When certain pedestrian gates are locked as part of the suburb's nightly semi-closure, pedestrians can make use of smartphone apps such as Fluss to unlock the gate. Standard, SMS-based options are available for those with "normal" phones, in the language of the laminated information sheets cable-tied to these gates.

In security terms, "the boom" is merely a slowing-down measure, at best leaving a mark on a criminal vehicle attempting to escape the suburb. In most cases, booms are paired with large steel gates attached to the fencing infrastructure that are closed during non-operational hours. These gates are also closed during what some boomed suburb developers and managers call "a lockdown." Lockdowns are initiated when a criminal incident has been reported in the suburb. As fast as possible, usually taking somewhere between one and three minutes, all active guards must detach the gates from the suspensions in the ground, close, and lock these steel gates. If a criminal or group of criminals driving a motor vehicle manages to break through these gates, requiring significant speed and force but not impossible, the impact will leave damage on the suspect vehicle and may lend to its capture somewhere else in the city. Boomed suburbs are, after all, part of a broader cooperative and coordinated effort against crime across the city. Some are not comfortable with the lockdown procedure, as one estate manager explained:

> I will never allow it in our area. I don't want to keep criminals inside my area. I'd rather lose some possessions. Thing is, if my wife is at that gate and that gate gets closed, that criminal has been to two other gates and seen they are closed, and he gets boxed in, armed response is on his arse, he pulls out a firearm and there's a shootout. There's a huge fight about this shit, but I will never do it (Estate manager).

Boomed suburbs are not impenetrable, neither at access points nor in fencing. While boomed suburbs usually enjoy decreases in crime, usually only suffering a couple of incidents a year, I heard of some "criminal" events that took place during field work, especially in boomed suburbs that have been operational for an extended period of time (usually more than three years) where "criminals" have practised and developed new methods of penetration.

5.2. Fences

As discussed in the Literature Review, the political materiality of walls and fences is one of teichopolitics (Ballif and Rosiere 2009). Walls are the primary historical material means of enclavement. Teichopolitics have played a reality-defining role in South African history, as enclaving (as a migratory aesthetic of imagination) morphed and continues to morph into different shapes at the sculpting of different hands. Like the boom, the fence is ultimately a type of wall. And like gates, they are everywhere.

> The wall has been mobilised as a new portable instrument of control in a fluid and constantly changing political landscape … The boundary wall, with its smooth, closed surfaces, repulsive electromagnetic fields and tight, guarded openings, has become the ubiquitous ordering element of the city (Bremner 2010: 170, 204).

Pretoria-Tshwane is a city of high walls and palisade fences. Seeing as boomed suburbs do not develop in open green or brownfield developments, fences are preferred to walls. Fences are cheaper, easier and faster to install, and generally present the boomed suburb as a space more accessible than one walled away, in some sense complying with the vague, official imaginary of boomed suburbs. Fences in boomed suburbs also enclose loose roadside spaces between neighbouring properties at both closed gates and access points. These fences are usually palisades, although the last few years have witnessed the rapid decline of a palisade as a fencing technology, especially in boomed suburbs and younger fortified enclaves. Comparing the fencing of older boomed suburbs, developed in the 2000s, and younger boomed suburbs that have emerged since the mid-2010s, reveals another innovation of the experimental borderlands. Pretoria-Tshwane remains a city of palisades, the material markers of 1990s and 2000s enclaving, but as I came to learn, not for much longer.

Palisades enclose older boomed suburbs, shopping centres, complexes, and houses. Cochrane Global, an established local (and increasingly global) fencing company, has recently enjoyed something of a eureka moment in the market with their ClearVu model. Palisades, while still effective, something I can personally attest to from some experiential horrors as an undergraduate student, are also scalable and can be bent out of shape to which I, or rather my gone-forever laptop, can similarly attest to. There is perhaps no better example of the

coproduction of world-leading security technologies between South African criminals and their engineering and design countrymen, and the exportation of 'militarised global apartheid' (Besteman 2019), than the rise of Cochrane. The advanced nature of these technologies is only as advanced as the creative techniques "criminals" have deployed and modified over time. Besteman's (2019) 'militarised global apartheid' refers to South Africa's post-mortem exportation of an apartheid-resemblant separative and defensive socio-spatial order, of which advanced security and fortification technologies are but one material part.

Cochrane's ClearVu 'Invisible Walls,' can be seen across the Gauteng province (Figure 9). These cross-pattern steel fences, peaked with a variety of "toppings," enclose many fortified enclaves and spaces of open land, hosting quirky slogans on signs attached to their most visible, public-facing panels. At the McDonald's in Rosebank, Johannesburg, a ClearVu fence hosts the catchphrase, 'Drive-Thru Not Cut Through.' On the N1 highway between Pretoria-Tshwane and Johannesburg, another reads, 'Criminals Need a Brake.' In Ekurhuleni, 'The Wall of the Mall' protects a fortified shopping centre. Even The Strip, a popular party spot for University of Pretoria students, is in-part enclosed with a ClearVu fence reminding all that thanks to this busy nonhuman 'No one passes.' At a residence of another Pretoria-Tshwane university - 'Our students sleep easier than they do in a lecture.' It was only upon writing up that I came to discover how Cochrane's ClearVu fences are not only present here in Gauteng, but across the world. Cochrane is a roughly 30-year-old South African security technology firm that provides "high-security perimeter barriers for government, commercial and private interests" (Cochrane Global 2024). Once advertised in the back pages of South African newspapers, the company now hosts offices in Johannesburg, Dubai, Washington D.C., Houston, Los Angeles, New York, and Birmingham - its fences can be found in over 140 countries. As "one of the finest trusted security providers on earth" with "an enviable reputation for innovation," some of Cochrane's most illustrious installations fortify and enclose: the U.S. Capitol; the Pyramids of Giza; the Union Buildings here in Pretoria-Tshwane; and various international commercial headquarters of companies such as American Airlines and Porsche, as well as protected historic sites (ibid.).

Cochrane holds an unregistered patent for the term 'ClearVu,' submitted in 2010, and battled in court over its ownership as a Google AdWord, in South Africa's first legal case of the sort (Tong 2016). The ClearVu fence is, in the words of its makers, a marked attempt at balancing "unparallelled security" with "aesthetic appearance" (Cochrane Global 2024). It is heralded for "a superior quality that visually enhances, rather than masks, the property it protects" (ibid.). It consists of horizontally and vertically arranged steel rods or wires that conform to a mesh

Figure 9: Cochrane's ClearVu across Pretoria-Tshwane.

Source: Author.

which is quite transparent. They are easily installed in panels and require little concrete to erect. Galvanised steel support posts of "trapezoidal" shape connect these panels to present a "flush finish." Their patented design makes them "Difficult to cut" and "Difficult to climb," the latter especially so in light of anti-scaling modulations built into the fence (ibid).

> And that's not all; such walls can be enhanced with accessories like the Cochrane Smart Coil, Electric Smart Coil, and Spike Toppings. The Smart Coil's description reads like a menu at a fine-dining restaurant: composed of 'a 730mm high Ripper Blade smart Concertina Coil, produced from the finest galvanized steel available on the market.' The 'smart' part is that it will provide an 'intrusion alert,' and the electric part means a potentially deadly electric current of 7,000 volts. From this menu, CBP has one contract with Cochrane from 2020 for 'coil units,' but the contract doesn't specify if it is 'smart,' 'electric,' or both (Miller 2023).

What or who is the CBP, one might ask. The CBP is none other than the U.S. Customs and Border Protection Agency, who first contracted Cochrane in 2020 for services beyond the ClearVu fence, namely its line of border control fencing. Cochrane also holds an $850,000 contract with the Texas Department of Public Safety (ibid.). After all, and ironically emphatic of my incessance on security technologies as agentive coproducers, "With police and military organisations being increasingly called upon to provide protection in uncharted territories, being a first respondent to a volatile situation requires serious, structural '*back-up*'" (Cochrane Global 2024). This was in description of their Rapid Deployment Barrier - a storable, portable bundle of razor and barbed wire coils that can be deployed up to 300 metres within 15 seconds, known to have been showcased at many a border security expo (Miller 2023):

> Then the demo began. One of the men got back in the truck, and as it lurched forward, coiling razor wire began to spill out of its rear end as if it were having a bowel movement. As the truck moved forward, more and more of Cochrane's Rapid Deployment Barrier spilled out until it extended the length of a football field or more. It was like a microwavable insta-wall, fast-food border enforcement.

But it was not this technology that would pull Cochrane into infamy. In August 2023, a couple of media houses (Newsweek 2023; France24 2023) revealed Cochrane as the contracted provider of the Rio Grande water barrier that made international headlines only two months before, and not for admirable reasons. The Marine Floating Barrier, another product in the company's diverse line, was installed across a frequently-crossed portion of the river on the 6th of June. However, an unauthorised 'topping' was attached to the barrier, that of circular saws, lodged between its large buoys, making the structure impossible to traverse without serious injury (ibid). Cochrane's involvement in the attachment of these steel saws to the water barrier – dubbed the technological "centrepiece of Operation Lone Star" (Texas Standard 2023) – the deployment of which has led to the Department of Justice suing the state of Texas, is not of investigative importance in this study. What is important here is whether there might have been anywhere more perfect to develop 'the finest fence you've never seen' than in the multi-

actor, hypogoverned, transition and post-transition borderlands of enclave South Africa. ClearVu's dominance is as much the result of the prescient insights of its designers and engineers as it is of the sharp criminal whose constantly adapting techniques made the palisades of Pretoria East, for example, defunct.[17]

Although most boomed suburbs do not use Cochrane's product specifically, their fences still adhere to the ClearVu model, sourced from contractors who purchase generic versions of the fence from a variety of local providers. Only in older boomed suburbs might one encounter a traditional palisade fence, far more difficult to install. These generics are not always as advanced as the original, but suffice to do the job. Topped with electric fencing, these new fences are quite impossible to penetrate. That is, for the time being, as "criminals" gradually develop techniques to conquer yet another security technology, and contribute to innovation on the international whole. The bending of a palisade at the edge of a fortified enclave in Pretoria East reverberates, as seen here across the United States, Europe, and Africa, as South Africa continues to export the technologies of Global Apartheid. This constitutes a 'reversal' of the orthodox trickle-down transfer of technological innovations from Global North to South:

> In a reversal of the direction of key 'traveling ideas,' the architecture and infrastructure of risk management coming to fruition in cities at the margins of modernity have gradually appeared in embryonic form in the so-called leading global cities at the core of the world economy (Murray 2022: xxii).

Making sure fences remain impenetrable is an important process in the reproduction of boomed suburbs. They are additionally - as sites of both possible criminal penetration and the built and unbuilt city that surrounds it - hubs of activity in the more-than-human city (Franklin 2017), which if this work has thus far neglected, includes not security technologies and infrastructures, but the natural environment as an urban borderlands actor as well. Allow the following two excerpts from my field notes to substantiate, beginning with an excerpt from a suburban vigilante group meeting, where at one corner of the large suburb, palisades enclose a cul-de-sac from a particularly lush and overgrown *spruit*:[18]

> The meeting is being held at one of the suburb's weakest security points, the spruit which arrives from under the nearby highway and feeds a luscious and large green tract of land, separated only by a palisade fence with a dual-facing camera and pedestrian gate. These fences appear archaic compared to the ClearVu fences at the top of the suburb. First, the overgrowth at the spruit where we have congregated provides criminals with golden opportunities for undetected movement and easy hops over the palisade. *Die riete*[19] are difficult to see through.

[17] While I have been unable to include the technical images found in ClearVu's international brochure due to copyright, it is highly recommended that the reader visit the hyperlink in accompaniment of this section of the dissertation, available at https://www.cochraneglobal.com/clearvu-the-invisible-wall-brochure/.

[18] Afrikaans: 'Spring or stream.'

[19] Afrikaans: 'The reeds.'

> The group considers burning or cutting the trees and grass, but the former is preferred. Another fellow offers his company's jackhammer to break stones, some of which are used to boost criminals' jumps over the fence. Along this road and cul-de-sac, none of the municipal lights are functioning. The group pines idealistically for high-mast light poles with 100-watt bulbs, as well as increased camera surveillance. This entire affair makes me think once again of the relations between private and public infrastructure. An additional demand is made to increase pedestrianism along the spruit, especially with dogs, to increase visibility in this fringe area of the suburb (Field writing excerpt).

In this scene, the fence, the spruit and its flora, the highway, the cul-de-sac's residents, the criminals empowered through the escape route offered by the built environment and the stealth offered by the unbuilt, and the security group, and the local state's non-delivery, all participate in the borderlands to coproduce a weak point of the enclave. The built environment has been identified in the literature as a focal material actor in either the prevention of crime or its unleashing (Snyders and Landman 2018). The fences of boomed suburbs become contact zones not only between residents, securities, and criminals, but also between the human and nonhuman, the former forced to engage in relations of acceptance and negotiation with the latter to achieve its goals of enclavement. The second example is less criminal:

> Another unique and notable issue on the day is the luscious overgrowth on the embankment across the street, opposing the guardhouse, at Nicholson West. In another wonderful infrastructural exchange, the large pool in the adjoining property leaks under its tall wall, pushing nature to grow wildly in the immediate space following the suburb's entrance, corroding asphalt and concrete but standing impenetrable (Field writing excerpt).

This small piece of roadside land, demarcated as a neutral space immediately behind the suburb's fence and before the fertile property's driveway, eventually grew to a small South African Amazon. Fed by the swimming pool on the other side of the wall, the accidental garden on this corner revealed the ways boomed suburbs can never fully sanitise or expel the city, which in cases like these, refuses to be unheard. The leak was eventually repaired and the area cleared. Following the fences of boomed suburbs, from their installation to their active engagement, reveals that booming is a multi-actor process coproduced by both humans and nonhumans.

5.3. Guardhouses, Guardhuts, and Control Rooms

The presence of a guardhouse with access to basic facilities is a legal requirement for boomed suburbs that look to post guards at the gates of the enclave. Guardhouses are also, of course, vital to the functioning of fortified enclaves more generally, and are a common sight across South African cities. Writing about Johannesburg, Bremner (2010: 204) noted that, "All over this city, alongside or adjacent to its walls, at every access boom or gate, little pitched-roof booths provide shelter for the security personnel who control access to the precinct inside." As is to be expected in this capitalist economy, guardhouses in South Africa and Pretoria-Tshwane

take on a variety of designs and sizes, components not only of boomed suburbs but estates, complexes, and other fortified enclaves as well. In the case of boomed suburbs, guardhouses can be fairly large, solid, two-roomed, structures fitted with the heights of security technologies. Others may simply be wooden, 'wendy'[20] house 'guardhuts' with portable ablution facilities situated beside. There is no significant scientific literature on enclave guardhouses in South Africa. The immediate exterior spaces of guardhouses are usually paved with concrete or stones, something like a patio of the guardhouse. I was fortunate to encounter a range of different guardhouse types during field research. More advanced models, of which there is no single, market-dominating type, may be constructed with bricks, concrete, but more often composite walling materials. Guardhouses include a large glass or Plexiglass window, from which the guard can view the access point. Advanced guardhouses consist of two rooms, an office space with chair and desk (although guards are often seen moving this chair to sit outside the guardhouse), and a bathroom with toilet and basin. Their thin walls are coated in Gamazine, a composite granular plaster consisting of a varying mix of quartz, gypsum, stone, and acrylic resins. It offers a textured look and is lauded for its durability. Guardhouses are difficult to develop, and are a point of subjective judgement for council inspectors, in what is another ode to the unpredictabilities of the borderlands. I met the contractors Jan and Johann after the firm they work for, SALTUS, was contracted by the suburb committee to finalise the installation of new guardhouses. SALTUS is a local company that produces composite posts and poles for a variety of infrastructural uses, although also offer prefabricated 'pod' structures. The guardhouses deployed here were variations of the flagship line of prefabricated houses. The units are fire are light, durable, UV-resistant, fire-resistant, and often make use of carbon fibre as a base material, built to avoid corrosion, and quick to assemble, "In four hours, easy." They supply these "prefabs" to housing projects in informal settlements and various private developments. For the poor, these are living quarters, while for the rich these are offices for security personnel protecting the wealth of the rich, presumably from the poor living elsewhere in similar abodes. A number of "inspections" I attended alongside Col. Malan involved reviewing the state of guardhouses.

Guardhouse installation is a thorny branch of boomed suburb development, always more difficult to complete than expected. According to the Colonel, there are seemingly no reliable

[20] "Wendy houses have their own history, beginning as dolls' houses in Edwardian England for aristocratic families … Rich families called in carpenters to build small but habitable miniature houses in their gardens – called Wendy houses after Peter Pan and Wendy. At some point in the 1960s/1970s, a local South African firm started making prefabricated dolls' houses that became storerooms for garden equipment and overflow goods. These degenerated into pre-made stores. They still retained the name Wendy house, from the 'age of respectability'" (Chipkin 2013: 248).

guardhouse providers, and expected final profits always seem to gradually fall during their construction, revision, and refurbishment. Contractors' promises are often unkept and the construction becomes an ordeal for project managers, awaiting residents, and resident committees. Guardhouses are central to many a developmental "horror story." Colonel spoke of the (successful) negotiation battles he has held with contracting companies over the price of guardhouses. In one case, initial quotations floated around R600,000, first reduced to R200,000, and finally to R120-150,000, which he claimed effectively set a new market rate for guardhouses in the city, at least for the time being – "Everyone wants to make money, but doesn't want to do the job properly" (Col. Malan).

Entering a boomed suburb guardhouse is like opening a set of matryoshka dolls. It is a pertinently material example of what has been vaguely referred to in Science and Technology Studies and urban studies as an 'infrastructure of infrastructures.' Here is an excerpt from my field notes:

> A flatscreen monitor hosts eight live camera feeds of cars, drivers, and pedestrians passing in and out of the suburb; a basic Wi-Fi router buzzes and flickers at the corner of the desk; crumbs of a recently-finished lunch rest in a Tupperware beside it; instructions regarding traffic control, suspicious vehicles, cell phone use, and emergency protocol are plastered to the main outlooking wall. Behind the guardhouse a new on-site control room is in early stages of development, and I hear inverters donated by ADT are also on their way to the guardhouses (Field writing excerpt).

Guardhouses of more upmarket boomed suburbs are usually fitted with alarm motion (camera) eyes that are activated when the guardhouse is unoccupied. This is no surprise given the large flat-screen monitor, inverter, and batteries stored in the guardhouse. The latter two objects have become increasingly valuable as loadshedding has intensified and a grey market has emerged for reliable power sources during blackouts. The inverter, usually placed on the internal side wall of the guardhouse, is relied upon to provide voltage to the assemblage during these periods of scheduled and sometimes unscheduled de-electrification, named as 'loadshedding' by the state. One to two large batteries situated under the guard's operating desk, which sits just behind the viewing window, power the inverter. Batteries are trickle-charged during periods when electricity is available. Secondary technologies are also subject to practices of borderland experimentation. During one "inspection" I participated in, a crew consisting of myself, the project manager, the guard, and a technician employed by the same security company, deliberated and decided to place the newly-delivered batteries into some sort of plastic or cardboard box. This after considering the heat that the batteries generate, as well as their capacity for electrical current wastage, which occurs when batteries are placed on the ground

without a neutral barrier in-between. Some guards also receive five-litre water bottles from employers, delivered daily, to keep refreshed while on the job.

Following the technologies that link-up to the guardhouse, often underneath it, leads to other critical components of boomed suburbs. I begin by following the most central of these - electricity. The main electricity distribution board (DB) for the booms, cameras, control boxes, and floodlights is found bolted onto another internal wall of the guardhouse. While there does exist some legal possibility of upheaving land and city infrastructure to fit new electrical connections from the public grid to each guardhouse, this is often out of question for developers of boomed suburbs, both for practical and financial reasons pertaining to bureaucratic approval processes and costliness respectively. Base electricity for guardhouses is sourced from the nearest neighbouring private property, be that a home, shopping centre, or office park. Once the booms and guardhouses of a suburb become operational, the administrative arm of the committee compensates owners of these properties according to a monthly meter reading. Boomed suburbs are not new developments transplanted from above, but materially emerge from the built environment of the city itself.

Following the various pipes that run underneath and out from the guardhouses leads to another infrastructural domain. Faeces also express agency in the multi-actor borderlands of boomed suburbs. The provision of ablution facilities directly linked to the public sewage line is challenging, and thus quite rare. One of the committees engaged in this study was quoted a figure of R1.2 million to connect guardhouses to the public sewage system. Committees thus opt for more temporary or mobile solutions, such as portable toilets or toilets within guardhouses that lead into buckets. Waste management companies contracted to replace these buckets twice a week, the most popular of which in this study was LemonTree, access the buckets from a small door at the foot of the rear wall of the guardhouse. Once again, different human and nonhuman actors relate and experiment among one another, within contextual and economic constraints, in ways that lend towards material innovation, as I noted in field notes:

> One of the contractors and I are approached by the guard regarding an issue with the bathroom – the square-shaped toilet bucket which rests under the toilet seat … is an ill fit, as urine slips between the gap of the seat and the bucket (leading to a smell). The guard thus requests a circular bucket like those found in other guardhouses in the suburb. We promise to raise this to the Colonel and do so (Field writing excerpt).

Guardhouse toilets are unique variations of Nojiyeza et al's (2008) 'neoliberal loos,' that emerge as a result of the tension between the state's strong commitment to a right to water (and an implied flush toilet) and its vaguely-defined constitutional right to sanitation (Bond 2019). During the latter stages of fieldwork, LemonTree began testing and experimenting with a new

chemical, after guards raised concerns of a smell. Waste affairs in boomed suburbs and their innovations serve as reminders of a larger point I have been making, namely that booming does not end once operations begin, but is rather a constant and unending process of maintenance and perpetually recurring, borderlands experimentation. Despite this, specifically the constant need for innovation and the rolling costs that accumulate as a result, it is rare for a suburb to ever go back, i.e. to strip their suburb of booms and return to life as an open one, not only because this would leave them criminally vulnerable, but because this would, similarly, come at a hefty cost.

Following the camera footage captured at the guardhouse and transported via the internet brings one to the "control room." Control rooms are usually situated far outside the boomed suburb and operate as central control points for a number of enclaves that a given security company oversees. In one of this study's suburbs, the control room was situated on-site, which Col. Malan expressed was preferable, despite the orthodoxy of off-site, multi-suburb control rooms. These control rooms are points from which key emergencies or directives are disseminated. In a "lockdown" situation, the control room operator must identify - in collaboration with 'Romeo,'[21] who is ideally already in pursuit of the suspect - the location of said suspect, and notify all guards to lock the steel gates under their supervision and prevent traffic movement in and out of the suburb. Allow here for a description from the field, based on one of the visits I made during field research to such a 'control room:'

> The control room actually hosts two rooms, first a foyer decorated with a colourful and abstract local painting of an African woman, where the estate manager is to spend their working days. The adjacent room, separated by an ominous and revolving block-door hosts a desk, 6 flat-screen monitors, and a beast of a PC underneath. Some posters of known suspicious vehicles spot the walls of the room. A woman security guard is operating the control room at this hour. She cracks jokes with us and is especially jovial about her new role in the suburb. She shows me how the systems work, from the cameras to the projected WhatsApp and Telegram chats, and explains how her other shift is through the night during which she does not sleep. She looks forward to the upcoming public holidays not for a break but for the bonus pay it will bring when she works through it. Once again proudly, she states, "We are catching criminals here," amidst the glow of her arsenal of security technologies (Field writing excerpt).

The final set of actors who coproduce security with guardhouses are none other than the guards themselves. While I did not directly recruit security guards as participants in this study, they are nevertheless critically important actors in enclavement. The individuals employed to man the guardhouses of boomed suburbs are uniformed, unarmed, and majorly black. Guards are paid upwards of R3000 per month, and stand to receive bonuses for assistance in in detaining suspects, whether that be by radioing-in a suspicious vehicle, or closing the gates in sharp time

[21] Security term for a suburb's dedicated patrol car.

during lockdown. For the most part, however, guards spend their days greeting those entering the suburb, watching out for suspicious activity, and dealing with disruptions of smooth entry and exit, either in the form of traffic jams or assisting car drivers at the hand sensor. The field excerpt below, lifted from a guard training session I attended organised by Col. Malan for the incoming guards of a boomed suburb only weeks away from operations sheds further light on their expectations and functions:

> "There are two kinds of people who live here, payers and non-payers, but it is your job to keep them all safe." "But how?" he follows, "because you don't have guns. You don't shoot the criminal, [redacted] shoots the criminal," then pointing to a bearded man in darkened sports glasses with a gun on his hip, a higher-up in the force. But "How," is revealed thereafter as staying vigilant, manning the gate with dedication, and communicating meticulously with the control room. This section of the training is closed with an incentivisation, a R1000 bonus for providing leads and assisting in preventing a crime through apt manoeuvre of the activities above. "We pay for good work," Colonel says. "The criminals must fear you, but the people must love you, they are paying your salary." Colonel probes the topic of pedestrians, concluding on the point that pedestrians are rarely criminals, especially because of their inability to conceal stolen items or move rapidly through the suburb. Cell phone use is a sackable offence - "we'll get another guard who wants to work. He also gently reassures the guards, reminding them that they are in training and his consideration of that fact. Now involving [redacted: estate manager] in the semicircle of bodies, he recommends that he "should always punish the mistake, not the man." He rallies them by pronouncing that they (along with the boomed suburb's management) are a team, that success is only possible through mutual, shared effort, and alludes to [estate manager], "Here he is like your father." Closing off, I'm told "*Pasop vir die boom*"[22] by a security officer as I walk away from the roadside (Field writing excerpt).

In this vein, security guards also perform an important social role in day-to-day reproduction. Situated in a locus of activity between humans and nonhumans alike, guards are highly knowledgeable of the booms and the daily hustle that they funnel. The guard, as part of his job description, must present and maintain a sense of friendliness and cooperativeness in everyday engagements with residents. These engagements most often take place in the fleeting moment it takes for a driver to stop, engage the hand sensor, and ride along through the boom. Security guards enthusiastically greet and wave at hundreds of people every day, and consistently at that. One resident participant laughingly asked, "Does this guy ever get tired of waving at people?" Guards are not expected to greet every transient of the suburb, especially when engaged in other duties like tending to infrastructural glitches or logging data into the "occurrence book" or "OB," another critically important even if less glamorous technology of the boomed suburb assemblage. The covers often decorated by guards, OBs contain a running list of all shift changes and incidents, and is the first point of reference in the analysis of an event.

[22] Afrikaans: 'Watch out for the boom.' Boom directly translates to 'tree' in Afrikaans, but in this instance refers to the boom that extends across the roadway at the entrances of boomed suburbs.

The guard not only engages with residents but with various non-resident commuters and pedestrians as well. Guards come to know almost everyone involved, in the development, reproduction, and daily mobilities of boomed suburbs - from contractors and repairmen to committee members, taxi drivers, UberEats motorcyclists, walking workers, dog-walkers, and other security guards who work at properties within. The guardhouse becomes a site of gentle authority and warm sociality. Guards' efforts, either as crime fighters or agents of pleasantry, do not go unnoticed. Efficiently coordinated boomed suburbs often hold Guard of the Month programs. One committee member expressed their delight with the guards, specifically their punctuality, friendliness, and provision of reports. At one meeting, officers pitted guards as "heroes" who also kill snakes and assist in domestic activities when possible. Another theme I picked up on was the emphasis of most developers and security officials to have dignified facilities in place for guards, under the premise that workers who are well taken care of do better work.

3.4. Cameras

Cameras play a vital role in the materialisation of 'guaranteed but monitored access.' The amount of cameras installed depends on the wealth of the suburb, or rather the strength of its contributions by subscribing residents. Cameras at access points of boomed suburbs most fundamentally look to capture footage of the vehicle and its licence plate. Most technologically-advanced boomed suburbs also include a camera attached to the boom island pole capturing drivers' facial shots. The inclusion of these specified cameras at the entrances of boomed suburbs, numbering up to eight in total and now standard best practice, is the result of decades of trial-and-error experiments in devising a legal and effective camera configuration befitting of boomed suburbs (Figure 10). Cameras, along with sensors, have superseded their archaic forms, as regular CCTV feeds and card or tag readers respectively, in coproductions between developers like Col. Malan, camera providers, elusive criminals, boomed suburb residents, and the material spaces they watch over.

Both the security and convenience that cameras offer rely on the invisible infrastructure of License Plate Recognition (LPR) or Automatic Number Plate Recognition (ANPR). ANPR is an algorithmic system with which live camera inputs "can be applied at number of public places for fulfilling some of the purposes like traffic safety enforcement, automatic toll text collection, car park system, and automatic vehicle parking system" (Patel, Shah, and Patel 2013: 21). Most ANPR algorithms operate in a sequential process of vehicle image capture, number plate detection, character segmentation, and character recognition (ibid.). In most cases, the system

retrieves the figures of the number plate by means of image binarization, which converts the captured shot of the plate to black-and-white.

> The institutional frameworks dealing with both vehicle crime and road accidents are associated with the national driver and vehicle management system used by South Africa, as well as the criminal justice system. The former is a complex system of legislation, structures, responsibilities and relationships which transverse all spheres of the public and private sectors … functions are in turn supported by the SAPS Circulation System and specialist support functions such as the National Vehicle Information Centre (NAVIC) at SAPS National Head Quarters in Pretoria (Wright and Ribbens 2016: 448).

Figure 10: A young Col. Malan showcasing earlier borderland camera innovations.

SECURITY HEAD: Jan Malan demonstrates the new security technology at Die Wilgers, Pretoria

PROTOTYPE: Security guard Johannes Nkabinde with a head-mounted camera and microphone

levels of crime in those areas.

Malan, who lives in Lynnwood, Pretoria, is behind the hi-tech security project in Die Wilgers, and a similar one in Edenvale, in eastern Joburg.

He says he has more than 20 applications in the pipeline and is ready to install a number of security systems in other areas.

Residents of Die Wilgers had the system installed less than a month ago.

"I feel much safer now," said Lionel Celetana, a resident.

"It takes a little time to get used to, but now there are no problems and you can come and go as you like."

GOTCHA: Jan Malan is caught on camera

The full system costs about R170 000.

"This system will provide a 95% crime-free neighbourhood," said Malan.

Source: Sunday Times 2004.

The broader ANPR network, facilitated by NAVIC, a database and system that rapidly informs users of blacklisted vehicles linked to crime, in collaboration with other public and private services, assists in retrieving or identifying stolen vehicles. As a literal and figurative cloud, NAVIC and ANPR hover over the cities of South Africa. Many participants involved in the security sector trumpeted NAVIC as a "proudly South African product," not only to me but also in presentations at community meetings.

“The network,” can return a vehicle’s details in seconds, pulling from a database of over 1.6 billion camera shots of active and previously-active number plates (NAVIC 2024). The monitoring system, as I and the crowd at a community meeting were told, is “always running, it backs up to a cloud, so we can always go back” (Security officer). NAVIC also provides a service that erects geofences - virtual geographic boundaries that trigger surveillance responses when crossed - also in use in some boomed suburbs. Most also posit cameras above or beside their pedestrian gates. Although facial recognition software has been vaguely touted in the field, although ethically and legally challenged, geofence-based surveillance and threat identification software (based on proximity of the passing pedestrian to the guardhouse for one example) persist at some pedestrian gates. Again, developers of boomed suburbs have to strike a balance between security and surveillance aspirations and democratic, legislative constraints. Boomed suburb camera configurations required a recent ethical refresh with the ratification of the POPI Act (2021), to which now most comply. All footage and facial imagery is managed in accordance with the act, and is only retrieved in cases of criminal incidents or for insurance purposes, e.g. when a car collides with a boom.

While the systems remain effective for identifying stolen vehicles and vehicles of interest, and thus coordinating public-private security response, this invisible infrastructure has been around for long enough for it to become a domain of criminal creativity and experimentation. In an interview with a security officer at an older – as in having been operational for several years and consequently established as such in the city – I was told that when working as a security officer or guard or even as a hotly vigilant resident of a boomed suburb, one should look out for duplicate number plates, vehicles with tinted windows or lowered sunshades, especially solely occupied by men, and to verify supposed Uber drivers looking to access the suburb. Each guardhouse is fitted with a screen that presents the camera feed/s and stores the last five vehicles entering and exiting the suburb for rapid reference.

Residents engage in relations of coproduction and innovation perhaps more so with cameras than with other technologies involved in enclavement and booming. This is especially with regards to ANPR as a means of attaining convenient, uninterrupted access through the boom. During the concluding question-and-answer segment of one community meeting, residents pertinently probed the advertised perk of ‘automatic entry.’ “What’s stopping someone from driving through the boom with my car?” one resident posed. Another asked, “What if the boom opens automatically but I’m not driving?” These questions quickly corrupted the sleekness of the proposed convenience of ‘automatic entry,’ leaving security officers and committee members stumped, forcing them to fumble a generalised answer in avoidant response.

5.5 Signs

Erected physical signs that are visible and readable communicating information are similarly required and operationally crucial components of the boomed suburb assemblage. Considering the traffic and road alterations that boomed suburbs initiate, signage is required to inform users of the public road reserve of the presence of the closure, gates' hours of operation, their status as temporarily or permanently closed, and points of exit. Those who boom suburbs are also required to erect signboards at main access points that detail the closure's accordance with the Rationalisation of Local Government Affairs Act (1998) and thus their legality. Signs also abound boomed suburbs in the form of approved contributor tags, which are placed on the outer walls of financially-compliant or contributing properties, and placards of dedicated security providers, similarly attached to the outer walls or fences of homes in boomed suburbs.

The various traffic signs that vehicle drivers, cyclists, and pedestrians encounter within and along the outskirts of boomed suburbs, now frequent sights in the city, appear standardised in ways that betray the experimental and negotiated processes that brought them into being. Before and for some time after the passing of the Act in 1998, there were no established standards in place for the construction of road closures, nor for the traffic signage that would safely integrate them as legal urban forms. Practices and processes concerning the material development of boomed suburbs were at this stage undeveloped, not to mention unformalized if not illegal. The traffic signs (specifically those that indicate and delimit types of access points and permanently closed gates and where they are situated in relation to the public roadway) that are today found both at and around the entrances of boomed suburbs are direct products of the borderlands, specifically as coproductions between early boomed suburb developers and (in the case of this city and study), the CTMM (Figure 11). In the lead up to the passing of the Act and in the immediate few years that followed, actors such as Col. Malan and municipal traffic engineers engaged in productive deliberation and experimentation to settle on the types of signs that these unique urban arrangements would require. In an interview with the CEO of Streetsafe I was told:

> I went and sat with the city's traffic engineers. I said, 'Now guys, what signage must go here?' But now you sit with a very interesting problem. If you put a steel gate down, it stands locked. What message do you give to people with the signage? The signage says, 'Here's a gate, but it's not opening.' Then you go with my other concept which is the sliding gate. Because I need some perk for the people that are paying. Now if this gate slides, what signage do I now put on it? I'm only gonna close this in an emergency, so what signage do I use now? So that's why I had to sit with them and work it out and say this must be a W4-10 for this, and this one is a 4-11 for that. And that's when we started standardising (Col. Malan).

Figure 11: Boomed suburb traffic signage.

Source: Author.

The traffic signs that pervade all access points and closed gates, the entry signboards that detail the suburb's legality, and the inclusion of telephone numbers (of the committee, security provider, municipality, and public emergency services) on these boards are all functional innovations that emerged from these early, frontier-like negotiations between municipalities and developers. The coproductive work of the Colonel and the City's traffic engineers, which began as mere meetings in The Backrooms[23] of the early years of booming, would eventually go on to shape by-laws concerning signage and construction. Even if these signs become casually invisible to residents, commuters, and pedestrians over time, as these mobile actors are unavoidably familiarised with the closure's presence, they remain critical to the suburb's survival and function. The incorrect placement of even one sign within or around the boomed suburb is enough to spark CTMM inspectors' concerns. During one "inspection" I attended alongside the Colonel and the traffic engineer Lehmann, the latter expressed how misplacing a sign, be it an 'Exit' sign or board displaying the gate's hours, can lead to automatic failure of the municipal inspection. While driving through the suburb with us as part of the "inspection," he recommended that a couple of signs be relocated to better comply with municipal regulations. He also noted that a few stop signs in the suburb, only recently erected in the roadside ground, were standing slightly skew, and recommended that these be straightened before the final inspection. So too did he recommend that mounds of unearthed dirt, sitting at the feet of some of these stop signs, used to fortify the sign pole in the ground, be removed as soon as possible.

To explore security company signs or placards, ubiquitously attached to property walls and fences across South Africa, within boomed suburbs and without, I take Short's (1996) postulation that the walls of the city speak more literally, much like Victor and Pavoni (2018: 94, 101) have done in Brazil, when they write that:

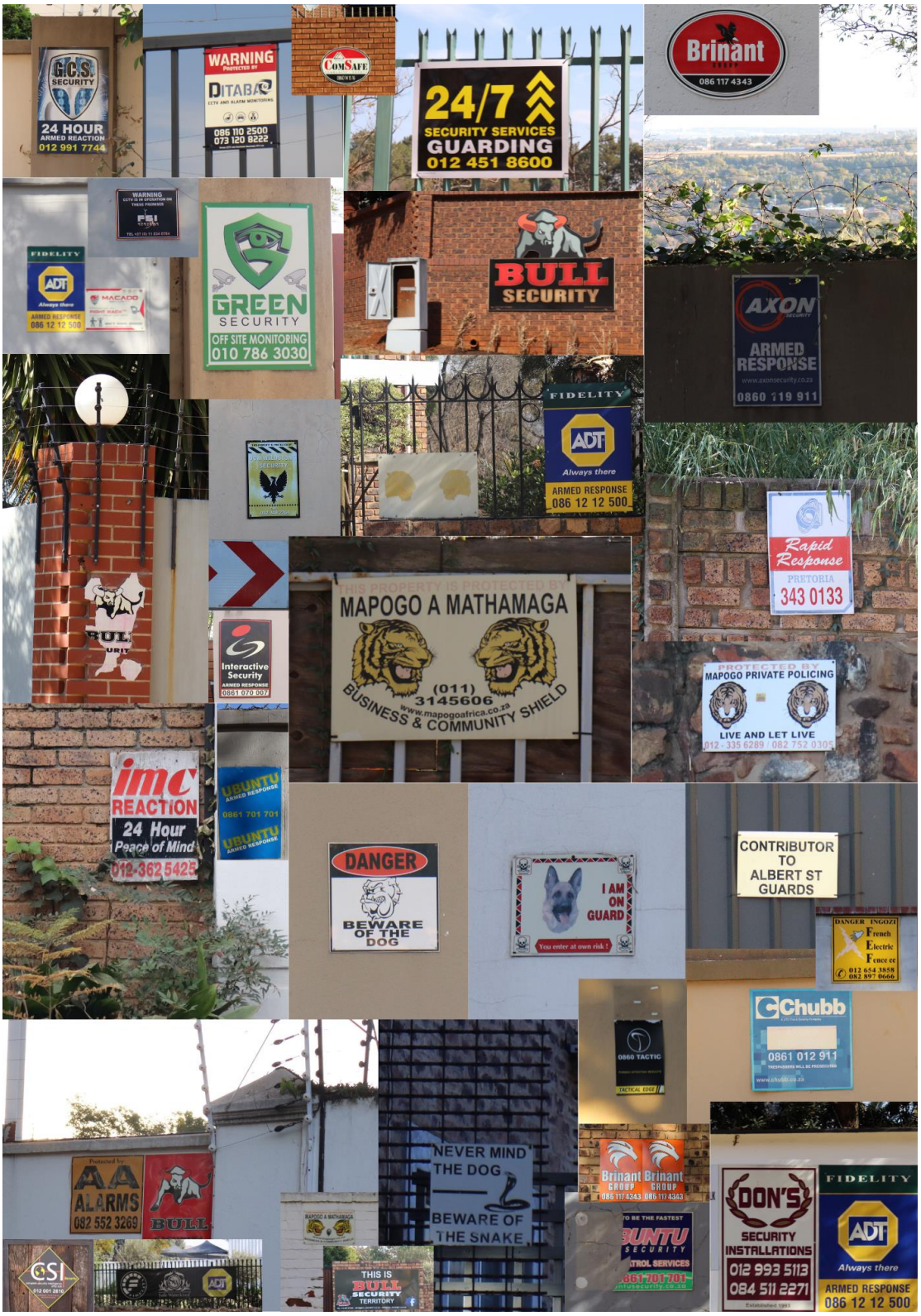
> What matters to us is not knowing what is beyond this wall, but rather letting the contradiction it materialises emerge … [We] refrain from petrifying it into the game of interpretation or deconstruction, and instead engage with in the multiple mediations in which it is entangled, attending to its semio-material and spatio-temporal prolongations.

As touched on in Chapter Three, a walk through a boomed suburb is also a walk through an open-air, living museum exhibition of the ongoing war against crime. Artefacts in the museum include not only the innovated enclaving technologies found near its entrances, but also artefacts that originate from a time before their arrival, such as various fortifications owners

[23]Concept derived from a "creepypasta (a term used to describe works of Internet folklore) about an endless network of spaces within which one may get lost" in their liminality (Ginter Agreda 2024: 6). Via Zizek, backrooms are spaces that "linger between two deaths … a glitch in (or 'clipping-out' of) reality that opens to unbounded surplus (Greenshields 2023: 3-4).

attached to private properties before booming; faded, scattered signs calling residents to join street patrols and community watches; or the many placards of security companies that have come and gone in the course of this war (Figure 12).

Figure 12: Private security company signs.



Source: Author.

Walking through the museum of the boomed suburb with an eye for these artefacts reveals a story of perseverant crime, policing hypogovernance, the mobilisation of residents in defending themselves, and the gradual, domineering ascent of the private security sector. Simply looking down as I walked through the museums, I was able to discern a sidewalk's year of construction or repair through engravings cut into it when once wet. Pedestrians, workers, and contractors quite literally try to concretise their time in history with these engravings. Given the disarrayed state of the municipal archives, as well as the shoddy availability of detailed information on the city's younger infrastructures, my chances of uncovering that a sidewalk was constructed in 2003 without the help of these anonymous antiquarians ranges from slim to none. The pavement recalls other, less revelatory facts from the past as well, like "Ruan was here." But the museum's headline exhibition is only accessed when walking along and looking at the walls and fences of passing properties, as I dotted down in my field notes:

> More and more I get in touch with the history of the suburb by walking it. I see the faded sign of the Albert Street Guards, the even more faded sign of the Julius Jeppe Foot Patrol, resident-driven initiatives of community safety that have emerged and died in the past, whom along with the various security companies, make up the genealogy of security in the suburb and the Old East at large (Field writing excerpt).

Today, hundreds of private security companies operate in Pretoria-Tshwane. These firms vary in exclusivity, technological development, and areal scope. Some companies only operate in certain parts of the city and with small sets of clients. Other 'industry leaders' such as Fidelity/ADT, offer services nationwide.

The last set of signs I discuss here pertain to internal suburb governance and management. Most boomed suburb committees distribute signs to contributing residents to be attached to the outer walls, fences, or gates of private homes (Figure 13). Once attached, these signs communicate that the private property is financially supportive of the booming project and effectively serves to distinguish between residents who are "contributors" and "non-contributors." Committees sometimes attach these signs to the walls or fences of residents' homes themselves. One participant promptly ripped the contributor sign from his fence soon after it was applied. But overall, residents hold little reservations about hosting these signs on the walls of their private properties. The committee may also deploy signs across the suburb pertaining to maintenance and care for its natural environments, much like the laminated 'Keep Brooklyn Beautiful' posters scattered throughout the eponymous suburb, currently engaged in a drawn-out closure process. Several interviewed committee members expressed that communication with and between residents of boomed suburbs was a significant challenge. In mazes of electrified high walls, tall gates, and disembodied intercoms, there is little neighbourly sociality upon which to instigate efficient and free-flowing communication. This

Figure 13: Community and contributor signs.

Source: Author.

is despite various multimedia approaches, including WhatsApp messages, emails, SMS texts, and printed flyers. Some exemplary suburbs, usually the result of a dedicated marketing committee member, exhibit advanced communicative capacities.

In closing of this section, it is important to note that while some of these technologies are operable in isolation, for the purposes of boomed suburbs, a camera, boom, or fence on its own, unconnected to other technologies, is of little value or use:

> I'm convinced that a camera on its own plays a role, but it's not the whole thing. A vehicle on its own is not the whole thing. You can have many vehicles but if they don't work together it's nothing. It is this way to put this thing together for everybody (Col. Malan).

Boomed suburbs must take upon relational assemblage forms - a fence cannot exist without a gate, and vice versa. These assemblages are not limited to technology alone. Humans must engage in relations with enclaving infrastructures to guarantee functionality. One security officer spoke of how the "*working together*" of the camera and the hand sensor allows "*us*" to slow drivers down without having to resort to manual boom raises, the case for years before borderlands innovation.

5.6. Life Cycles of Boomed Suburbs

I suggest that boomed suburbs, as assemblages of various cooperating component technologies and humans, are lively because of the attention and care they demand of the latter (Edwards 2003). Infrastructures and technologies are never static or stable. The field of infrastructure studies has no undersupply of analyses of maintenance practices (Barry 2010; Bjorkman 2015; Anand et al 2018). Users (and maintainers) of infrastructure "have continually to be aware of at least some of infrastructure's instability, vulnerability, and even 'liveliness'" (Barry 2010: 92; Edwards 2003). In their temporality, infrastructures are "not smooth surfaces that perform as planned; instead they are flaky, falling-apart forms that constantly call out for projects of management, maintenance, and repair" (Barry 2020: 97). During their lifetimes, boomed suburb technologies and infrastructures "accumulate momentum" and decay, prompting human actors "to act in conformity" with the nuanced maintenance they demand (Gieryn 2002: 44). Maintenance practices in boomed suburbs are prime opportunities for observations of raw, intimate interactions between humans and nonhumans, as the latter consistently calls out to the world for care. I here investigate the maintenance of enclave technologies and infrastructures, and how these practices concede their liveliness. I am further looking to respond to a few calls scholars have sent out. The first of these is that the lively temporality of infrastructures "needs to be explained rather than assumed" (Barry 2020: 104). In conducting research with developers and maintainers of boomed suburbs, I was well-positioned to do so. It would have

been impossible to make assumptions about the endurance of infrastructures, seeing as their lifetimes materially unfolded before me as I moved through the field. Further, I attended numerous events in which human actors, including myself, engaged in deliberation and action towards the prolonging of these lifetimes. I also look to contribute by examining technoscientific knowledge production, specifically pertaining to inspection and monitoring of infrastructures, which remains a neglected avenue (ibid.). Seeing as "the inspection" (as a recurring event in the field) became a key ethnographical vehicle in this study, I was again well-posed to tackle such considerations. Inductively, 'bringing the booms to life' was unavoidable. At one "inspection," wandering about the boomed road space, I skipped onto the island to get a detailed look of the boom, its hinges, and its monotonous movement. I laid my hand on the control box and noted its warmth, attaining my own sense of what the guard meant when reporting that the boom was wobbling when completing ascents and descents. Turning to head back to our "inspection" team, the access point surprisingly quiet enough for me to be heard, I wondered out-loud about how many times the boom rises in a day. The guard, with a half-nod, half-shake of the head, responded to say, "*Sometimes they get tired*." And if the guard enlivens the boom, thinking of it as a temporal, vulnerable actor of its own, how could I not?

As such, I begin at the booms in this recollection of maintenance practices, specifically considering moments 'when booms cry.' During field work I shared a recurring joke with the pair of SALTUS guardhouse contractors, Jan and Johann. On one occasion while engaged in the conclusionary chatter that accompanies "inspections," I was asked to explain my study in some more technical or theoretical detail, after we had spent a few minutes examining a dent made in the boom. After an explanation of some key pillars of Social Anthropology, as well as the materialist paint with which I am coating them, the older of the two jokingly asked, "So do booms cry?" We shared in the joke every time we encountered one another thereafter, although my laughter on that first day was more a nervous chuckling that occulted my unspoken response, which would have been 'Well, yes.'

Without taking the joke nor the biotics implied in 'crying' too seriously - booms do cry. One elderly boom, just across the main road which sidelines the Groenkloof boomed suburb, installed at the entrance of a fortified, popular recreational centre, emits a well-known, high-pitched wail when raising that is eerily like that of a young human child. As technologies expected to conduct over three million ascents and descents minimum, booms naturally corrode and decrease in function over time. Booms lightly cry with each ascent, heard as a beeping sound, emerging from the interplay of the ground loop and sensor, that persists until the car has

moved completely through, and may also let out creaking sounds resultant of age and poor lubrication.

Car-on-boom violence is a major challenge for boomed areas across Pretoria-Tshwane. Motorists crashing into booms is related to alcohol abuse, but also confusion, frustration, rushing chancers, and trailers, on which the boom can close.[24] Guards cup their hands over sensors to assist trailers entering and exiting the suburb, much like in moments of traffic build-up. Some drivers look to save time by not waiting for the boom to descend, rather hopping onto the phase initiated by the driver. Injuries to booms can also result from driver distraction. While vehicles smashing booms is never out of the question, there is an uptick in frequency during the initiation of operations or within the first few days of lowering the boom. In one of the focus suburbs, a Land Rover took out a boom within the first hour of opening day. An estate manager I interviewed recorded four incidents during the first hour of operations:

> One vehicle hit it, lost their mirror, then three motorbikes and one kid on an electric scooter, they drive into the shit. They're breakaway booms, but now the issue is the guys that built this didn't think about the breakaway properly because it hits the chevron. So the arm hits the chevron and bends the whole pipe, where it starts pulling the bolts and shit out of the base. But the thing is if those poles aren't there, the boom can swing around all the way 180 degrees. It's easy to fix, but you have to have those chevrons on due to the council demands (Estate manager).

This excerpt reinforces the experimentally fertile context of the borderlands and the many human and nonhuman actors involved, from the teenager and his scooter to the boom designer and the CTMM official. It further showcases the tension between the legal demands of boomed suburbs and the use and abuse of these enclaves' composite technologies. The development and innovation of breakaway booms, as well as booms with centred couplings, included in most installations today to decrease impact damage, are borderland products in response to incident frequency and replacement cost. On one unique occasion during field work, I was shown CCTV footage of an incident that took place around 02:00 in a boomed suburb I will not name. A reportedly drunk and distressed boyfriend of a suburb resident, in storming-off from a fight at his partner's home, quickly became frustrated with the hand sensor and chose to simply ram through the boom.

Booms, as stated, are frequent targets of driver violence. Ideally, the boom walks away from incidents with its carer simply pulling or knocking it back into place, continuing work albeit with scars and dents. But when a boom is smashed beyond repair, there is no amount of

[24] The small gap between a vehicle and its attached trailer confuses the boom at both magnetic and visual sensor levels.

maintenance that can resurrect it. Booms, however, also decay on their own. The boom is connected to the control box with nuts and bolts of either steel or plastic composition. At one "inspection," soon after the onset of operations, guards noticed that some plastic bolts were coming loose, making booms wobble worryingly. The grey-transparent plastic nuts, bolts, and washers were too weak to withstand the busy transit of the newly-boomed suburb. One guard approached the inspecting crew, of which I was part on this day, to request that he and his colleagues be sent metal bolts and nuts to replace the plastic renditions. He stated that he would be happy to repair the boom himself, "so that I don't have to call [redacted: contractor] every time," only that he has no tools to do so. Colonel and the accompanying committee member concluded that guards be given spanners and screwdrivers to make minor fixes themselves.

In another young closure, booms were similarly demanding care, especially after four "*died*" after a large storm:

> Installation was poor and some of the boom control box's doors do not work. Other booms are wobbly. Recent repairs have only further complicated things as new PC boards were installed and the older model has been discontinued. Keep in mind the warranty for these booms is only one year. "When the guards come to operate they've got to open that door, through all the wires, they've got to hit the circuit breaker to make the thing run. This is a fuck-up because they pull wires, there's sensors on the door so if they open it too far it falls, it pulls the wires out, I've gotta go out and fix all the wires, put them back in and shit. The wiring inside there was never done properly, they just stripped the wire and put it in the middle." At three of the booms he has installed his own receivers with remotes to raise or lower them. For some literally unknown reason and unlike in other installations, holding a hand over the hand sensor does not keep the boom up reliably, "it starts to jiggle up top, *it wants to come down*." I think of Joe's comment at the meeting earlier this week that every boom installation is unique, and am amused by all the things booms appear to do: wobble, jiggle, stand upright, and more (Estate manager; Field writing excerpt).

Traveling to the guardhouse, further acts of maintenance are found:

> Workers delicately chip and hammer away at a new window frame, another is on the roof of the guardhouse, and an older worker dilutes a small bucket of sealant paint with a stick found nearby. The worker on the roof covers white blotches with black paint. The contractors explain that the salt held in the drops of the late summer rains has accumulated on top of the roof, run down its sides, and now seeped into the Gamazine, appearing as white streaks and ovate shapes on its underside (Field writing excerpt).

The roadway is similarly another point of infrastructural care and concern. Not only can thousands of cars move through a boomed suburb on a given day, their movement is also characterised by stopping, edging, and waiting, specifically at access points. In collectively doing so, drivers distribute concentrated pressure upon a small section of road, compressing it and lending to its decay. The compression of asphalt is only made more intense due to cable and coil-bearing slits in the road and heavy rainfall. In inspecting the health of the roadways, I was familiarised with an informal technique of gauging the extent of asphalt compression, which involves a sort of hopping and stamping of one's feet on the road surface, feeling for its

strength while calculating meterage. The alien ethnographer conducting fieldwork at Earth could, from an observable distance, easily mistake these rather unconventional bodily movements as some sort of socio-material, ritualistic dance.

Maintenance is an everyday activity, as booms malfunction, camera feeds fail, and litter threatens cleanliness and the required aesthetics. Beyond clearly affecting humans in their everyday lives, boom gates and their sister systems have lifespans of their own, requiring the care of humans to make them last. But the maintenance of technologies is part of a larger ethic of care on the part of the committee, guards, and passionate residents that determines the success and long life of a boomed suburb. The labour involved in keeping the suburb alive includes more than just replacing smashed booms and trimming grass at the feet of fences. It requires a daily undertaking, from the estate manager who must tend to a midnight suicide scare in the suburb, to the managing agent who must determine why a resident's contribution did not appear on the system, and to the communications committee head who updates the Facebook page, among many others.

Chapter 6: Seeing Between and Beyond Enclaves

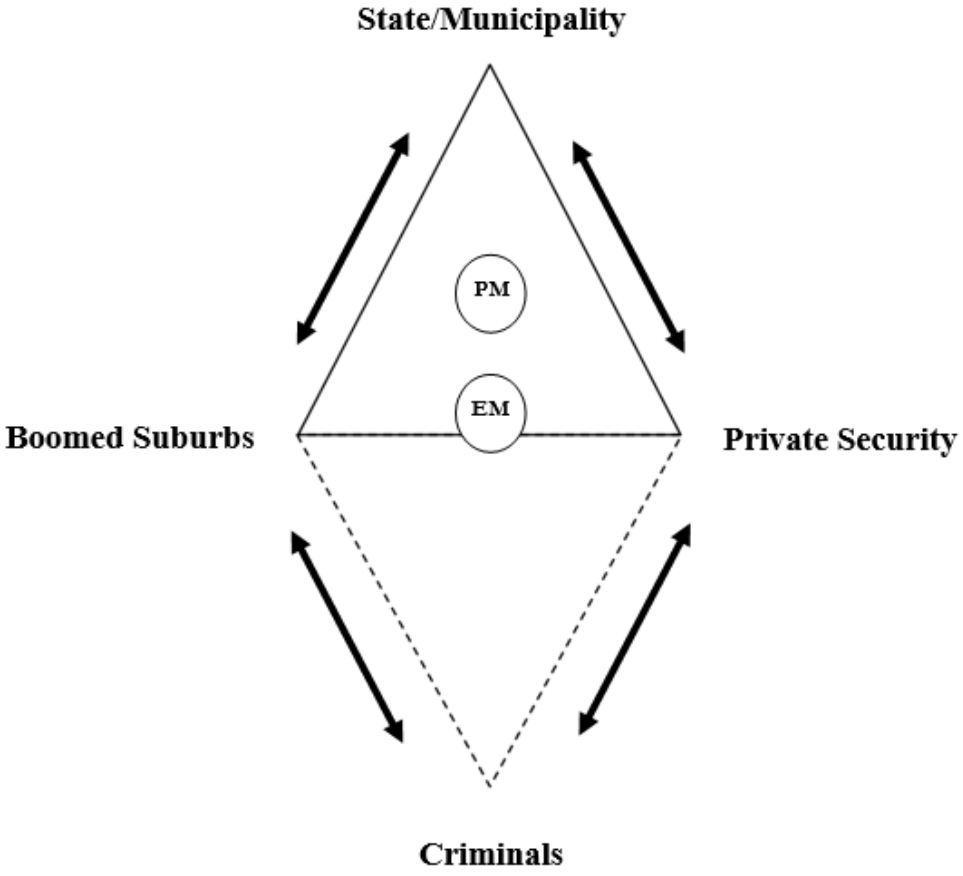
In the previous chapter, I sought to introduce the technologies and infrastructures that altogether constitute the boomed suburb assemblage from a materialist perspective by describing these objects, as well as my close attention and 'following' of them during fieldwork, in intimate and technical detail. Against a background of the borderlands, I showed how humans, technologies of enclavement, information transfer, services, and mobility, as well as the built environment of the more-than-human city itself, are relational coproducers. I provided evidence of liveliness of technologies and infrastructures by describing and recounting the acts of maintenance and care humans mobilised upon them. As such, groundwork has been laid to approach boomed suburbs and constituent technologies not as merely passive, nonhuman objects, but rather active and agentive coproducers in the developmental unfolding and everyday reproduction of suburban enclaves. While I have already revealed that these objects coproduce technological innovation alongside and in borderland relations with humans, one of the main arguments of this dissertation, I now build from this base to probe several further arguments in an attempt (as per borderland urbanism) to see between and beyond enclaves, and as stated in the Introduction, to consider and explore 'what else is going on' amidst the proliferation of boomed suburbs in Pretoria-Tshwane. As follows in this penultimate chapter, I aim to answer the following secondary research questions: If boomed suburbs are assemblages, what are their affects? What kinds of knowledges and expertise do boomed suburbs harness and develop? What kinds of hierarchies develop between different boomed suburbs? What kind of infrastructural hybrids are boomed suburbs? How do boomed suburbs redraw understandings of citizenship and community? How have boomed suburbs shaped municipal legislation and the state's position towards enclavement? What kinds of markets to boomed suburbs maintain or generate? I further look to continue an exploration of the previous chapter's broader secondary research question: How do humans relate with the nonhuman technologies and infrastructures of boomed suburbs?

Before moving between and beyond mere enclavement, I first begin with what may be deemed the 'basics' of the booming question in accordance with the literature pertaining to this particular type of enclave, namely the physical affects of boomed suburbs on levels of crime and thus safety, public mobility, private space, and socioeconomic inequality. In the closing of this first section, I explore other, thus far overlooked, physical affects and relations shared between humans and nonhumans in the world of booming. This leads into the next argument, which explores how humans' physical interactions and relations with the technologies and

infrastructures of boomed suburbs, as I have discovered, generate new types of urban expertise and knowledge through processes of coproduced learning and experimentation, the latter having already been addressed in the previous chapter. I then investigate how practices of booming are contributing to the emergence of novel forms of community and citizenship among residents of Pretoria-Tshwane. Finally, reaching the top rung of the analytical ladder, I consider the relation between the state and boomed suburbs, arguing that these enclaves constitute infrastructural hybrids that exist between the public and private realm, and that the state's stance has shifted significantly since the SAHRC commission in 2004. I progressively answer the secondary research question regarding hierarchies between different boomed suburbs, in other words what constitutes a successful boomed suburb, throughout each section in relation to the particular dimension of booming at hand.

Before expelling this barrage of arguments, I first recap here by providing a map of boomed suburb relations in the borderlands and describing how different actors interact within it (Figure 14).

Figure 14: Borderlands relations.



Source: Author.

The idea that these relations subsume a triangular shape came to me as I neared the end of fieldwork. The municipality, situated at the 'top' of the triangle, dispenses hypogoverned infrastructure, policing, and legislation in the direction of boomed suburbs, who occupy the left base point of the triangle. Back upwards along this relation, boomed suburbs send tax, income, and compliance with legislation. On the other hand, the municipality similarly dispenses legislation and hypogoverned policing in the direction of the private security sector, the latter capitalising on the gaps it leaves. In return, the sector sends income, employment, and an extension of its security capacity. Along the base of the triangle, boomed suburbs relate with private security providing income and valuable territory in exchange for safety and security services and technology. Floating, if not bouncing, between the edges of the triangle are the facilitative actors of project (PM) and estate managers (EM). While the latter usually only moves between the actors situated at the base of the triangle, although can occasionally orbit higher up, the former must be everywhere, and sometimes invites actors from outside of the triangle as well. In symmetric reflection of the triangle, 'beneath' it, I have included "criminal actors" in consideration of their unignorable agency in the unfolding of enclavement. Fiercely facing the state across the borderlands, "criminals" dispense crime and violence towards both boomed suburbs and private security forces. They also, perhaps more essentially, provide both groups with essential purpose. Towards the private security sector, criminals dispense their ever-evolving creativity, shown above as a critical force behind the innovation of technologies. Criminals and the persistent, evolving set of strategies they develop and employ are primarily responsible for the tweaking and development of security technology, for the refining of security techniques, and ultimately for the emergence of boomed suburbs themselves, along with the income and employment they generate. Beyond the exchange of bruises and bullets, criminals do not enjoy many direct material gains in their relations with private security. Criminals do, however, extract significant material value from boomed or booming suburbs. On a good week, criminals can extract up to R100,000 worth of stolen goods from a suburb, excluding vehicles. On the whole, boomed suburbs need criminals as much as they passionately do not, as ongoing providers of their operational and essential logic. The relation between fortified enclaves and criminality is one of circular reliance. A few important disclaimers. For heuristic sake, the boomed suburbs in the bottom left include both their committees and residents. In reality, relationships between residents and committees are never as ordered as they seem. The diamond should also be thought of and approached as though it were laid horizontally flat, on its back as it were, to dispel any notion of stable, hierarchical relations of simply 'up' and 'down.' The diamond is additionally not stuck in its presented orientation here. The shape constantly tilts and swings at different degrees due to relational turbulence, pitting

different actors in constantly shifting positions of power. Furthermore, while the lines connecting the points of the diamond appear straight here, the relations they represent should not be thought of as such. This visualisation serves to remind that thinking about enclavement in South Africa as the product of one, particularly predominating actor - like Cock's (2005) overstatement of the singular role of private security, for example, - is impossible.

6.1. Physical Affects and Bodily Contortions

6.1.1. Crime, Mobility, and Public Space:

The purpose of boomed suburbs is to prevent and reduce crime, the key criterion for what may be deemed a successful road closure project. As stated in the Literature Review, scholars have differed in their findings regarding the ability of boomed suburbs to meet this goal, with some arguing that the enclaves are effective security measures (Coetzer 2001; Zinn 2010), while others stress that they displace and may even attract crime (Naude 2003; Breetzke et al 2014). Uniting these views is the understanding that the ability for a given boomed suburb to reduce crime relates to the unique contextual circumstances that face each case. More generally, "the effectiveness of gated developments to reduce crime are dependent on a range of factors, including the extent and type of security measures employed and the likelihood of criminal syndicates operating from inside the gates, as has been the case in some gated townhouse complexes" (Landman 2020: 65), as well as (as per the data made in this study) the geographic location of the suburb in the built environment of the city.

Statistically speaking, most (successful) boomed suburbs in Pretoria-Tshwane enjoy reduced levels of crime within the suburb, as evidenced in decreased incidents of crime in areas before and after booming according to SAPS statistics (2015-2023). According to one of the nation's largest property companies, this is the key reason for their increase in demand across the province (Property24 2015). All suburbs enlisted as key research sites in this study saw decreases in crime, although one to a lesser degree due to its crime-friendly geographic location and subscription shortfalls, as shared with me by the committee members of this suburb based on their experiences and private collection of statistics. In confirmation with the literature, the data from this research suggests that safety remains the primary motivation behind booming, even if topped with appeals to property value increases and community. Crime still takes place within and around boomed suburbs, although again in variation due to aforementioned factors (Breetzke et al 2014). One interesting finding of this research study was that, although rarely addressed in formal conversational space, wealthier criminals may sometimes contribute to

enclosure projects themselves, to protect and fortify their properties, and rehabilitated celebrity criminals may also reside in these enclaves. Crime emerging from within the boomed suburb, as in from its resident base, is also a factor, although rare, evidenced in in the following field writing excerpt:

> One suburb was facing an issue with one particular house near the *koppie*[25] of the suburb, where a white *tannie*[26] was holed-in and supposedly selling drugs. In previous callouts she has refused security's requests to enter her garden, and the team has refrained from trespassing in light of legal concerns. The estate manager states to me that this house, and a few other suspected "knockshops"[27] in the suburb, ultimately, are part of the suburb, and can only be dealt with accordingly (Field writing excerpt).

Confirming the findings of some scholars (Landman 2000; Tshehla 2003; Breetzke et al 2014), boomed suburbs also displace crime to unboomed areas in the city. While boomed suburbs may instigate a decrease in criminal incidences in the enclosed suburb itself, this does little to prevent crime in surrounding areas of the city, as evidenced in the consistency of crimes such as burglary and vehicle theft over the years visible in precinct-based statistics (in this study, the precincts of Brooklyn and Garsfontein) (ISS 2015-2023). Regardless of the effectiveness of a given security technology or enclave assemblage, "crime [always] slowly returns" (Minnaar 2010: 205). Recall here the words of onion-layer-inspired security actors in Chapter Four, that crime cannot be eradicated but can be pushed away, and that boomed suburbs cannot eliminate crime but can displace it. Houses in the naked, open suburbs are made more vulnerable to crime, especially when neighbouring boomed suburbs, with "spacious homes that empty during the day, sprawling lawns, thick shrubberies, high walls, empty suburban streets, long driveways, anonymous freeways" (Bremner 2010: 218). Ironically, materialities of privilege during an earlier period in the history of enclavement in Pretoria-Tshwane have been refigured as vulnerabilities. The unrelenting and evolving agencies of "criminals" are working constants in this field.

Generally, for residents of the boomed suburbs in this study, a "sense of security and communality is regained. Gates are left open, children play in the streets again, crime levels fall" (Bremner 2010: 182). This is consistent with findings on gated communities in South Africa on the whole. According to one interviewee in a New York Times special on gated communities in South Africa, his migration into a residential fortified enclave allowed him to feel "mentally free:" "No longer did he need to worry about locking his doors at night. His wife

[25] Afrikaans: Small hill.

[26] Afrikaans: Aunt.

[27] Slang: Brothels.

and children could walk around the estate after dark. He became aware of a subtle fear that had pervaded his life and was now lifting" (2019). Participants in this study stated that "people enjoy their lives here all of a sudden" and that the closure allowed residents to "take back our lives a bit." A related finding in this study was the centrality of family and the ability for children to roam the streets in play is a major component of the imaginary of gated communities in Pretoria-Tshwane, suggested in Chapter Three to be part of the reason why the city appears to be at the forefront of booming. They are ideologically constructed with child-rearing in mind, fulfilling suburban promises that open areas cannot. This is frequently cited by residents, committee members, and others as material proof of the security and peace-of-mind that booming affords. When successful, as Cathy stated, "Children can play outside again, kids can be kids, grownups can be grownups without worry and stress." Aris expressed fulfilment with the booming project project by highlighting how more people walk in the evenings and children play in the street. Childless residents and even non-residents also reported feeling safer behind the booms, even if crime awaits only a few metres away:

> But when I started running I was running in here, alone … I started going outside the boomed area and that's where I would feel uncomfortable. There's also, I think, cameras kind of on the street in the suburb, and I just used to tell myself that at least if something happened, it would be like, recorded (Ingrid).

> There's normally groups of 'helpers'[28] that work in the area that walk together, because there's been a lot of incidents with them. People try to kidnap them and stuff. There's been a woman who got kidnapped just outside the boom gate, this car pulled over and forced her into the car. There's also been a couple of incidents of people getting mugged, like literally just from the nearest taxi drop-off area to here [the boomed suburb's main gate]. Me and my helper have a really good relationship and she chats to me about this stuff, and she says 'No they walk in groups now,' just until they get to the boomed area at least, cause its safer (ibid.).

> "Nothing much has changed, but I feel safe, here on the street." He claims that two to three houses would be robbed per day before the booming, and in that sense he sees the booms as "nice," and believes that "it works," especially for people who live in the suburb (Happy; field writing excerpt).

The second major physical affects of boomed suburb concern complications of mobility. The restrictions of movement that boomed suburbs pose have been at the centre of their emergence since the start (Czegledy 2004). Boomed suburbs, as socio-material actors, undeniably reshape traffic flows and refigure conditions of accessibility in the city (Nel and Landman 2015; Smit et al 2015), even if they have been designed to do so as minimally as possible, without compromising security of course. Build-up of severe traffic presents the suburb in poor light, especially in the eyes of the municipality, and facilitative actors look to quickly resolve such

[28] Household domestic workers, mainly women. Domestic workers that Harrison and Mabin (2006) interviewed stated that they felt safer after closure, while others lamented the mobility changes it brought (Minnaar 2010).

issues, leading to the innovation of methods of such as the upright raising of booms during peak rush hours.

In some cases, property owners, drivers, and pedestrians can be hard done-by in the booming of the suburb. Such incidents include, as lifted from interviews and walking the field: the placement of a permanently closed gate near one's home or on one's street, with which an unlucky resident would previously exit the suburb; the placement of the boom gates of the suburb immediately after their property, thus leaving them out of the enclosure; the closing of beloved and convenient shortcuts; the temporary, nightly closure of certain gates, forcing drivers to reroute to a main, 24-hour gate; and the closure or inconsistent operability of pedestrian pathways and entries, which similarly force actors on foot to main points of access. But for the most part, residents and transients see the breaks in mobility instigated by boomed suburbs as little more than annoying, and quickly normalise them, even if frustrated at first. This excerpt from an interview with Zuki is but one example:

> In terms of interacting with the booms, he finds them "annoying," and that they waste his time. "I find it annoying when I have to wait." These are micro-annoyances, however, "just an extra little schlep," telling me that the frustration is quickly forgotten once he has moved through the boom. In terms of interacting with the boom and the hand sensors, he finds them quite reliable and comfortable (Zuki; field writing excerpt).

Moving through the city via passing through booms has increasingly become part and parcel of everyday mobility in Pretoria-Tshwane.

Boomed suburbs, in virtue of their agentive, politically material influence on conditions of inclusion and exclusion in the city, are widely viewed, as seen in the Literature Review, as instigators of urban fragmentation, socio-spatial segregation, and the death of public space. Physically, as enclaves, boomed suburbs undeniably fragment the city, in the sense that they are fragments in themselves (Vinokurov 2009). In-between city spaces "are simply movement channels that the body must traverse to get from one insulated enclave to another. The city is further fragmented, dispersed, and divided" (Bremner 2010: 229). The fragmented state of South African cities, products of both the oppressive past and the hypogoverned present, is hard to miss. Fragmentations both inherited and renewed posit further complications for social integration among residents of desegregated suburbs, as reflected in daily patterns of movement and interaction (Lemanski 2006). Relatedly, as also discussed in the Literature Review, fortified enclaves more generally appear as symbolic and material watermarks of the erosion and decline of public space. In South Africa and beyond, authorities are said to have abandoned public spaces, giving way to the proliferation of fortified enclaves (Holston and Appadurai 1996). In this research study, the technologies of enclavement that constitute boomed suburbs

can be said to have mobilised against public space and opportunities for vertical heterogenous encounter:

> When asked to surmise living in the suburb in one word, he can only offer me the term, "Bubble" (Zuki; Field writing excerpt).
>
> "It's quite a peaceful place in general. Like peace within my house but also just like in the surrounding area. It's generally very quiet, people are familiar. It feels like there's space to breathe, in a lot of ways. But it kind of ties-in with how you come here and you can just kind of forget about the outside world, you know" (Ingrid).

But boomed suburbs, I argue, complicate fragmentation and public space as well. The CTMM encourages the development and integration of free, open public space for the health of the city (Landman 2015), although these calls have fallen short. But only so much of the 'death' of public space in Pretoria-Tshwane can be attributed to hypogovernance. The failure of planning initiatives gauged towards the development of democratic, reconciliatory public space can also be attributed to changes that have and are taking place in the imagination, nature, and use of public space itself, towards which boomed suburbs and other fortified enclaves are contributing. Public space is not static but rather also shaped in borderland processes of "experimentation and innovation" (Landman 2019: 182), coproduced in relations between human and nonhuman actors. In confirmation with Landman, I suggest that boomed suburbs form part of evolving public space in South Africa. Participants in this study expressed unique personal understandings of public space in relation to boomed suburbs:

> In absentia Zuki reminds her [his sister, who initially held some ideological reservations about the closure] that this type of thinking had always been there though, long before the infrastructures began to appear. To him, it was as if there had been "invisible boom gates this whole time" (Zuki; field writing excerpt).
>
> "It's still too public, I like estates, I like having space. I don't want people walking up to my house" (Walking interview with Denga).

So too did Rhulani, after I explained how boomed suburbs are criticised from a public space perspective in my line of work, give me a confused look and state, "But the street in front of people's houses isn't really public space?" Hannah the preschool teacher decried that the public park in her boomed suburb had become *siffy*[29] following its recent popularisation, patronised by diverse residents from all over the city for walks, picnics, and even photoshoots. Although as long as the area is not fully enclosed – as it would be in a security village-type gated community and what she desires – she understands the park as public space, even if preferred otherwise.

[29] Corruption of Afrikaans: *sif*: 'Gross, disgusting.'

Scholars tend to decry the fragmentary effects of enclaving on public space and duly so. But their static conceptualisations of public space still pull from floating, normative ideals that they hold should exist in a healthy and just city. As shown in this study, public space itself evolves, and boomed suburbs are active coproducers in this process. These enclaves are simultaneously neither, or both, public and private spaces due to the borderland-developed legislation that governs them. The areas contained within boomed suburbs remain public spaces, but of a different kind. Unlike in fully-enclosed gated communities such as estates and complexes, the boom here actively communicates that the space beyond it remains accessible. Even though this communication can sometimes be mistranslated, and some boomed suburbs still operate illegal measures of access control, their incidence remains few and far between, at least in this city. This forces consideration of whether boomed suburbs have become part of the configuration of public space for inhabitants of Pretoria-Tshwane. Landman's (2019) concept, which I have harnessed to make this argument, reveals that public space is not dead, and if it is, whatever taking place in the vacuums it has left behind certainly is not. Public spaces cannot die, but rather only evolve in different contexts over time due to their human and nonhuman, socio-material coproduction, in both materiality and imagination. While the postulation that boomed suburbs fragment the city indeed holds true, it also forces consideration of the acceptance, willingness, and sometimes happiness of residents to live in fragmented cities, especially as produced through private enclaves. It evokes the question of whether, in the minds of Pretoria-Tshwane's residents, public space can include gated and fortified developments, a question which cannot be answered in this dissertation based on how and where data was made, as well as the duration of research, but one that other scholars may probe in the future. This echoes Landman's recent findings that the 'pseudo-public spaces' that fortified enclaves coproduce and urban citizens consume have increasingly solidified as standard features of public space itself (Landman 2019). I stress here that it is important not to speak over what the city itself is saying. Analysing Pretoria-Tshwane's boomed suburbs under a lens of evolving public space reveals that boomed suburbs are not only shapers of public space, but also products of its present normalisation and evolution towards fortification and enclavement.

While boomed suburbs, through complicated processes of fragmentation and segregation may be said to intensify socio-economic inequality (Mabin 2005; Obeng-Odoom 2015), these enclaves, even if unsavourily and unsettlingly, may also be economically generative as well. Boomed suburbs, firstly, are post-market products that engage markets of private security, development, and administration in reverse motion. The resilience of criminal actors and the crime they collectively produce creates and sustains markets that the suburb must entangle

with. Boomed suburbs and fortified enclaves have also become sites and sources of employment and economic exchange (De Boeck and Baloji 2016). Boomed suburbs generally provide opportunities for 'low-skilled' employment, and tree-fellers are often seen hanging about at the gates awaiting work. The booming of suburbs is an economically stimulating practice in that it generates income for a wide range of parties, creates and maintains employment, and provides returning financial benefits for residents. Businesses in the suburb are also provided with increased safety and peace of mind to conduct work, in-keeping with the World Bank's recommendation of 'Safety First.'[30] The economically generative capacities of gated communities are an overlooked dimension of these urban forms overall (Salcedo and Torres 2004).

This is not to say that there are no economically stifling affects of boomed suburbs, especially suffered by walking workers and jobseekers, taxi drivers, and businesses outside the suburb onto which crime is displaced. I temper this study's findings regarding boomed suburbs' economic stimulation capacities by reminding, as argued recently in the literature and as evidenced in this research in the case of security guards, that the provision of employment opportunities through enclaves does not guarantee that these opportunities are any less precarious or exploitative (Ballard et al 2021). Nevertheless, boomed suburbs in this study were seen to express affective, circular economic vitality in multiple directions and upon a diverse set of urban actors, from gate welders, construction workers, and security guards, to administration firms, project managers, lawyers, criminals, security companies, domestic workers, engineers, NPOs, small businesses, and residents who are conferred with increased property value and decreased insurance liability via enclosure.

6.1.2. Bodily Contortion

A more materially direct example of the physical affects of the technological and infrastructural assemblage of boomed suburbs is the coproduction of human bodily movement during engagement – objects and technologies alter the behaviours of the human body. All human actors involved in the broader assemblage of boomed suburbs, from commuters and walkers to gate guards and project managers, must contort their bodies to engage with its technologies and infrastructures to achieve mobility, safety, or development. I begin with residents, drivers, and pedestrians.

[30] Incidentally, The World Bank's Pretoria-Tshwane office is located on a corner that precedes the gates of a boomed suburb.

Becoming adept at opening the boom with the wave of the right hand over the sensor that activates the boom – in South Africa the driver sits on the right side of the vehicle – requires one to build an intimate awareness of the size of one's vehicle and body. It further requires drivers to carefully slow down pace of movement, engaging the brakes of the motor vehicles they are driving with their feet and removing one hand from the steering wheel, not to mention rolling down the window. While on one "inspection" – kitted in my best attempt at a project manager's assistant outfit – a member of one of the embassy delegations in the suburb driving through the boom passage in his car, complained of having to (electronically) roll his window down during periods of rainfall, and asked me to raise to 'my superiors' his request that guards be posted with umbrellas in these conditions to activate the sensor for drivers. It is clear that engaging the boom coproduces movement and alterations in the behaviour of its users. Over time, residents and driving transients of the suburb also develop personalised strategies of convenience towards this process. Zuki told me he would often use a smartphone to extend his hand and activate the sensor. Once, while on an "inspection," I watched from the nearly-complete guardhouse an elderly woman extend a plastic spatula from her Mercedes to wave the sensor. On another occasion, a woman made use of a plastic flyswatter.

So too does the boom assemblage spark bodily contortions in the guards posted at the gates. When a delivery truck driver from the neighbouring North-West province is experiencing extended trouble with activating the hand sensor at the boom, for example, the guard must rush to assist the driver through and thereafter stay standing on the boom island, keeping their hand palmed over the sensor to allow traffic that has accumulated behind the truck to move through faster. In another example, the rotating guards at the Albert Street gate in Waterkloof, one of the busiest access points of the suburb and situated just off a frantic, four-way intersection, must also engage in island hopping and sensor cupping during rush hour in order to keep the flow of traffic exiting the suburb from overloading the intersection ahead and avoid congesting the boom passage. Opening the boom of a 12-hour gate in the early morning similarly involves skipping about the assemblage, flicking switches and pulling open steel gates. From these findings, and in consideration of the social labours that guards engage in as mentioned in Chapter Five, it is evident that guards do a lot more labouring than merely guarding.

Contractors, labourers, municipal inspectors, and project managers, those involved in the development of boomed suburbs, must also navigate their bodies in constructing, testing, and maintaining the boomed suburb assemblage. The following excerpt from the field notes of one of the first "inspections" I attended with the Colonel serves as an example:

> The collections of refuse and rubble that annoyed Colonel appeared quite wonderful to me. Shards of pavement and rock lay peacefully with bundled dead plants, almost as casualties of the construction process. Planks of wood and metal rods are not uncommon among them – the signs of a missing contractor. Inside the guardhouses are cooldrink bottles, workers' rags, and polystyrene food trays among other plastics. Alongside feeling the rough Gamazine, sticking our fingers in the gaps of the walling insulation, we had to peek through the windows to inspect the guardhouses, sometimes using my nails to open the bathroom windows, as the key was with the contractor. The layers of dust I encountered in all these activities told a story of an enclosure stuck in motion (Field writing excerpt).

Further examples have already been disclosed in the processes of describing the assemblage in the previous chapter, such as the jump of Lehmann's body during the asphalt inspection ritual dance. For these actors, directly involved in the materialisation of boomed suburbs, their bodies become sensors of their own kind, gauging and confronting the limits of technology and infrastructure in the process of fetishising it. In closing, the booms and its sister technologies in the enclave assemblage demand work from humans, and – as I argue in the next section below – contribute to new forms of coproduced knowledge and expertise in the process.

6.2. Urban Expertise and Knowledge

Out of contortions of the body, knowledge and expertise is developed. In responding to Robin and Acuto's (2023, p.439) call for "research on the ways in which struggles for urban justice mobilize new forms of expertise," I here explore how again through borderland experimentation, humans and nonhuman technologies, coproduce new types of expertise and embodied knowledge in socio-material interaction. Boomed suburbs are not only laboratories for social experiments in community and citizenship, they are also laboratories for experiments in the development and legitimisation of context-specific technical expertise (Turner 2014). The smartphones, spatulas, and flyswatters mentioned earlier, as well the method of traffic management of the guard cupping their hand over sensor, and mine and Col. Malan's contortions during guardhouse "inspections," are already-introduced examples of the capacity for physical interactions between humans and the technologies of enclavement to develop new workarounds and knowledges. I here look to provide more examples from the field to further substantiate the argument that the development of knowledge and expertise may not be solely an exclusive human domain but perhaps a shared one.

Beginning with the guards, the formulation of the 'five-car rule' at the aforementioned Albert Street Gate is an example of socio-material, coproduced knowledge and expertise at work. On one of our post-operational "inspections" of the suburb, Col. Malan explained that for the benefit of traffic both inside and outside the suburb, which can become extremely tight during rush hour, only five exiting cars should be permitted in the road space between the boom and

the intersection's public traffic light. Based on the experiential knowledge of the guards, this method was developed by learning and experimenting with the timings and niches of the roadway and the boom, in the process growing from a mere trial to a successful working standard. Permitting any more drivers in this space would not only overburden the intersection ahead but confuse the boom itself, as the last of cars in this line are positioned directly beside the raised boom, which now waits for the ceasing of magnetic disruption between vehicle, ground loop, and detector to descend and close. Expertise appears to be constantly innovating through coproductive relations between humans and enclave technologies in Pretoria-Tshwane's borderlands. Recall here the example of maintenance in the previous chapter, wherein the guards watch the booms, note wobbles and creaks, and in some cases even repair the booms themselves and ask for improved materials to do so. Residents have also been seen to engage in the practice of developing expertise based on consistently refining knowledges in relation with the technologies of booming. Drawing from the previous chapter once again, with the questions posed by residents to the committee and security provider regarding how the automatic entry technology of the boom may be circumvented, technological innovation unfolds.

Security expertise is another product of bodily coproduction between humans and the technologies of enclavement. Take for example the following excerpt from one of the "inspections" I attended of a boom suburb undergoing the late period of the construction phase:

> Immediately Colonel is on the case, pointing-out tiny gaps in the ridges of the fence, shaking the spike strip that runs along the top bar of the fence and revealing its flimsiness. There is a nice little spot of bush dominating the corner preceding the closed gate. Colonel leads us into it and shows the routes for two possible diagonal fences that can bisect the space. He sees the bushy corner as a risk due to its density (that can conceal criminal activity). Colonel also examines and touches the trees in the small bush warmly, and tells the contractor not to cut down these "*mooi bome*."[31] We head out the bush full of blackjacks and congregate by the gate. Here the group engages in a common practice in the development and inspection of boomed suburbs, namely postulating about how crime might slip its way through weaknesses in the gate's defences. It is an engaging exercise, as individuals share their imaginations about how different types of crowbars, bolt cutters, or grinders might be nefariously used by chancing criminals on a dark night somewhere in the future. Indeed, the gate is brought to life in this exercise as members of the group not only collect themselves around it but rest and lean on it too, feeling and fidgeting to attain some measure of its strength. A silent awkward moment ensues after Colonel walks up closer to the gate (it is designed in the ClearVu style), slots his fingers between its small slits, and rattles the entire thing with a few shakes of the wrist and forearm (Field writing excerpt).

The coproduced knowledge under development in this example involves quite literal fondling between humans and nonhuman materials. The suburban vigilante group, despite their non-

[31] Afrikaans: 'Beautiful trees.'

professional roles in the security of boomed suburbs, combine knowledge collected from the internet with intimate knowledges of their suburb both before and after the installation of enclave technologies to also contribute to the development of a type of context-specific, amateur expertise, one which proposes that residents contribute to the effort as spies and eyes in the suburb, watching suspicious persons or activities, taking different routes home, and looking for "spotters" (reconnaissance members of criminal teams) (Vigilante group member; field writing excerpt).

Estate manager Aris, who has risen from a stranger to the field of booming to an expert within it[32] – a course emblematised by Col. Malan's story – provides a share of examples himself. I found that actors engaged in the security of boomed suburbs develop expertise via embodied knowledge premised on *thinking like a criminal*. In one instance of such experimental mimicry, Aris pushed the limits of his suburban SUV to discover it takes roughly two minutes to escape the suburb from its centre. He added that criminals are knowledgeable of the suburb's road layout, and which streets do not host speed humps. In this case, expertise is generated by driving like a criminal. Col. Malan's aforementioned rattling and shaking of fences and the group's practice of postulating how to penetrate said fences is another example. In some cases, it may even involve literally stepping into the shoes of a criminal:

> "But now those two guys, I have them on footage with a third guy, this was in the beginning of [month]. Now that third guy, he's the guy with the knife, same clothes, same shoe tracks. The biggest thing I've realised about crime is the fucking shoes. You check an *ou*[33] walking in the street, right. Majority of guys that are hard workers, black or white, they obviously wear hard, steel toe boots. You see a guy wearing Pumas, Adidas, that kind of shit, but wearing overalls, there's something wrong there." This knife-wielding criminal is known to make use of cat doors to enter properties, but an elderly lady with a pepper gun recently warded him off. "I'm struggling at the moment to find one pair of shoes, can't figure out what the fuck they are. We find these tracks inside the yards, outside the yards. I thought they were VANS first, but look (shows me a photo of a resident comparing her VANS sole to the image he shared on the WhatsApp group). We also looked at Converse, but they're too small. We doing a lot of … looking at shoes and shit (laughs). It pays off though" (Estate manager; field excerpt).

These practices may even involve attempts at physically embodying the criminal, which was the case for one member of the security team during a test simulation I attended at one of the boomed suburbs, who was tasked with driving through the suburb how a criminal might and being chased by the suburb's patrol car. At work here is not only mimicry but shared and collaborative process of learning and knowledge generation. I remember being taken aback by the constitutive relationships that criminals and crimefighters share, even though never vocally

[32] Aris became the chairman of his greater region's CPF soon after I left the field, barely two years after beginning his journey as an estate manager with no prior experience.
[33] Afrikaans: Slang, 'Guy.'

conversing. These actors learn each other's styles and techniques in a constant game of urban chess that over time repaints the picture of the city. Aris once claimed that, “I think these guys learn,” and “the biggest issue is the way the tendencies change, the crime tendencies. They keep changing time slots and stuff.” At a suburban vigilante meeting, I was told of an incident wherein a criminal opened a permanently closed gate by laying prone beside the kerb, under the cover of unlit, hypogoverned darkness, and unlocking the gate motor clutch with a screwdriver. Numerous private security and police vehicles drove past this man, who went on to penetrate the suburb undetected. I was then told by a member of the group that, in another instance of learning through embodied knowledge, that criminals usually band in threes when conducting strategic operations, with one lookout, one driver, and one on foot. They are parts of larger teams that stake out and “spot” the suburb over longer periods of time, noting residential and security behaviour. It is evident that the human actors that engage in criminal practices, as evidence suggests, become vitally influential in the shaping and reshaping of the city, especially towards fortification. This was less a study of crime than a study with criminals, even if these criminals were not official research participants. But they did not need to be, the extent of their creative expertise is already materially rooted across the city, e.g. ClearVu. Evidently, new forms of security expertise are innovatively coproduced in relations between criminals, human security actors, and various technologies of enclavement through practices of shared, embodied, and majorly anonymous learning. But might these technologies be learning from these human actors in return as well?

Much like I, who during this research study sought to ‘learn’ from boomed suburbs, their residents, and their transients, so too do certain technologies in the assemblage learn the suburbs. One security officer explained at a community meeting regarding the ANPPR camera system:

> The software also learns the area … software will learn that this is our armed response vehicle, Romeo six or seven, it brings it up … It starts to learn everybody, it knows all the residents (Security officer).

With innovations in the use of Artificial Intelligence for suburb and city security, coproduced again due to criminal expertise, it appears that both humans *and* technologies are learning from their socio-material engagements. I learnt of a small drama that unfolded after the rolling out of the automatic entry technology in one of the suburbs. Residents were firstly required to register the license plates of the motor vehicles they own with the committee, who would share these with the security provider to input into the ANPR system. While this worked for some, residents also reported glitches in the system that denied the smooth, uninterrupted entry promised. At a follow-up meeting, the committee and security officers explained that the

system can glitch due to some motor vehicle's bright headlights that "literally blind the camera," dirty or unclear license plates, or approaching the boom with excessive speed. "You don't speed up to the boom at malls or shopping centres … we ask the same when you approach our boom gates of our community." The active, verb-based language people use when speaking of camera and ANPR systems, as technologies that can 'learn,' and be 'literally blinded,' are silent give-aways of their agentive, lively, and coproductive capacities, those that this analysis has looked to uncover and lay bare.

6.3. Community and Citizenship

6.3.1. Communities of Property

Another major dimension of analysing and evaluating boomed suburbs, both in the academic literature and among actors of booming, regards the formation of a 'community' or sense of 'community' among residents and committees behind the gates of these enclaves. Undoubtedly, some kind of community does emerge throughout the course of developing and thereafter operating a boomed suburb. What is peculiar about the data made in this study is the basis of these communities, forming what I term *communities of property*.

The development of boomed suburbs is an expensive and exchange-based process. As Gill (2008) reminds, more wealth brings more insecurity, and thus the lean if not dive towards enclaving. As put by one car guard working at the shopping centre adjacent to the Waterkloof boomed suburb's main gate: "I can see [from the booms] that there is a lot of money in that area … the robbers go there because there is lots of money there, so it makes sense." Social relations in and of boomed suburbs operate upon intensely economic and individualist bases. As enclaves wherein conditions of residence are determined not by the colour of one's skin as once but rather the depths of one's pocket (although racisms nevertheless persist), boomed suburbs are optimal sites for an everyday exploration of the race-class shift mentioned in the Literature Review. Preceding with an understanding of boomed suburbs as racially homogenous, elite attempts at producing spaces that block out the present with the past would have made this analysis of them far easier. But this was ultimately impossible in consideration of the data made in the field. Boomed suburbs, as products of unrelenting crime and urban hypogovernance, are also products of an emerging, pro-enclave, consumerist mindset set in conditions of rampant individualist alienation (Bremner 2010; Landman 2019).

The idea of community deployed in boomed suburbs is unique, localised, and complicative of the concept. Evidence from field research strongly suggests that the socio-material, multi-actor

development of boomed suburbs does produce ‘communities’ within them, or at least communities as defined through residents’ conception and use of the term. A boomed suburb’s human ‘community’ first begins to form in its early stages of development, and is ideally preserved and expanded for long after operations begin, ensuring its successful reproduction and its position in hierarchies between them. Boomed suburbs rely on capital, social labour, and technologies and infrastructures to construct these internal communities. Communities ought not to be taken as pre-established truths, but rather products of what actors make of them. As such, most of the participants in this study referred to and conceived of ‘community’ as simply collections of residents (and sometimes workers) who live or work in the suburb. This economic-geographic conception may be optimistically laced with notions of togetherness and cooperation for some, while purely functional for others. Much like the residents of Chipkin’s security complexes (2012), these are not the cosmopolitan, rainbow communities that were optimistically envisioned following the demise of apartheid, but rather communities of property, cash, and the shared desire for safety and order. To repeat, different demographic and economic groups occupy these spaces with passing tolerance but not embrace - “groups are attracted by the promise of communal living; not because they are seeking community or non-racial conviviality. Rather, they are attracted to the security and orderliness of a regulated environment” (ibid.: 21).

This is related to the aforementioned shift from race to class. The material enclavisation and privatisation of South African cities embodies and engages **“**a shift towards class rather than racial segregation as well as a shift from state to market forms of segregation” (Hamann and Horn 2015: 42; Mabin 2005). Col. Malan also once stated, “I’m saying we’ve changed from a thing that was based on race, to a thing based on class. The only thing that for me is critical is to move to a point, with safety and security, where I can protect everybody.” The pseudo-public, evolved, fortified enclaves-cum-public spaces of shopping centres and malls are prime artefacts of the race-class shift in material action: “In many of the shopping centre plazas, everyone who can afford it and who ‘behaves’ according to the expected norms is welcome, regardless of race or background” (Landman 2019: 124), much like in boomed suburbs as well.

It has already been established that the success and functionality of boomed suburbs centrally depends on the accumulation and movement of capital. In material terms, “If we don’t receive these monies, we’re going to have dust collectors on our roads;” “Listen, we want to secure this area, pay us this money, and we’ll be secure.” Capital informs the relations that dictate the formation of communities in boomed suburbs, in the absence of integrated social networks. It acts as a connecting, encounter-making and encounter-preventing social conduit, tool, or arm

with which urban citizens interact, over and above its more straightforwardly central role as a medium of monetary exchange. I prefer to use the descriptor of an arm here, as the limb that does, builds, repairs, steers, and waves (over hand sensors), to capture the lively role of capital in the making of boomed suburbs and the 'communities' within them. One estate manager explained the role of capital in the reproduction of community in their boomed suburb:

> That in my sense is the beauty of the closure. I don't think it's the closure that's working, it's, 'Listen, we put this cash in we have to make this work now,' and they're making it work. If they just sit back, it's not gonna work, and that's the fuck up we have (Estate manager).

The chairman of another boomed suburb's committee highlights the coming together of security concerns and cash to form communities in boomed suburbs:

> "The objective was to close off our area, to make it a gated community, with the booms and the gate at [redacted: street]. It's you that made us achieve that goal, the community, and we are thankful for that. Your contributions make it safer for our community as a whole, and we'd like to keep it that way and take it and progress from here onwards … We all feel like why should we pay if everybody else is not paying, but then the system will fall flat. And hopefully then we will be able to get through to the other people in the sense that they know that you add value to your life, your personal life. You are able to walk down that street, if the weather allows, freely, without people harassing you, without people threatening you, without being robbed, and there's value in that. It's a simple equation. If people say they don't want to pay, it's their choice, you can't force them. But to me, my security, I value the security of my life, that of my family, that of the people who stay in our area otherwise" (Committee chairman).

Between residents, capital is both the basis for their newfound, post-boom relations and an arm with which to express cooperation, difference, or shame. One's decision to move capital towards the suburb NPO in the form of a levy becomes a social base on which residents are differentiated as either caring contributors or 'free riders.' A fair share of participants interestingly identified their suburbs' wealthier inhabitants as those who are most "stingy" towards contributing. Committees encourage residents to establish relations of familiarity with one another, share information about the closure project, and assist each other financially when falling on hard times, in the process fostering a community. Early drivers of this process are the 'street captains,' whose voluntary role is to spread the word of the closure to other residents and probe these neighbours with the simple question, "Listen mate, are you willing to contribute?" In some of this study's suburbs, residents supported neighbours or elderly residents in accumulating their contributions, even if these figures would not always meet the demanded levy. One passionate resident at a community meeting, after the committee shared capital contribution shortfalls it was facing, exclaimed: "So what's the solution? I'll pay my R580 three months in advance and his too if he needs!" These are examples of successful community-making in boomed suburbs, seeing as the value of said community revolves less around flowery neighbourliness (even if this is the dream of many a committee), but more

around the ability of the community – the suburb's residents – to come together, contribute, and generate income for the suburb's closure and daily reproduction.

Capital becomes the social fibre connecting actors in the communities of boomed suburbs: "I'm not working with my money, I'm working with our money … We gonna to have to hear you out, we not gonna to take food out of your kids' mouths, we gonna make a compromise" (Committee chairman). The accumulation of capital through contributions is also the driving force behind arranging car boot sales, flea markets, family fun-runs, braais and cookout competitions, auctions, and other socially accretive fundraising events. In the best cases, funds that these events generate for the committee are directly invested into the demands of the suburb's infrastructures or their upgrading. In one of the more successful suburbs, the yearly residential *potjie*[34] competition accumulated enough capital to single-handedly foot the new electric fencing bill. The socially-connective capacity of capital is also exemplified in the way it mobilises actors, guiding them along towards new roles of authority or expertise. Aris spoke of how, before taking on the estate manager role:

> "I was a hermit in my house. I had my alarm system, I didn't care what was happening outside. I was fine, eventually I told my wife I'll try out this job, see if I can pay off my debt and see how it goes. Since I've started, the amount of good people you meet, it's amazing. It becomes a passion" (Field writing excerpt).

But not all communities of boomed suburbs enjoy family-like relations of cooperation and shared belief, materialised in the form of capital contribution, nor are these 'communities' consistently and homogenously received by all residents alike. Residents as contributors have pivotal roles to play in determining the successful reproduction of boomed suburbs. Their relations with the contribution-demanding committee are often marked by doubt, scepticism, and suspicion:

> A lot of people that I've spoken to, when I spoke about the committee, they're like 'Oh, they just want money.' I'm like, 'No, they don't want money, they want to build a community but they need money to do it.' But the people only see the money thing because the way these things were handled previously, it was too much (Estate manager).

Such suspicions, as well as significant numbers of non-contributing residents, are often bad omens for developing boomed suburbs, and can contribute to weakening the closure and its position among hierarchies of these enclaves:

> He speaks of residents complaining about their current levy, which is hefty, who do not realise, however, that increased contributions would decrease the levy. Complex contributions do little to assist cash build up, as residents living in complexes within the boomed area pay only R140 per month. Of course, the complexes themselves already have levies in place and it is difficult to convince already-enclosed people to contribute more than that. 70% of the freestanding

[34] Traditional South African pot-cooked dish.

> houses are contributing, but only 50% of the suburb on the whole, and only nine out of twenty complexes. A major business in the northern side of the suburb has not contributed at all, seeing as they have their own security services, but their monthly R7k would do much to help (Estate manager, field writing excerpt).

Contributions, unless in exceptional cases of efficiency and cooperation, are subject to flux, as personal economic circumstances change and belief in the project wavers. Because of the close entanglement of capital contribution, community, and functional success of boomed suburbs, those that are unable to formulate a community that consistently collaborates and contributes to the closure's running costs may be deemed unsuccessful, and occupy a lower position in the hierarchies between them. The desperate desire for safety and the availability of disposable capital pushes different actors into interplay, from both the top-down (committee) and bottom-up (residents), producing *communities of property* in which cash is, ultimately, king.

Successful boomed suburbs, elevated in the hierarchy, are also subject to a significant amount of social labour aimed towards forming tight, tolerable, and most importantly contributing communities. Successful boomed suburbs require intensive social labour, and are those in which (at community events) "everyone eats together," and in total, "everybody is together," as put by one committee member of a successful boomed suburb.

> He raises examples of the biltong[35] hampers provided to every new owner, and how the suburb hosts its own Facebook group and classifieds page He maintains contact with residents often, and this is something of a secret ingredient in his eyes, requiring only a little of personal consideration and effort (Committee member; field writing excerpt).

> "We tried to build a community, a close one. We also realised that security does not work on an island basis." In other words, security cannot be achieved if each individual property only protects itself, disregarding their situatedness as smaller parts of a larger whole. He is big on teamwork, stating "I realised very early that we must bring everybody on board … I have a number of directors of colour on my board." One board member works for the City of Tshwane, which fosters a fruitful understanding between the city and the suburb. He prefers not to fight the city council and opts for an understanding perspective from both sides. He also tells me of a high-ranking member of the Economic Freedom Fighters (EFF) who lives in the suburb, who has proved to be a major supporter of the closure and often reports suspicious activity on the community WhatsApp group. He calls the "community" in the suburb a stable and inclusive one – "We not involved in any politics, we just want to be safe" (Herman; field writing excerpt).

> He puts this down to the impeccable leadership of the committee chairman, social media communication, and a connectedness between residents that has flowered into reciprocity as well. Friendships and social connections must be built for a suburb to be boomed successfully and to live on as such thereafter. It is on the community to be vigilant and communicative, and residents often still go on amateur patrols through the suburb, on foot or by car (Committee member; field writing excerpt).

I lastly look to reveal the role of technologies and infrastructures in processes of community-making in boomed suburbs. In this sense, including and recognising the agencies of technologies and infrastructures allows for interrogations of communities that revolve less

[35] Dried meat delicacy.

around what they *are* or characteristics they *have*, and more around the material tools, objects, and resources they *use* and are coproduced *with*. I reject the assumption that communities are limited to strictly human actors and sociality. The following excerpts from interviews and field writings offer insight into how relations between humans and enclave technologies reproduce communities of property. These examples reinforce the under-identified but increasingly relevant postulation that, "Gating, by virtue of its exclusionary effects to the outside, ironically seems to facilitate greater inclusion inside" (Landman 2020: 66).

> The other thing that's very important is that there's a dynamic in the community that you unleash [when booming a suburb]. Because once you do this type of thing, and that's why your [research title] is very appropriate, because there's certain skills in a community. People are marketers, this guy does the website, this guy does the electronics, this guy does the project coordination between them, the one will be a chairman, the one will be a secretary, type of thing. Now that's important because that's exactly what your title is saying. They don't know each other, they stay behind the high walls and they do their job and we meet maybe at church or at school. But now, as you start unleashing the potential of your community, pop, pop, pop (Col. Malan).

Colonel's words here form part of a broader process of 'de-cocooning' that boomed suburbs initiate for walled human actors starved of neighbourly sociality:

> With some nuance, he explains that houses in unboomed suburbs tend to continuously increase the size of their fences and walls, forming "cocoons," which do not allow for "mingling." "But when you enclose a space it becomes branded, it becomes owned and shared." Booming and enclosing then creates community, a certain pride of resistance and belonging, according to the Colonel. This is specifically driven by how residents get to know and interact with each other, sometimes "again," in the cumbersome process of enclosing a suburb. They are forced to have meetings and to talk because of their shared vision for enclosure. Even those opposed are part of these conversations. People engage. Suddenly, where it was not before, community happens, it is made (Col. Malan; Field writing excerpt).

The power of boomed suburbs to accrete various, diverse actors and concerns again shines through. A committee member of a successful boomed suburb once mentioned to me that no sense of community would have been possible without the work of its technologies of enclavement. Drawing from the same interview:

> He speaks of how residents "used to be closed off" before the booming, and that the space and community has opened-up ever since, as people feel safer. Revising this portion of the field notes in the course of writing this report, I asked myself: Do people close their suburbs so that they can open their doors, literally and figuratively? (Field writing excerpt).

Recall Ingrid's earlier comments, of "*physical barriers* for this little community" and how her boomed suburb has generated new relationships between previously unfamiliar neighbours by 'keeping people out.' She adds:

> Existing relationships with people who lived in this area changed too. Cause you know instead of seeing them in other spaces where you'd normally interact, now you're seeing them when you're going walking or passing them in the car, now you have chats that are more related to where you're living. Instead of how your work is going, it's gonna be like 'Oh my gosh did you

> hear what happened on Barbara Street three days ago?' or 'I can't believe these potholes are getting so bad on our street' (Ingrid).

The teichopolitical attachment of confirmed contributor signs on the walls of homes in the suburb, or the registration of contributor's vehicles in the ANPR system for automatic entry – codes for the reading of social difference – are further material examples of the role of nonhuman technologies and infrastructures in the forming of communities within boomed suburbs.

Ultimately, boomed suburbs bring sociality to the formerly cocooned and alienated spaces and residents they enclave - packaged, understood, and consumed as 'community.' It was shown in this section that the 'communities' that form behind the gates of boomed suburbs are highly-capital and contribution-centric, rely on social labours, and are actively coproduced in relations with technologies and infrastructures of enclavement. The communities of property that boomed suburbs incubate and coproduce are always respectively unique, and do not always appear or function as prettily as they do in more successful instances. In the worst of cases, these class-based communities, access into which is secured by property ownership, rent payment, and financial mobility, carry over the social exclusions of the city beyond the booms back into the suburb, leaving (often differently raced) residents who do not appear in the community's image of the ideal resident feeling alienated. This is despite meeting the banal but nevertheless active criteria for cross-class, cosmopolitan recognition and inclusion - that criteria being, quite literally, the possession and accumulation of enough disposable income to reside in a boomed suburb. In more encouraging cases, communities grow healthily to include more than just residents, but security guards, domestic and shop workers, and other regular transients or users of the suburb:

> One thing that has changed for him since the booming, however, are his relationships with occupants of the houses neighbouring his stall. On multiple occasions in the past few years, the police have sharply badgered him for operating on this particular street corner with ambiguous demands to present a trading licence. On the most recent occasion, neighbours came out of their homes to defend him and ensured that him trading there was to no issue with the suburb at large. Others have since advertised his wooden figurines on Facebook for him (Happy; field writing excerpt).

6.3.2. Insurgent Citizenships at Grassroots of Altitude

But what kinds of citizens are communities of properties made of? In what might be an indicator of discontent with hypogovernance, 78% of South Africans are unsatisfied with their democracy, resulting in the formation of alternative government and citizenships in the form of residential fortified enclaves (Afrobarometer 2024; Chipkin 2012). Conditions of neoliberal hypogovernance have been noted to spark reconfigurations of popular conceptions of

citizenship (Herbert and Murray 2015). Boomed suburbs and other gated communities act to bring "order and predictability in a society where the state seems to lack coherence, where its reach is uneven and unpredictable and where its ability to secure social order is questionable" (Chipkin 2012: 21). As discussed in the Literature Review, the concept of insurgent citizenship and its use in African and South African cities has generally been orientated towards marginalised groups and their pursuit of their right to the city under conditions of state neglect and everyday abandonment. I here consider the concept of insurgent citizenship in relation to boomed suburbs, further informed by Lemanski (2020) and Von Schnitzler's (2017) concepts of infrastructural and technopolitical citizenship. Anyone involved-in or supportive-of booming would agree that their interactions with the state, the mobilisation of their communities, and their co-optation of the built environment, correspond with descriptions of insurgent citizenship. The mobilising strategies that marginalised urban citizens use to subvert state shortcomings and exclusions – cases usually associated with insurgent citizenship – resonate with the practices of boomed suburbs residents in their attempts to claim civic legitimacy, guarantee safety, and negotiate their own right to the city. I move forward noting that "the absence of a strong state presence within urban milieus increases the probability that challengers operating in different sectors, at different scales, and in different places will form ties" (Uitermark et al 2012: 2251).

Juxtaposing with diverse insurgent citizenship works across the Global South, I generate a new question, particularly about what urban residential insurgency - employed in relations with built environments, infrastructures, and technologies - looks like when it *is* empowered and *does* possess resources, responding to state failures that are often incomparable in severity to the cases with which juxtaposed but residents perceive and feel all the same. I am proposing here that boomed suburbs and initiatives like them, projects premised around perceived marginalisation and filling hypogovernance gaps, that residents organise and drive, *without* aggressive capital or political hindrances, forces the consideration of what I call *grassroot altitudes*. Boomed suburbs are most certainly grassroot operations, only that the roots from which they mobilise are situated at higher class elevation. Insurgent citizenships at grassroots of altitude are empowered by personal, private capital, and it is from this altitude that these urban actors launch engagements of alternative, "city-specific violences of citizenship" (Holston and Appadurai 1996: 202).

In coproduction with various infrastructures, these altitudinal actors are able to materialise and achieve an insurgent citizenship, driven and inspired not by the traditional quest of the right to the city but rather its contextually transmuted form: the right to avoid it. The right to avoid the

city, as shown in the previous section, ironically facilitates increased social interaction within the previously open, suspicious suburb. What differs this case from others of insurgent citizenship is that its enablers are not "residents seemingly marginalised and immiserated by urban life" (Simone 2004: 407), but rather well-salaried individuals looking to safeguard themselves and their families by increasing private consumption and mobilising infrastructures from positions of privilege. Here, infrastructures are 'politics pursued by other means' (Latour 1983), giving form to power and inequality, producing select temporalities, and symbolising national aspirations - they are bound to political life (ibid.).

Some scholars of gated communities argue that "people [in them] have ensured that government does not hear them, which prevents government from taking cognisance of their situation and concerns, and in turn reinforces the belief that government does not address their issues" (Culwick 2015: 2). The data presented in this dissertation suggests that residents and producers of boomed suburbs are anything but unheard. While it may be true that the development of gated communities makes their relationally privileged residents less demanding of accountability from the state (Chutel 2018), they are also in themselves insurgent and coordinated materialisations of this demand for accountability. Others identify the insurgent citizenships involved in fortified enclaving as resistance to democratisation (Caldeira 2000). While this appears to hold true, I also do not wish to overlook the very participatory processes that reproduce boomed suburbs, specifically through compliance with legislation and in the production of communities of property. In field notes from one of the suburb's early community meetings, I wrote with regard to this sort of compliance and social engagement: 'I can't help but wonder whether what I am watching are South Africans learning democracy, driven not by a rainbow generator but by individual interest as economic actors?' How are South Africans making democracy materially, on the ground, within the vague, hypogoverned, and yet evidently effective prescriptions of the post-apartheid state? It is not as though gated communities are only resistances to democracy - they are materialisations of democracy in action, however corrupted, aborted, or capital-centric they appear. Latour (2005: 14) settles this best:

> The word "demos" that makes half of the much vaunted word "demo-cracy" is haunted by the demon, yes, the devil, because they share the same Indo-European root da- to divide. If the demon is such a terrible threat, it's because it divides in two. If the demos is such a welcome solution, it's because it also divides in two. A paradox? No, it's because we ourselves are so divided by so many contradictory attachments that we have to assemble.

Boomed suburbs and other fortified enclaves are both exemplifications and active material coproducers of the kind of increasingly class-based, individual, consumerist mode of relation I have looked to grasp in this dissertation. This shift constitutes the emergence of a new kind

of economic or financial citizenship that can be considered insurgent in relation to hypogovernance. Capital wealth is active here in both limiting insurgence and empowering it. The relations and 'communities' that individuals reproduce in boomed suburbs are expressions of this economic citizenship.

6.4. The Gated State

The final argument I wish to make in the closing of this chapter pertains to the relationship between the state and boomed suburbs, especially regarding infrastructural hybridity and the former's stance towards these and other fortified enclaves more generally. But before doing so, I must address the gradual normalisation of boomed suburbs and other fortified enclaves for city inhabitants of Pretoria-Tshwane and beyond in South Africa, amplifying Bezuidenhout and Buhlungu's (2015) arguments that enclaving has become a dominant sociospatial order. With each passing day, enclaves become less 'new' urban forms. Many of the residential participants in this study, specifically those under 35, have grown out from their childhoods and into adulthood within or alongside enclaves, common features of their spatial reality (although increasingly over time) often since birth: "There's always been booms on the roads here, for as long as I can remember, it's not a relatively new thing, everyone knows this is one of these areas" (Ingrid). Similarly, older residential participants have also lived enclaved lives, only under different material forms productive of different teich- and technopolitics.

For all the detail with which I have presented the worlds of boomed suburbs in this dissertation, it must be noted that for many living in suburban Pretoria-Tshwane today, these enclaves are simply not that big of a deal, let alone a problem to contest. Bremner made the point in 1998 that South Africa's younger generations may increasingly perceive fortified enclaves as 'normal' ways of sharing and dividing urban space. Gone are the days when gated communities challenged the spatial orders of a developing, democratic South Africa. Fortified enclaves are by now orders in their own right, evidenced in their increasing number and variety. Ambivalence towards gated communities complicates the verdict that they necessarily erode public space and are viewed with disdain by those who live outside them. I echo Bezuidenhout and Buhlungu (2015) to state that boomed suburbs and fortified enclaves, as assembled, agentive wholes that have and are increasingly reshaping the city, have by now become normalised, naturalised, and thus increasingly invisible features of everyday urban life. Recognising the slowly unfurling normalisation of enclaving in South Africa corresponds with broader calls from materialist scholars to investigate those objects, technologies, and

infrastructures that have become 'invisible,' rarely scrutinised and part and parcel of everyday life (Larkin 2013; Bjorkman 2015, Howe et al 2016).

The naturalisation and increasing appeal of boomed suburbs suggests a change in popular imaginations of the city, a combined product of hypogovernance in the form of crime vulnerability, the militarisation of urban space, and increasingly individualist, accumulative, and defensive citizenships: "New private infrastructures - surveillance cameras, walls, barricades, gates, alarms, armoured vehicles, fortified entrances, intercom systems - build new repertoires of ritualised behaviour into daily life" (Bremner 2010: 100). Crime prevention has become the 'normal,' if not (to many but not all) necessary mode of urban design (Meyer and Qhobela 1997). It was once common in the literature to claim that boomed suburbs and fortified enclaves ultimately "help white South Africans to manage the contradictions of where they aspire to live, and where they actually reside" (Rink 2020: 79). I argue that this racial limitation is now dated and inaccurate, in that gates and booms today conduct this work for more than only whites and more than the extremely wealthy. It reveals the quickly and unpredictably changing landscape of Enclave South Africa, and the need for scholars to approach these increasingly normalised urban forms in ways less monochromatic than they were in the first two decades of democracy. The unchallenged material frequency of fortified enclaves is what normalises them.

> The wall is, in a sense, the figure of our democracy … The wall is the figure of the new political order, indicating not that democracy has not gone far enough, but that it has been too far-reaching, unsettling, and profound (Bremner 2010: 203).

Figure 15: Voting station in a boomed suburb.

Source: Author.

Enclaves are no longer scattered islands of a fearful and conservative white elite, but now appear in diverse forms both opulent and basic. Telling of the material normalisation of enclaving, I cannot help but point out that in the recent 2024 National Election, no small

number of voting stations in Pretoria-Tshwane were situated within boomed suburbs and other fortified enclaves themselves (Figure 15).

The increasingly cross-class frequency of gating and booming, thinking here of the DIY enclosures in Tembisa, Diepsloot, Soweto, and Lenasia (Daily Sun 2024) exemplify this trend. Another example might be drawn from a recent incident in Lombardy East, Johannesburg, wherein a small group led by taxi drivers attempted to topple a permanently closed gate of a boomed suburb on Canning Road. The committee of the young, majority-black boomed suburb had apparently failed to keep a promise to leave the gate on this street open, despite commuters' requests, as it is an arterial taxi route. The fact that taxi drivers led this protest, motivated solely by economic concerns, is important. It is related to the normalisation of enclaving and the rise of an accumulative sensibility. Between conditions of hypogovernance and a shift from race to class, there is increasingly less time and space for regular people to propagate transitionary visions of an equal, just South Africa and engage in action towards these ends. Contestation over boomed suburbs has migrated to the figurative 'back of the line' of the long list of everyday and long-term concerns that face South Africans. Harrison and Mabin's prediction back in 2006 in response to the SAHRC affair, namely that a revised policy would instigate a decrease in boomed areas has failed to materialise - time has proved the opposite. The hypogoverned, 'cautionary but not restrictive' (Landman and Badenhorst 2014) approach of the state in relation to boomed suburbs has not sufficed in containing expansion, even if its official stance has been one of vague ideological opposition. The noise has since deafened, there are fewer Karvelas' still standing. The processes of enclave normalisation I have discussed here offer reasons as to why this is so. In the enclaved borderlands of Pretoria-Tshwane, the insurgent citizenships involved in gating and booming "are not new identities forming within an already existing social space, but the social space itself emerging" (Chipkin 2012: 75). That fortified enclaves have processually instituted a novel (and yet historically informed) urban and social order, appealing to members of different classes and demographic groups, flies in the face of earlier works on South African gated communities that predicted these enclaves would remain homogenous and isolated urban forms limited to white, wealthy residents alone (e.g. Jurgens and Gnad 2002).

As much as the proliferation and popularisation of boomed suburbs are material reflections of the jagged shift from race to class and the emergence of an economic citizenship, they are most ultimately still mobilisations against crime. In this sense, criminals are not only the drivers of technological innovation and enclavisation, but coproductive determinants of post-apartheid South African urban sociospatial order. The normalisation and increasing appeal of boomed

suburbs and fortified enclaves over the last twenty years forces questions about the kinds of cities that both South African urban residents and the state desire. The normalisation of gating has complicated popular understandings of the post-apartheid South African city itself. This is not to say that there is no resistance against these processes, but that such initiatives, truer to Holston's original conception of (marginalised) insurgent citizenship, are losing power as enclaving and privatised urbanism increasingly come to constitute the 'normal' urban order.

6.4.1. Infrastructural Encounters in the Borderlands

During my time in the field, interplay between public city infrastructures and private infrastructures of enclavement was difficult to overlook, raising questions about whether boomed suburbs are public or private, and who truly owns them. I situate boomed suburbs within an urban ballroom, where public and private infrastructures dance, looking to respond

Figure 16: A municipal electricity pole holds up a stop sign at a boomed suburb access point.

Source: Author.

to Cirolia and Pollio's (2024) call for the development of a research agenda of infrastructural hybridity. The kinds of confusing, negotiated, and symbiotic relations these infrastructures share are perhaps most poetically expressed in Figure 16. These infrastructures, as dancing, relational coproducers, refigure existing public spaces and the city at large, rewriting ways in which humans engage the built environment and construct understandings of urban citizenship. Several instances of this sort of dancing have already been disclosed, such as the five-car rule or more generally the raising of booms during rush hour. Another is the meeting of the suburban vigilantes at the fence by the spruit, where these actors were forced to engage in deliberation and consultation with both built and natural environments of the city in order to sharpen the security and thus functionality of their boomed suburb.

Amidst the blurring of public and private infrastructures in boomed suburbs of Pretoria-Tshwane, novel innovations and expertise have also emerged, such as when boomed suburb committees must engage with nearby private property owners and the infrastructural machine of the city to attain electricity for guardhouses. This leads to new kinds of infrastructural connections, alterations, and legal agreements, developing and innovating knowledges and methods pertaining to measurement, record-keeping, and compensation in relation to technologies such as electricity meters and the already-existing legislative structures of the city. Enclaving in the form of boomed suburbs appears to both literally and figuratively plug into public infrastructures, sometimes successfully while in other times and unevenly so, as in the case of the mentioned challenges of connecting guardhouses to public city sewage lines. The reasons and modalities of these connections and linkages reveal the ambiguous legal status of these infrastructures, complicating understandings of who exactly owns them and how they are stitched together. Further examples include Hannah's 'siffy' park, which is located within a boomed suburb but remains a popular and accessible public space and is maintained by the CTMM's Municipal Services department. As an infrastructural hybrid at once both private and public, the park is doubly hypogoverned as the City rarely enforces the rules of the park (such as the prohibition of alcohol on the premises, the overlooking of which has in some ways contributed to its popularity), while the boomed suburb committee does not hold legal power to enforce such rules, nor deny access to anyone seeking to visit the park in general. Another example saw one lucky suburb benefit from the renovation of a nearby shopping centre, through the construction of a public traffic circle that the city required of the centre's developers in accordance with traffic management legislation:

> We actually had a freebie there as a community. It was on our cards to apply to Tshwane to introduce a traffic circle there, and I believe we are getting a freebie there. This will give us

> better access to [redacted] Drive in the mornings and afternoons getting into the gated community area (Committee chairman).

As public and private infrastructures increasingly blur in Pretoria-Tshwane, the agencies of enclaves like boomed suburbs, as well as the components of their technological assemblages, are laid bare. Private booming technologies relate with public city infrastructures, as well as with human actors developing new knowledges regarding their plugging-in, to form infrastructural hybrids of unclear ownership and responsibility. A successful boomed suburb is one that is able to navigate this blurry terrain, embracing the reliance of its technologies on public infrastructures while not transgressing municipal by-laws or accumulating too many costs in the process.

6.4.2. The Changing Face of Boomed Suburbs in the Gated State

The final point I wish to make is that boomed suburbs are today viewed differently by the state when compared to its previous positions regarding enclavement, as in the early 2000s and in consideration of the SAHRC hearing. I suggest that, in light of the information collated above, boomed suburbs have shifted from unthinkable corruptions of the post-apartheid city to be (during the dawning of the democratic period), to a controversial public debate and policy challenge (as throughout the 2000s), to now part and parcel of the urban order both in the domain of the everyday and in state-driven urban planning. To make this argument however, boomed suburbs must be approached not merely through the agencies of the technologies and infrastructures of enclavement, the case thus far in this dissertation, but through their agencies as whole urban forms in assembled totality.

Like Tanulku's finding (2012), to which I have sought to add some material depth, I suggest that as a complete assemblage, boomed suburbs have the capacity to act as political, 'active, urban agents,' in relations with the state, its citizens, and the built environment of the city. In retrospect, this has already been shown throughout the course of this chapter, as boomed suburbs generate safety, markets, new forms of community and citizenship, and infrastructural hybrids. I now reorientate in the direction of the state, and the affects boomed suburbs dispel in an upwards trajectory towards it. In this regard, the politically agentive power of boomed suburbs as assembled wholes has already been evidenced in its ability to force the emergence of new legislations and legal standards, such as with the Rationalisation of Local Government Affairs Act, the 'cautionary but not restrictive' position based on SAHRC recommendations, as well as the more recent Adopt-A-Spot policy, the latter an extension of the logic of booming as a hypogoverned infrastructural hybrid over which the state relinquishes its responsibility to proactive city residents often situated at grassroots of altitude. I liken the agencies of boomed

suburbs, as complete assemblages, to what Latour (2005) terms 'Dingpolitik.' The Ding, or Thing, is for Latour a "certain type of archaic assembly" that has historically operated as an issue or object that brings human actors together precisely because of the way it divides them (ibid.: 12). It has already been shown that boomed suburbs, as dings, accrete a variety of diverse sets of actors during development and everyday reproduction thereafter, not excluding criminals, pedestrians, residents, engineers, inspectors, service providers, contractors, and project managers, as well as nonhuman agents such as the technologies of enclavement and the city's built and natural environments. A Ding may be material or immaterial, examples of which include: technologies, scientific laboratories, technical and financial institutions, shopping centres, places of worship, ecologies, internet forums and social media networks, medical establishments, and "even the catwalks of fashion shows" (ibid: 26). These Dings, points of gathering and exchange, are "hybrid forums and agora" of socio-political concerns and contestations (ibid.: 13), as evidenced through events such as the SAHRC hearing and ongoing debates about crime and enclavement in the city. Boomed suburbs undeniably operate as Dings that accrete different actors, natures, histories, and politics towards themselves. But I would like to add by moving beyond Dings as only fora and agora. Boomed suburbs are not only the socio-material bases upon which different actors attract, gather, and engage, but are also technopolitical agents, who do not only host unfoldings of relations but speak back into them as well. From their appearance before the SAHRC and their role in reshaping planning policy and legislation, to how they engage in long-term, borderland negotiations with the municipality and private sector to generate urban change and innovation, boomed suburbs - as coproduced assemblages of the human and nonhuman - exert agentive force in the refiguring of the post-apartheid capital city, vis-a-vis their political materiality (Pilo and Jaffe 2020).

Much of the CTMM's planning documentation is devoted to addressing the inherited fragmentations and segregations of the past (Makhale and Landman 2018). As shown earlier, this is no easy task in cities that have previously been intentionally shaped towards these ends. The municipality's incessance on suturing the city's historical urban fragmentations is based on a justifiable sensitivity and "awareness of how societal fragmentation is usually reflected in the manner in which opportunities and spaces are appropriated, transformed, produced and used," egged-on by increasingly alarming intensifications of socio-economic inequality (De Villiers 2014: 216). But even with these planning recommendations in place, hypogovernance has stifled their actualisation, if not overseen further fragmentation via fortified enclaves. The state itself is at this stage clearly embracive of booming, gating, and enclaving. This is materially evident in the state's economic incubation and planning embrace of large and diverse

estates, multi-purpose enclave complexes, and shopping centres, co-pioneered with the private property and financial sectors, and at the very boom gates of most state buildings themselves.

So where do boomed suburbs fit in the picture of the "capital of Africa's wealthiest country" (Mabin 2015: 35)? In this hypogoverned context and under conditions of speculative urbanism, which looks to develop and market cities as world class, it follows that boomed suburbs are conducting some heavy lifting towards this goal, alongside other fortified enclaves. I argue that boomed suburbs, at this stage, have become silently preferable, appealing, and useful for the state. If the goal of the state is to make world-class the cities it already struggles to control, safeguard, and regulate, then boomed suburbs offer a convenient means of offloading responsibilities of policing, governing, and maintaining these areas, as well as presenting the city as safe and ordered to the global eye**.** The CTMM's 2018 reconsideration of the high application costs for boomed suburbs is evidence of this shift (Pretoria News 2018), amidst its more general integration of fortified enclaves as opportunities and avenues of development in urban planning schemata, such as in the case of Menlyn Mall or the presidentially-endorsed, gated and fortified Mooikloof Mega City. The 'smart' and 'sustainable' fortified enclaves that the state developmentally trumpets or, in the case of boomed suburbs, contradictorily and silently accepts, are heralded for their "massive job creation benefits" and capacities for income generation (Public Works 2020). Boomed suburbs have thus grown from controversial policy challenges to practically appealing, if not unspokenly accepted and encouraged urban forms for the state looking to present its cities as world-class and occlude its realities of crime and inequality. Following speculative urbanism, in that the primary goal of planning is the rapid turnover of capital (Goldman 2011), and if the city's ageing suburbs are difficult spaces to implement high-capital, city-worlding projects, then boomed suburbs are convenient as spaces that the state is not especially interested in as sites for accumulation, but are conveniently governing and securing themselves nonetheless.

The state's approach to boomed suburbs is today less preventative than before, as part of a slow policy slide in which the SAHRC hearing was a flashpoint. With each passing year the processing of applications for boomed suburbs become more common to-do's on CTMM office boards. And while my data does not permit me to describe the requirements involved in booming to be anything close to lax, I echo scholars who suggest that the urban impacts of boomed suburbs are being generally ignored by the municipality (Makhale and Landman 2018). These same scholars have also found that the CTMM enjoys economic benefits from facilitating road closures, and the fees involved in applications have become additional sources of income for the municipality (ibid.). Taken in parallel with processes of world-classing and

property speculation, it becomes difficult to imagine that boomed suburbs do not serve a convenient purpose for the City in its attempts to "protect and preserve the image of middle-class prosperity in the face of increasing socio-economic diversity, a certain amount of decay and the absence of law and order" (Bremner 1998: 60). As such, I suggest that compared to the state's earlier stances on booming and gating in South Africa, the hypogoverned proliferation of boomed suburbs and other fortified enclaves indicate that this position has shifted towards one which embraces enclavement and its various conveniences and benefits, even if these processes may continue to marginalise and immobilise the poor, in contrast with official state rhetoric and policy regarding the remedying of inequality.

7. Conclusion

Looking back to the main research problem and questions of this research study, namely the proliferation of boomed suburbs in Pretoria-Tshwane and a consideration of the kind of environment different enclave actors relate across to reproduce this proliferation, as well as whether these relations can produce effects beyond mere physical enclavement, several key findings have been disclosed. The main argument of this dissertation, in answering the former primary research question, is that amidst conditions of severe crime and policing, planning, and regulatory hypogovernance, different urban actors both human and nonhuman engage across an experimental and unpredictable borderlands of encounter in ways that not only lend to the proliferation of boomed suburbs but also technological, institutional, and legislative innovation. Further key findings, in response to the second primary research question, driven by an attempt to explore 'what else is going on' amidst the proliferation of these enclaves, suggest that in this borderlands of encounter, humans, boomed suburbs and technologies of enclavement, and the city's built and natural environments, come together to coproduce novel knowledges and expertise, redraw understandings of community (of property) and (insurgent) citizenship (at grassroots of altitude), as well as shift state positions, indeed engaging in more than mere physical enclavement. This builds upon existing arguments about the effects of boomed suburbs while also diverging from others, specifically those that approach these enclaves monofunctionally as necessarily negative and fragmentary urban forms. These findings were attained by investigating the (often overlooked) role and productivity of "criminals" in processes of enclavement and technological and methodological innovation, as well as the ways technologies and infrastructures coproduce contortions of the human body, from cupping hands over sensors and extending arms with flyswatters to the shaking of fences and driving like a criminal. It was revealed that, in the borderlands, different human actors learn from one another and from technologies, and as shown in some cases, the latter learning from humans in return as well. In this process of attempting to see between and beyond enclaves, boomed suburbs were revealed as more-than-human assemblages that dispel coproduced physical, social, and political affects in ways powerful enough to reshape the city, both materially and in its imagination. Boomed suburbs accrete, enrol, and entangle a diverse range of differently-positioned human and nonhuman actors in the development and reproduction of these enclaves, including residents, commuters, pedestrians, city officials, project managers, building contractors and labourers, security officers and guards, contract managing agents, traffic engineers, service and infrastructure providers, and technologies of enclavement, as well as the built and unbuilt environments of the city. As evidenced in the

time, labour, and energy expended in the process of booming a suburb, it was further stressed that as assemblages, boomed suburbs are caught in unending and constant processes of becoming, being composed of technologies and infrastructures that demand care from humans (such as when maintenance or repair is required, further instigating contortions of the body) and through persistent experimental innovation in response to deft criminal creativities. During this lengthy, unstable, and multi-actor process, new forms of both cooperation and competition emerge within suburbs and amongst them, leading to new rituals of socioeconomic exclusion (such as in the case of attaching contributor signs on private houses) and community-making, as well as hierarchies of wealth, status, and functionality between boomed suburbs. In revealing the central role of capital in the development and successful functioning of boomed suburbs – in the form of levies – I suggest that new understandings of citizenship and community are emerging in these enclaves indicative of a reconfiguration of race, class, and space, shaped by widely-shared fears of crime and contextual conditions of socioeconomic inequality. So too was it shown that in material interaction with the city itself, boomed suburbs coproduce novel infrastructural hybrids through processes of 'plugging-in,' unsettling understandings of what is public and private in Pretoria-Tshwane. These infrastructural hybrids, which require the development of new practices of measurement, compensation, and legal compliance, are material symbols of the state's gradual and contradictory slide in favour of gating and enclavement.

These findings should be tempered by several limitations of the study. These limitations included the vertical trajectory of the research, namely my decision to 'study up,' which may have excluded further oppositional actors and arguments against booming, as well as the perspectives of economically marginalised groups towards boomed suburbs, even if I did attempt to gather some of these perspectives in interviews with street vendors and labourers. Another shortcoming of the study was its inability to engage more thoroughly with security guards as participants, who have been shown to be centrally vital to the reproduction of boomed suburbs. The final limitation I have identified is the study's lack of engagement with municipal actors such as administrators, town planners, and inspectors, a realm of the world of booming into which I struggled to negotiate access.

Despite these limitations, this research study and its findings remain significant. Thinking of boomed suburbs as coproducers of the post-apartheid South African sociospatial order and engaging with the messy political materiality of these enclaves is important, as it allows scholars to begin asking forward-looking questions, along the lines of Anand's (2018: 30), "What kinds of futures and future polities will today's infrastructures leave behind?" Where

are boomed suburbs taking South Africa, with the knowledge that their technologies and infrastructures affect humans as much as humans affect them? The study is also valuable for the way it has attempted to explore the broad and intellectually under-engaged normalisation of enclavement in South Africa over the last twenty years, serving to extend upon the arguments of some scholars, such as Bezuidenhout and Buhlungu's (2015), while rejecting other static and dated interpretations of gated communities as merely instantiations of 'neo-apartheid.' Based on the findings of this study, I have sought to interrogate the kinds of cities and social worlds that South Africans of various race and class positionalities, under conditions of crime and hypogovernance, increasingly desire to live in. I have also hoped to contribute a perspective from an urban reality of the Global South, even if unconventionally by studying up. In this regard, it has been shown that urban realities in Pretoria-Tshwane are complex and contextually unique, disrupting more common Global North analyses of African cities as simply growthless, decayed, fragmented, and disordered (Keith and Santos 2021). This is exemplified in the dissertation's arguments pertaining to the evolution of public space, which in Pretoria-Tshwane appears to increasingly include enclaves, even if unsettlingly, and how boomed suburbs complicate notions of urban fragmentation.

Based on both the findings and limitations of this study, I suggest further possible inquiry which could not be traversed in the scope of this dissertation. I firstly suggest that more investigative work be conducted into the history of enclavement in South Africa and how this history may be influencing the proliferation and normalisation of fortified enclaves today, as familiar urban forms that are ghostly and problematic but perhaps also appealing due to this familiarity. So too should the role of the family unit and its imaginary be explored in relation to enclavement, which this study could only touch upon in passing. I lastly call for further social scientific research with security guards, those critically important actors that this dissertation engaged but could not fully integrate, as well as direct research into the perspectives of municipal officials and the state towards booming, so as to test the conjectures I have made in this dissertation regarding the latter's possible shift of stance.

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Appendix A: Participant Consent Letter and Form

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Fakulteit Geesteswetenskappe
Lefapha la Bomotho

Humanities 100.

Department of Anthropology, Archaeology & Development Studies

LETTER OF INFORMED CONSENT

INTRODUCTION

Hello, my name is Armin Kific. I am a Master's student at the University of Pretoria in the Department of Anthropology, Archaeology, and Development Studies. Anthropology is the study of human behaviour and culture. In this document, you will find information about my research project and how you are protected as a participant in this study. You are free to ask any questions about this research project and your role in it. A consent form is available on the final page of this document. Please read through this letter to make sure that your consent to participate in this study has been fully informed.

Good Fences Make New Neighbours: More-than-human communities in the boomed suburbs of Tshwane East

PURPOSE OF THE STUDY:

Gated communities have become widely popular in South Africa. Gated communities provide safe residential spaces in response to high crime rates. Boomed suburbs are one type of gated community. The purpose of this study is to gain a better understanding of how communities are made in boomed neighbourhoods in the Old East of Pretoria-Tshwane. My understanding of community includes more than just humans but also animals, plants, objects, and environments.

INCLUSION AND EXCLUSION CRITERIA FOR THE STUDY:

To be included as a potential participant in this research project, you must either live, work, or walk in a boomed suburb in Pretoria East. Construction of this boomed neighbourhood does not need to be complete. You may also be a member of an enclosure or homeowners association, or you may work for an enclosure facilitation company. Ward councillors are also included as participants in this study. If you do not fulfil these criteria but still feel that you have relevant information about boomed neighbourhoods, please do indicate this before withdrawing.

PARTICIPATION IN THE STUDY:

As a participant in this study, you will be expected to answer face-to-face interview questions in English about: your personal feelings about the social and natural environments in which you live, work, and move; about boomed neighbourhoods in general; and your thoughts on South African society. If you hold a position of authority in a boomed neighbourhood, questions will revolve around your role in the organisation and your feelings about the booming

Room 8-15, Humanities Building
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2595
Email: sanna.sechele@up.ac.za | www.up.ac.za

process. Please keep in mind that you do not need to answer questions if you do not wish to. There is also no such thing as a wrong or right answer in this study. Your honest opinion is extremely valuable to me and my research project. You may also be asked to go on a walk in a boomed suburb with myself, the researcher. If you are working for a homeowners association or an enclosure company, I may request to accompany you and take part or observe in activities that form part of your involvement in the boomed suburb.

WITHDRAWAL FROM THE STUDY:

You are free to withdraw from this study at any time. This is one of the rights provided to you as a participant in an anthropological study. I will ask you at each interview if you still consent to participate in this research project. This way, we can treat consent as ongoing. There are no repercussions for withdrawing from this study. Your participation in this study is voluntary and signing this form today does not mean you must participate in future. Signing this form indicates you are informed about the research project and consent to participating in it for now.

RISKS AND CONFIDENTIALITY:

There are no identifiable risks in taking part in this research study. This is because any information you share during interviews is protected by the Protection of Personal Information Act (POPI) and will remain completely anonymous both during and after the research process. If any contents of our interview appear in my final research report, your identity will be provided with a pseudonym – a fake name. You may also request that your real name appear if you would prefer. In light of sensitivities and considerations regarding crime and gender-based violence in South Africa, walks held with female research participants will only be held in groups of more than two individuals, not including myself, the researcher. Covid-19 protocols are upheld in this research study, and your preferences regarding masking, sanitising, and choice of interview venue will all be taken into account.

BENEFITS:

While there are no direct benefits that will come to you as a participant in this research study, you will be contributing to scientific knowledge and building a clearer understanding of communities in boomed neighbourhoods. This research project will also provide new perspectives about how to organise boomed communities that include more than just humans.

ETHICS APPROVAL FOR THE STUDY:

This study has received written approval from the Research Ethics Committee of the Faculty of Humanities, University of Pretoria. The ethical approval number is [illegible] A copy of the approval letter can be provided to you on request. When writing up my research results, I will comply with UP's policies regarding plagiarism.

Room 8-15, Humanities Building
University of Pretoria, Private Bag X20
Hatfield 0028, South Africa
Tel +27 (0)12 420 2595 | Fax +27 (0)12 420 2595
Email sanna.sechele@up.ac.za | www.up.ac.za

CONTACTS DETAILS OF RESEARCHER AND SUPERVISOR

Mr. Armin Kific:

- aarmin124@gmail.com
- 071 322 3642

Dr. Detlev Krige: detlev.krige@up.ac.za

CONSENT FORM

Collecting data on community-making in boomed suburbs

I..... [redacted] ..... agree to voluntarily participate in this research.

- I understand that even though I agree to participate now, I can withdraw at any time or even refuse to answer any question without any consequences for doing so. I also do not need to provide a reason for withdrawing.
- I understand that I can withdraw permission to use part or all of the data from my interview within a reasonable time of at least 2 weeks after the interview.
- The purpose and nature of the interview have been explained to me in writing and I have also had the opportunity to ask questions concerning the use of the interview.
- I understand that I will not benefit directly from participating in this research. However, my participation will be valuable to the study.
- Please tick the appropriate choice regarding recording the interview below:

Recording allowed	~~Yes~~/No
Consent to be accompanied on a walk by the researcher	~~Yes~~/No
Anonymity by using a pseudonym/alias	~~Yes~~/No

Signature of Participant: [redacted]

Signature of Researcher: [signature]

Date: 2023/03/27

Appendix B: Permission Letter

470 SUSSEX AVENUE, LYNNWOOD, PRETORIA 0081
Tel: 0827840807, Email: jan@streetsafe.co.za

21 October 2022

Hallo Armin,

PARTICIPATION IN RESEARCH STUDY

This letter hereby states that StreetSafe consents to participate in Armin Kific's Masters research study 'Good fences make new neighbours: More-than-human communities in the boomed suburbs of Tshwane East.'

Permission is granted for Mr. Kific to conduct multiple interviews and participant observation by following work teams as they conduct construction, maintenance, or administrative work.

Disclaimer: In the case that the researcher (Armin Kific) is injured while conducting participant observation, StreetsSafe will not be held liable. Any medical expenses will be covered by the private medical scheme of which the researcher is a member of.

Regards,

Jan

Col (Retired SA Army) Jan Petrus Malan
5607125086089
Managing Director

Appendix C: Research Ethics Committee Approval

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Humanities
Fakulteit Geesteswetenskappe
Lefapha la Bomotho

15 December 2022

Dear Mr A Kific

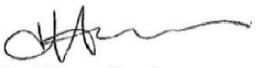
Project Title:	Good fences make new neighbours: More-than-human communities in the boomed suburbs of Tshwane East
Researcher:	Mr A Kific
Supervisor(s):	Dr PFD Krige
Department:	Anthropology, Archaeology and Development Studies
Reference number:	18221573 (HUM009/1022)
Degree:	Masters

I have pleasure in informing you that the above application was **approved** by the Research Ethics Committee on 1 December 2022. Please note that before research can commence all other approvals must have been received.

Please note that this approval is based on the assumption that the research will be carried out along the lines laid out in the proposal. Should the actual research depart significantly from the proposed research, it will be necessary to apply for a new research approval and ethical clearance.

We wish you success with the project.

Sincerely,



Prof Karen Harris
Chair: Research Ethics Committee
Faculty of Humanities
UNIVERSITY OF PRETORIA
e-mail: tracey.andrew@up.ac.za

Room 7-27, Humanities Building, University of Pretoria, Private Bag X20, Hatfield 0028, South Africa
Tel +27 (0)12 420 4853| Fax +27 (0)12 420 4501|Email pghumanities@up.ac.za | www.up.ac.za/faculty-of-humanities

Appendix D: Interview Schedule

- What is your role in the organisation?
- When you hear the word booming, what first comes to mind?
- In your view, why is booming happening?
- What kinds of neighbours do fences make?

- What stood out to you about the booming process?
- What issues did your organisation encounter during the enclosure process?
- In your experience, which residents oppose or support booming?
- Who decides when a street can be boomed off?
- What kind of paperwork is involved in booming a suburb?

- Who installs booms and fences?
- What kind of damage to booms and fences suffer usually?
- Can you talk me through the process of erecting a fence and developing a boomed suburb?
- How are fences electrified?
- How do you decide where to dig a trench?
- Are there different kinds of fences involved in developing a boomed suburb?
- How long does it take to erect and install a boom or fence?
- Who maintains booms and fences?
- Is booming a suburb a dangerous job?
- What is the most difficult part about putting up booms and fences?
- What is the most expensive part of the booming process?

- How important is technology to this boomed suburb?
- What happens to plants that get removed during the installation of booms and fences?
- Do animals get affected when a suburb gets boomed?