“We Are Going”

Riding Johannesburg’s BRT to Social and Spatial Justice?

L.M.D. Nijhof
Master African Studies
Leiden University

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L.M.D. Nijhof
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Leiden University, the Netherlands
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Photo cover page: Rea Vaya station Thokoza Park in Soweto. (own photo, 15 March 2018)
*Rea Vaya means “We are going” in Scamto

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Abstract

The legacy of apartheid and new forms of separation mean that Johannesburg remains spatially segregated, unconnected and consequently unjust. It was for these reasons that African National Congress (ANC) mayor Parks Tau introduced the 'Corridors of Freedom' (CoF) initiative in 2013. This aimed to create three development corridors, in which different areas of the city are connected by means of transport corridors which are themselves connected to intersections that will be transformed into areas for mixed-use development. The transport corridors consisting of the Rea Vaya Bus Rapid Transit (BRT) system are aimed at reconnecting different parts of Johannesburg and to ease people's access to jobs, facilities and recreational opportunities by means of an affordable, fast, safe and convenient transport system. However, due to a change in Johannesburg's political administration in 2016, and opposing interests of different stakeholders such as the taxi industry, the future of the corridors seems to have become uncertain. Nevertheless, although slowed down, various parts of the Rea Vaya BRT system are still going to be constructed.

This thesis contributes to the debate on the effects of transport development on people's social and spatial justice. It examines in what ways the policies and practices of the BRT impact commuters in terms of social and spatial justice by comparing the objectives of the City with the experiences of commuters. I gained insights into their practices by means of interviewing them while riding on the BRT with them. The thesis argues that while the policies intend to enhance the social and spatial justice within the city, in practice, although people are generally positive about the BRT, there are practical issues that prevent people from making full use of the city.

Key words: Johannesburg, BRT, Rea Vaya, transit corridors, TOD corridors, social and spatial justice, 'right to the city'(RTC)

Abbreviations

ABSA	Amalgamated Banks of South Africa
ANC	African National Congress
BRT	Bus Rapid Transit
C4	Rea Vaya Complementary route 4
CBD	Central Business District
The 'City'	City of Johannesburg Metropolitan Municipality
CoF	Corridors of Freedom
CoJ	City of Johannesburg
CUBES	Centre for Urbanism and Built Environment Studies
DA	Democratic Alliance
EFF	Economic Freedom Fighters
F5	Rea Vaya Feeder route 5
JDA	Johannesburg Development Agency
NDP	National Development Plan
NMT	Non-Motorized Transport
RTC	'Right to the city'
SABC	South African Broadcasting Corporation
SA&CP	South African Research Chair in Spatial Analysis & City Planning
SAF	Strategic Area Framework
SDF 2040	Spatial Development Framework 2040
T3	Rea Vaya Trunk route 3
TOD	Transit-Oriented Development
UJ	University of Johannesburg
Wits	University of the Witwatersrand

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1. Introduction

Johannesburg is "one of the most inequitable cities in the world"[1]

Old as well as "new patterns of spatial unevenness and new kinds of social exclusion" mean that current Johannesburg is seen as a "city of extremes".[2] On the one hand, the city is seen as South Africa's economic heart, a "linking city" in Southern Africa, and strives to be "a world class African city" characterised by neighbourhoods with "privatized luxury, where affluent urban residents work and play".[3] On the other hand, these patterns have resulted in "impoverished spaces of confinement, where the haphazardly employed, the poor, the socially excluded and the homeless are forced to survive".[4] These spatial divisions are visible in, for example, the division between the northern suburbs and Sandton as the commercial and financial centres of Johannesburg, versus the city centre as a "zone of exclusion" and the disconnected townships in the southern part of the city.[5] The enormous economic inequalities and the spatially segregated and unconnected geography result in Johannesburg's unjust fabric.[6]

It was in order to break the apartheid legacy and the continuing patterns of exclusion that African National Congress (ANC) mayor Parks Tau introduced the 'Corridors of Freedom' (CoF) initiative in 2013.[7] This aimed to create three "development corridors", in which different areas of the city are connected by means of "transport corridors" which are themselves connected to intersections that will be transformed into areas for "mixed-use development".[8] The goal of this initiative is to create a city that is more integrated and

[1] Johannesburg Development Agency (JDA), "Strategic Area Framework: Empire Perth Development Corridor," 8.
[2] M. J. Murray, *City of Extremes: The Spatial Politics of Johannesburg* (Durham and London: Duke University Press, 2011), xv.
[3] C. M. Rogerson and J. M. Rogerson, "Johannesburg 2030: The Economic Contours of a "Linking Global City"," *American Behavioral Scientist* 59 no. 3 (2015): 350-353; Murray, *City of Extremes,* xv.
[4] Murray, *City of Extremes,* xv.
[5] Rogerson and Rogerson, "Johannesburg 2030," 350-353.
[6] R. Dittgen, "The Corridors of Freedom Initiative," *Urban Transformations* (blog), 16 January, 2017, accessed 9 December, 2017, http://www.urbantransformations.ox.ac.uk/blog/2017/2699/.
[7] Dittgen, "The Corridors of Freedom Initiative."
[8] Ibid; M. Rubin and A. Appelbaum, "Spatial Transformation Through Transit-Oriented Development: Synthesis Report," *Spatial Transformation through Transit-Oriented Development in Johannesburg Research Report Series*, South African Research Chair in Spatial Analysis and City Planning (Johannesburg: University of the Witwatersrand, 2016): 4.

"people-centred" and to change the spatial and social characteristics of the city towards a more just city.[9]

An important component of the corridors, and the focus of this thesis, is the transport corridor, which consists of a Bus Rapid Transit (BRT) system named Rea Vaya. This bus system aims to create an "effective and interconnected public transport system" to ease access to facilities, workplaces and recreation activities.[10] It is intended to be "fast, safe and affordable".[11] The idea behind this new transport system is to improve the "freedom of movement", to reconnect the city and to improve access to economic opportunities in the more central parts of the city, especially for people living on the outskirts of Johannesburg "far away from job opportunities" and facilities.[12] Additionally, it aims to reduce the money and time people currently spend on transportation and to reduce greenhouse gas emissions.[13]

In 2016, however, the Democratic Alliance (DA) candidate Herman Mashaba became the new mayor of Johannesburg.[14] In addition to the City of Cape Town, City of Tshwane and Nelson Mandela Bay, this became the fourth metropolitan municipality that the ANC lost to the DA.[15] Due to this political change, the future development of the corridors seems to have become uncertain.[16] Mashaba has proclaimed his focus is among others on economic growth, business development and redevelopment of the inner city.[17] Nevertheless, the corridors are part of the "priority transformation areas" of the City's overall transformation plan, the Spatial Development Framework (SDF) 2040.[18] As such, the "development corridors connecting strategic nodes through an affordable and accessible mass public transport system [are] an integral component" of Johannesburg's long term development plans.[19] However, the

[9] Dittgen, "The Corridors of Freedom Initiative."
[10] Ibid.
[11] City of Johannesburg, "Corridors of Freedom: Re-stitching our City to Create a new Future," *Group Communication and Tourism Department*, 1.
[12] Dittgen, "The Corridors of Freedom Initiative."; City of Johannesburg, "Corridors of Freedom," 6.
[13] City of Johannesburg, "Corridors of Freedom," 1, 10.
[14] J. Dludlu, "The Capitalist as Accidental Politician," *New African,* no. 565, October 2016, 30.
[15] "Where We Govern," *DA* (website), accessed 30 January, 2019, https://www.da.org.za/where-we-govern. Important to note: after the break down of the coalition in August 2018, Nelson Mandela Bay Metropolitan Municipality has no longer been led by the DA; see: L. Daniel, "Democratic Alliance-led Coalition Breaks Down in Nelson Mandela Bay," *The South African* (website), 3 August 2018, accessed 30 January 2019, https://www.thesouthafrican.com/democratic-alliance-coalition-breaks-nelson-mandela-bay/.
[16] These political shifts are of interest, particularly given South Africa's national elections to be held in spring 2019.
[17] A. Cox, "Joburg Mayor's Ten-Point Plan for the City," *IOL* (website), 6 September 2016, accessed 19 June, 2018, https://www.iol.co.za/news/politics/joburg-mayors-10-point-plan-for-the-city-2064941.
[18] City of Johannesburg (CoJ), "Spatial Development Framework (SDF) 2040," *Department of Development Planning* (2016), 17. 'The City' will be used to refer to the 'City of Johannesburg Metropolitan Municipality'.
[19] CoJ, "SDF 2040," 97.

budget and attention allocated will influence the speed of the further construction of the BRT network, among other things.

As the backbone of these corridors, the BRT is seen as essential for bringing about change to the city. Some research has been done on the impact of Johannesburg's BRT. Venter, for example, has researched the impact of the BRT on "poverty reduction", on the inclusion of the taxi industry in the BRT network during its early stages and on the influence of the BRT network on the affordability of access to employment.[20] However, none of this research has looked at the impact of the transport mode on justice. Spatial justice is an important objective of South Africa's National Development Plan (NDP) 2030, which describes the striving for spatial justice as "The historic policy of confining particular groups to limited space, as in ghettoization and segregation, and the unfair allocation of public resources between areas, must be reversed to ensure that the needs of the poor are addressed first rather than last".[21] This description sees justice as being concerned with the outcomes of the fair distribution of goods and services. In turn, this 'fairness' is based on people's needs, lived experiences and the legacy of historical discrimination.[22]

In the case of Johannesburg, the legacy of the forced segregation of people and the discriminatory investments in transport services between different areas has led to inadequate public transport for people who depend on it for their access to social and economic facilities, which are often far from the places they live.[23] Soja, among others, explains that social and spatial processes constantly influence each other and that the fair or equitable outlay of a transport network – directed at servicing areas of people who are dependent on public transport for their ability to reach services and to go against discriminatory investments – can have positive effects on people's social and spatial justice. For example, this network counters segregation in the city by connecting the different areas and, by using the transport mode, improves access to different spaces in the city and thus to social and economic facilities in these places.[24]

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[20] C. Venter, "Assessing the Potential of Bus Rapid Transit-Led Network Restructuring for Enhancing Affordable Access to Employment – the Case of Johannesburg's Corridors of Freedom," R*esearch in Transport Economics 59* (2016): 448-449; E. Vaz and C. Venter, "The Effectiveness of Bus Rapid Transit as Part of a Poverty-Reduction Strategy: Some Early Impacts in Johannesburg," *Abstracts of the 31st Southern African Transport Conference* (2012): 619-631; C. Venter, "The Lurch Towards Formalisation: Lessons from the Implementation of BRT in Johannesburg, South Africa," *Research in Transportation Economics* 39 (2013): 114-120.

[21] National Planning Commission, "National Development Plan 2030: Our Future- Make It Work," 277.

[22] E. W. Soja, *My Los Angeles : From Urban Restructuring to Regional Urbanization* (Berkeley, California: University of California Press, 2014),230-231.

[23] See chapter 2 for the emergence of this situation.

[24] See 4.2 and 4.3 for a detailed description of these processes.

Based on what has been discussed so far, this thesis will show the ways in which the City intends to impact people's social and spatial justice by means of the BRT and how this is unfolding in practice. This thesis will therefore answer the question of:

"In what ways do the policies and practices of the BRT in the Empire Perth TOD Corridor in Johannesburg impact commuters in terms of social and spatial justice?"[25]

This thesis focusses specifically on the Rea Vaya trunk route, T3, through the Empire Perth development corridor as the case study of this thesis. This BRT route stretches from the central bus station in Soweto, Thokoza Park, to Johannesburg's Central Business District (CBD). Around 40% of Johannesburg's population resides in "the Soweto area", south-west of Johannesburg.[26] They have to travel long distances to get to places and "economic opportunities" in central or northern Johannesburg.[27] On their way, the Rea Vaya buses on this route pass several educational and medical institutions, as well as workplaces and residential areas.[28] Through the use of the BRT, people can thus access these different places within the city.

In order to understand in what ways taking the bus influences people's justice I asked people about their experiences while travelling along with them, instead of waiting till commuters got off the bus. This research approach gave me the chance to talk to my specific target group and to experience and observe the journey from Johannesburg's centre to Soweto (and back) myself.

To answer the research question, this thesis has been set up as follows. It will start with a chapter on the spatial development of Johannesburg and will explain how the city has developed over time, in the broader context of South Africa, to provide an understanding of its current segregated and unconnected spatial fabric. Chapter 3 will then set out the City's corridor initiative that aims to change Johannesburg's social and spatial geography. It will explain the current plans with regard to the BRT and how other major cities around the world have attempted to deal with their urban problems by means of transport development. Additionally, it will elaborate on the current state of the Rea Vaya development in Johannesburg. In order to constructively examine in what ways the BRT development impacts

[25] Rea Vaya's T3 route is the trunk route of this corridor and is therefore, in its entirety, the focus route of this thesis. The corridors are now called 'Transit Oriented Development (TOD) Corridors'.
[26] CoJ, "SDF 2040," 52.
[27] Ibid.
[28] JDA, "Strategic Area Framework," 23.

on commuters' justice, the fourth chapter will elaborate on the concepts of social and spatial justice, the relationship between transport and justice and the 'right to the city'. These first three chapters are results of the fieldwork that will set out Johannesburg's physical setting, the City's programme and the conceptual framework which are essential in seeking to answer the research question. Subsequently, the fifth chapter will outline the methodological considerations made during the research process. It will among other things, explain how I approached my fieldwork and conducted my comparative analysis of policy and practice. In this chapter I will also reflect on my own position during the research process. In order to investigate the City's aims and commuters' experiences in terms of social and spatial justice the next chapter provides a comparative analysis of the BRT policies in the Strategic Area Framework of the Empire Perth Corridor and the SDF 2040, and commuters' practices. The last chapter will provide the summary and conclusions to this thesis by combining the information contained in the previous chapters to answer the research question.

2. A concise introduction to Johannesburg's spatial history

"In Joburg, you can choose not to see the poverty"[29]

Johannesburg, like any other city in South Africa, has developed in response to changes in the wider area around the city and the economic and political landscape of South Africa.[30] This chapter will give a concise introduction to events such as the Gold Rush, the Group Areas Act of 1950, the emergence of Soweto, the development of separate transport infrastructure and several post-apartheid developments that have had a large influence on the growth and separation of the city. Consequently, it will outline the development of Johannesburg over time so as to have a better understanding of its current segregated, unconnected and unjust fabric.

2.1 1886: Gold and labour

The current city of Johannesburg dates back to 1886, when it was a small mining town next to the large gold fields that had just been discovered. Although gold had been discovered around this area before, such large findings as those at the Witwatersrand had never previously been seen.[31] George Harrison, a travelling goldminer from Australia, found gold at a farm called 'Langlaagte'. While Harrison left Johannesburg for reasons that are not known, news about the discovery of gold spread rapidly and many miners rushed to this area.[32] The first miner settlement, and the oldest part of current Johannesburg, was Ferreira's Camp, which was named after Colonel Ferreira, the leader of an early group of miners in the area.[33] Around this time, the government appointed a commission, consisting of Christiaan Johannes Joubert, Johann Rissik and assisted by Johannes Petrus Meyer, to investigate the area and to suggest a convenient place for a settlement. They reported that water was limited and that mining the

[29] Student at 'Faces of the City' seminar series, *Wits University* (6 March 2018).
[30] G. Gotz, C. Wray and, B. Mubiwa, "The 'Thin Oil of Urbanisation'? Spatial Change in Johannesburg and the Gauteng City-Region," in *Changing Space, Changing City: Johannesburg after Apartheid*, ed. P. Harrison, G. Gotz, A. Todes, and C. Wray (Johannesburg: Wits University Press, 2014), 59; A. Mabin and D. Smit, "Reconstructing South Africa's Cities? The Making of Urban Planning 1900–2000," *Planning Perspectives* 12, no. 2 (1997): 194.
[31] N. Mandy, *A City Divided: Johannesburg and Soweto* (Johannesburg: Macmillan South Africa, 1984), XV; G.A. Leyds, *A History of Johannesburg* (Cape Town: Nasionale Boekhandel Beperk, 1964), 9. Mandy's book is used as an important guideline for developments described in this chapter as it analyses Johannesburg's development in both a South African and an international context. Moreover, Mandy himself was extensively involved in the development of Johannesburg and the book therefore gives far-reaching insights from first-hand experience.
[32] Mandy, *A City Divided*, 2; Leyds, *A History of Johannesburg*, 14.
[33] Mandy, *A City Divided*, 2.

area would be costly.[34] Soon after their report, the Witwatersrand was officially proclaimed for mining and the southern side of the farm 'Randjeslaagte' was designated for the settlement. Johannesburg was most likely named after the members of this commission.[35]

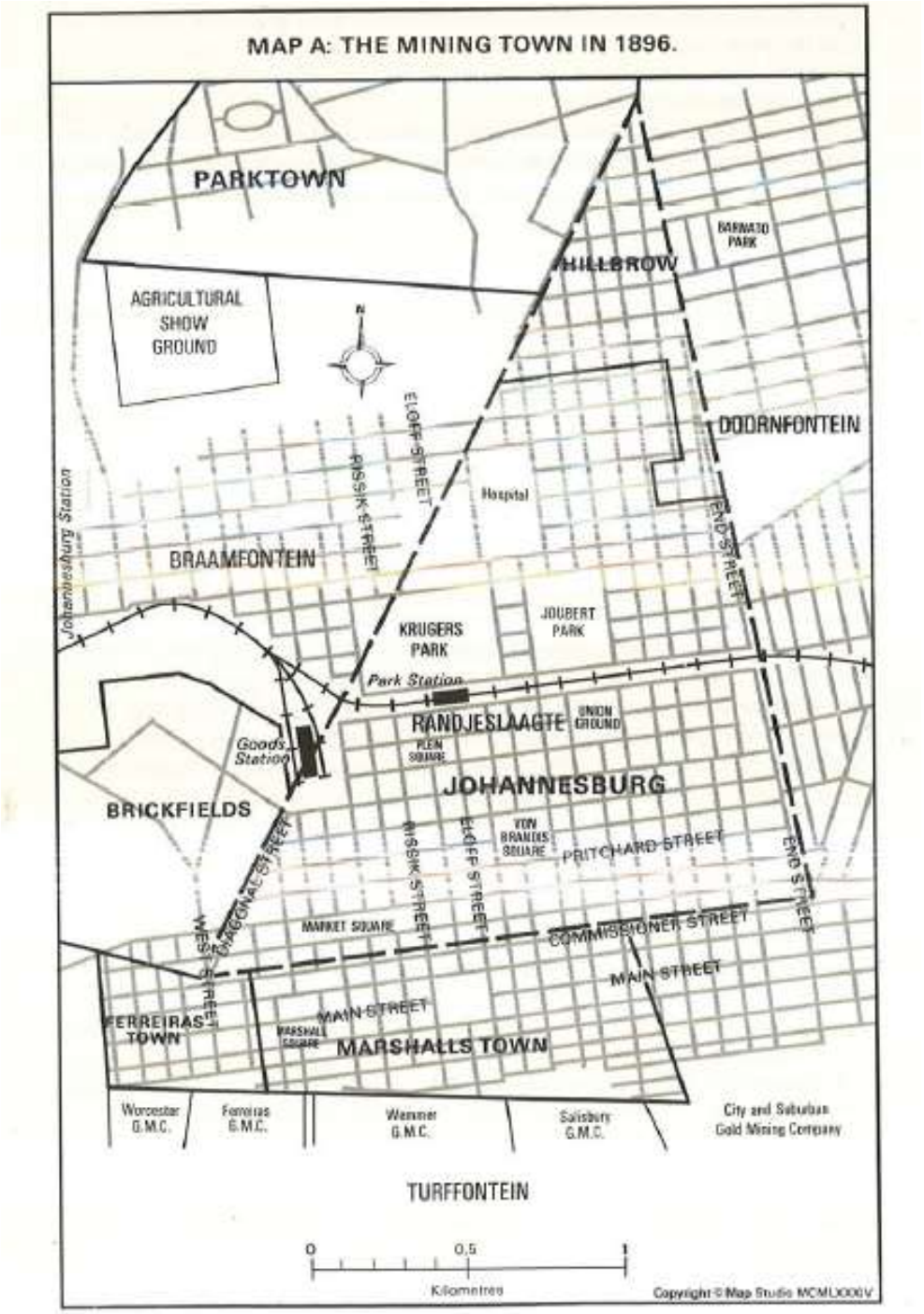

Figure 1: Johannesburg in 1896[36]

[34] Drawn from Mandy's and Leyds' descriptions, this report was most likely an oral summary of their findings. See: Mandy, *A City Divided*, 2-3; Leyds, *A History of Johannesburg*, 14-15.
[35] Mandy, *A City Divided*, 2-3; Leyds, *A History of Johannesburg*, 14-15.
[36] Ibid, 14.

In the 1880s, more and more people came to Johannesburg. This gave rise to economic and social activity, including the opening of banks, markets, sports clubs, liquor stores, theatres and a library.[37] Estimations of the city's population after one year range from 3000 to 8000 people.[38] The streets of Johannesburg were designed to be narrow, and the plots of land designated for accommodation were laid out grid-like to fit in as many properties as possible, as shown in the map above.[39] Simultaneously, Marshalltown, a privately developed township on the east of Ferreira's town, became "the mining and financial heart of Johannesburg".[40]

Technological innovations in the 1890s made it easier to extract gold from harder ore, which was deeper down in the ground.[41] The mining area expanded rapidly and, according to A.P. Cartwright in *A City Divided: Johannesburg and Soweto*, by 1895 the Witwatersrand goldmines were worth more than 100 million pounds.[42] By the same year, Johannesburg's population had increased to more than 100,000, of whom around 50 per cent, according to an official count, were white. Johannesburg became the largest town in South Africa, while many smaller towns emerged around this area. Half of the town expanded above and half of it below the gold reef.[43] While rich white people moved to the north of the city, to Parktown, the middle class went to areas such as Braamfontein, Hillbrow and Yeoville, and poor white people went to places such as Vrededorp and suburbs south of the mines. Indian, coloured and black people lived mainly on the south-west side of Johannesburg in compounds in 'locations'.[44] Over time, and as Johannesburg developed, these racial divisions intensified and are still largely reflected in the racial layout of the city today.[45]

[37] Mandy, *A City Divided*, 5-6.
[38] Ibid, 6; J. Behrens, "Navigating the Liminal: An Archaeological Perspective on South African Industrialisation," in *African Historical Archaeologies,* ed. A. M. Reid and P. J. Lane (New York: Kluwer Academic/Plenum Publishers, 2004), 347.
[39] Mandy, *A City Divided*, 3-4; Leyds, *A History of Johannesburg,* 142.
[40] Mandy, *A City Divided*, 5. 'Township' in this context refers to a "piece of land" used for "residential, industrial or […] business purposes" and is not comparable to 'locations' for non-whites or townships developed during apartheid. See: "Township" in "Land Survey Act 1997, Act no. 8," *Republic of South Africa, Government Gazette*, (11 April 1997), 50.
[41] Leyds, *A History of Johannesburg,* 34.
[42] Mandy, *A City Divided*, 7.
[43] Ibid, 4, 13; Leyds, *A History of Johannesburg,* 53.
[44] Mandy, *A City Divided,* 13; Leyds, *A History of Johannesburg,* 281; Mabin and Smit, "Reconstructing South Africa's Cities?," 199. 'African' and 'black' will be used interchangeably.
[45] Mandy, *A City Divided*, 13.

2.2 Increasing urbanisation and segregation

Urbanisation and thus the expansion of Johannesburg continued after the Boer Wars at the beginning of the twentieth century.[46] The British not only wanted to be in control of the Boer Republic of the Transvaal because of their wish to expand the British Empire, but also wanted to gain control of gold production and therefore of Johannesburg.[47] From the start of the Second Boer War in 1899, services in Johannesburg became disrupted and shops closed.[48] Thousands of people, white and non-white alike, left the city, and mines shut down. The British entered the city on 31 May 1900, but the takeover of Johannesburg was relatively calm.[49] By the time the war ended in 1902, the Transvaal and Johannesburg were in British hands and, although the mines were mostly intact, many labourers had left Johannesburg. Between 1904 and 1910, however, people came back to Johannesburg, while the value of gold production doubled and the city's suburbs expanded.[50]

Until and after the First World War Johannesburg had a period of stable development, in which industries and the city expanded.[51] However, the Great Depression in the 1930s had a major impact on the economy of South Africa. The country eventually devalued its currency, and this gave a boost to the economy (the mining industry and secondary industry), resulting in increased demand for labour and new investments in the city.[52]

During the periods of growth, and for various reasons, the spatial segregation in Johannesburg became more evident. Firstly, the gold reef and the mining dumps separated the southern suburbs from the CBD and the wealthy northern part of Johannesburg. Secondly, the land on the east side of Johannesburg is flatter and therefore more suitable for industry and, later on, for airports, while the land on the west side is steeper and therefore more suitable for residential purposes. Thirdly, while the ridges protected the northern part of Johannesburg from the cold winds in winter, townships on the less desirable south-west side of the mining belts continued to grow.[53] The black residents whose informal inner-city settlements were burned down to avoid another influenza outbreak, such as the one in 1904, were resettled to

[46] This chapter does not go into detail about the Boer War. For an elaborate explanation, see: B. Nasson, *The War for South Africa: The Anglo-Boer War 1899-1902* (Cape Town: Tafelberg, 2010).
[47] T. Packenham, "The Man Who Started the Boer War," *The Observer (1901-2003)* London, 19 August 1979.
[48] Leyds, *A History of Johannesburg,* 138.
[49] Ibid; Mandy, *A City Divided*, 19.
[50] Leyds, *A History of Johannesburg*, 152; Mandy, *A City Divided*, 22, 25.
[51] Leyds, *A History of Johannesburg,* 151. For an elaborate description of South Africa during the First World War, see: B. Nasson, *Springboks on the Somme: South Africa in the Great War 1914-1918* (Johannesburg: Penguin Books, 2007).
[52] Mandy, *A City Divided*, 43-44, 47.
[53] Ibid, 25-27.

Klipspruit, which was also part of these south-west areas.[54] Fourthly, and importantly for this thesis, the availability of various means of transport contributed to the expansion and development of white areas, while other areas lacked adequate modes of transport. In the early twentieth century, trams, and later on buses, were introduced in the city. Various suburbs north, east and beyond the mining belts in the south grew along the transport routes as these linked white residents to their workplaces, stores and places for recreational activity. Additionally, from the 1930s onwards, most wealthy white people owned cars, which resulted in the northern part of the city being car-oriented. However, the separate transport facilities available for Africans were seen as highly inadequate, according to an advisory commission.[55] Even before racial segregation by law became official, black residents were dependent on separate trains, buses and certain trams with a solely commuting function.[56] Lastly, at the beginning of the twentieth century, racial separation in cities became incorporated into legislation. In 1923, the Union of South Africa (formed by the four British self-governing provinces in 1910) adopted the Native (Urban Areas) Act.[57] Under this Act, municipalities had to ensure the urban residential separation of Africans, in so-called 'locations' "or else [Africans had to live] on their employers' premises".[58] In addition to this forced spatial separation within the city, the government introduced passes in order to strengthen control of the influx of African men into urban areas.[59] In 1930, the Native Affairs Committee of Johannesburg started to build Orlando as a black township on the south-west of Johannesburg and "the industrial township of Industria on the western edge of the municipal area".[60]

Urbanisation increased enormously during the Second World War due to the high demand for African labour in the manufacturing industry. This large increase in urbanisation

[54] P. Harrison, "The Policies and Politics of Informal Settlement in South Africa: A Historical Perspective," *Africa Insight* 22, no. 1 (1992): 15; Mabin and Smit, "Reconstructing South Africa's Cities?," 199; C. M. Chipkin, *Johannesburg Style: Architecture & Society 1880s-1960s* (Cape Town: David Philip Publishers, 1993), 198.
[55] Mandy, *A City Divided*, 25-27, 45-47. K. S. O. Beavon, "The Role of Transport in the Rise and Decline of the Johannesburg CBD, 1886-2001," *20th South African Transport Conference South Africa: Meeting the Transport Challenges in Southern Africa* (July 2001): 7-8.
[56] Beavon, "The Role of Transport," 4, 12.
[57] Before this Act was implemented, several other acts (such as the Native Affairs Act) were introduced that concerned the segregation of Africans, but these were not directed at cities as such. See: J. Wells, "Passes and Bypasses: Freedom of Movement for African Women under the Urban Areas Act of South Africa," in *African Women and the Law: Historical Perspectives,* ed. M. J. Hay and M. Wright (Boston: Boston University Papers on Africa VII, 1982).
[58] R. Davenport, "Historical Background of the Apartheid City to 1948," in *Apartheid City in Transition,* ed. M. Swilling, R. Humphries and, K. Shubane (Cape Town: Oxford University Press, 1991), 7; Wells, "Passes and Bypasses," 127.
[59] A. Mabin, "Dispossession, Exploitation and Struggle: An Historical Overview of South African Urbanization," in *The Apartheid City and Beyond: Urbanization and Social Change in South Africa*, ed. D. M. Smith (Johannesburg: Witwatersrand University Press, 2001), 17; Harrison, "the Policies," 15.
[60] Mandy, *A City Divided*, 43.

resulted, however, in overcrowded locations and expanded the numbers of informal settlements owing to the large shortage of accommodation for black labourers.[61] During this period, the government decided to relax the pass laws in Johannesburg as it was in the 'national interest' to have a flourishing industry for the war.[62] A government advisory committee pleaded for "orderly urbanisation" as it realised that black people were an integral part of cities' populations and that urbanisation could not be halted. In Johannesburg, for example, the city council "adopted a policy of 'controlled squatting'" and created Moroka, part of present-day Soweto, as an official informal settlement for 50,000 people.[63]

2.3 Apartheid's influence on Johannesburg and Soweto's development

This intended form of controlled urbanisation was not, however, achieved as the National Party came into power in 1948 and actively sought to counter black urbanisation as part of its apartheid policies.[64] In 1950, the government passed the Group Areas Act, which led to residential areas in cities and towns being segregated and reserved for specific racial groups.[65] This Act was followed in 1951 by the Prevention of Illegal Squatting Act. While the informal settlements in the city were destroyed, large townships were built outside Johannesburg for the resettlement of various racial population groups.[66] Soweto, the abbreviation for South-Western Township, was developed for black people, Lenasia for Indian people, and Eldorado Park and Coronationville for those referred to in South Africa as coloured people.[67] The separation of the different areas was strengthened through "buffer zones" such as the mining belts, industrial areas, "railway lines [and] motorways".[68]

As described above, black labourers had previously settled in or were resettled to the south-west of the mining belts before and around 1904. These settlements expanded as a result of new resettlements following the introduction of the Native (Urban Areas) Act in 1923, and because the municipality started to provide more housing for black people in places

[61] Wells, "Passes and Bypasses," 147; Harrison, "The Policies," 15.
[62] Wells, *Passes and Bypasses*, 147.
[63] Harrison, "The Policies," 15-16.
[64] Apartheid was the "political system in South Africa [from 1948 until 1994] that legally separated people of different races" in all spheres of life. *Cambridge Dictionary* (website), accessed 10 September 2018 https://dictionary.cambridge.org/dictionary/english/apartheid.
[65] Mandy, *A City Divided*, 89.
[66] Harrison, "The Policies," 16. The word 'township' acquired its publicly well-known meaning in South Africa during apartheid: "the large, segregated public housing estate, usually on or beyond the urban periphery." In Mabin and Smit, "Reconstructing South Africa's Cities?" 206.
[67] Mandy, *A City Divided*, 57, 173.
[68] A. Makhubu, "A Democratic City? The Impact of Transport Networks on Social Cohesion," in *International Planning History Society Proceedings*, ed. C. Hein, *17th IPHS Conference, History-Urbanism-Resilience, TU Delft 17-21 July 2016* (3), 223.

such as in Orlando in the 1930s. The large urbanisation that occurred from the Second World War onwards highlighted the lack of housing available, and resulted in squatter camps such as Jababuve and Moroka being set up. Although the city council built houses and hostels during this period, demand significantly outstripped supply. In the 1950s, tens of thousands of people were subsequently resettled to Soweto, Lenasia and other townships under the Group Areas Act. Soweto continued to grow and was officially named Soweto in 1963.[69]

South Africa's flourishing economy in the 1950s and 1960s resulted in Johannesburg both expanding and undergoing rapid transformation.[70] While large skyscrapers and office blocks were built in the city centre – resulting in densification, but also the destruction of some older historical buildings – the white suburbs, which were characterised by low density, expanded enormously.[71] This expansion, in turn, led to an expanded road network and, due to the increased numbers of cars, the municipality decided to remove the trams from the city in the 1960s.[72] In the 1970s and 1980s, large shopping centres developed spread in the various northern suburbs, while Randburg and Sandton developed into commercial and financial areas.[73] The townships assigned to black people, however, remained "under-serviced, with [separate] inadequate transport infrastructure [consisting of public trains and buses] further compounded by long commuting distances from these areas to places of work".[74]

The apartheid system seemed to be working according to plan until the mid-1970s. However, the 1976 Soweto uprising sparked the beginning of public revolt against the regime in the years to come and highlighted "cracks in the system".[75] In the ten years after the 1976 uprising, the government made various adjustments to its planning, but these had very little effect.[76] In 1986, the government realised its policies were unsustainable and black urbanisation was going to be permanent and would continue to increase. It therefore adopted

[69] Mandy, *A City Divided*, 173-178. This chapter focuses specifically on the township of Soweto as this is a focus area of this thesis. For a more elaborate description of governmental and municipal control of Soweto, I recommend: Mandy, *A City Divided*, chapter 10 and 11.
[70] Ibid, 57.
[71] M. J. Murray, *Taming the Disorderly City: The Spatial Landscape of Johannesburg After Apartheid* (New York: Cornell University Press, 2008), 3; Mabin and Smit, "Reconstructing South Africa's Cities?," 207. It is important to note that there were also "considerable class, ethnic and religious" differences within these white suburbs. See: A. Mabin, "Suburbanisation, Segregation, and Government of Territorial Transformations," *Transformation* 56 (2005): 48.
[72] Mandy, *A City Divided,* 57; Mabin and Smit, "Reconstructing South Africa's Cities?," 207.
[73] Mandy, *A City Divided,* 57, 60; Mabin and Smit, "Reconstructing South Africa's Cities?," 209.
[74] City of Johannesburg Metropolitan Municipality, "Joburg 2040 – Growth and Development Strategy," (2011): 68.
[75] Mabin and Smit, "Reconstructing South Africa's Cities?," 209. For an elaborate overview of the causes of the Soweto uprising, see: L. Nijhof, "Causes of the Soweto Rebellion," *Course: South Africa in the 20th Century, Stellenbosch University,* 2015.
[76] Ibid, 211.

the *White Paper on Urbanisation*, which stopped the measures designed to control the influx of Africans and the restrictive legislative acts applying to urban spaces and was very similar to the idea of 'orderly urbanisation' developed in the 1940s. People consequently started moving to township extensions or large, new, informal settlements on the outskirts of cities.[77]

In 1990, "President F.W. de Klerk launched South Africa into a period of transition towards political democracy".[78] Over the next four years, apartheid-related acts were abolished and the government strived for a negotiated approach, with the planning discourse set to no longer be determined by race.[79]

2.4 Current Johannesburg: a post-apartheid apartheid city

A lot has been written about Johannesburg after apartheid, as well as on other post-apartheid cities.[80] This section will outline some recent developments that have had a determinative effect on the city's current layout.

Due to a growing economy, which has become predominantly service-driven since the 1990s, Johannesburg's population and the numbers of households have continued increasing since the end of apartheid. This has led to high demand for accommodation and services.[81] As there are no large rivers or mountains to limit the growth of the city, Johannesburg has expanded in all directions.[82] This urban sprawl "has continued on the edges of both township areas and previously whites-only suburbs", while the government has attempted to contain this sprawl.[83] This form of urban growth is mostly an extension to existing areas, in the form of public housing, some sort of gated community or informal settlements.[84] Generally, the suburbs have a lower population density than the townships and informal settlements, while the overall city is densifying owing, for example, to "inner-city development and backyard dwellings".[85] In addition to the urban expansion, the fragmented development of the city is a

[77] Mabin and Smit, "Reconstructing South Africa's Cities?," 212-213; Harrison, "The Policies," 17; Mandy, *A City Divided,* 178.
[78] Mabin and Smit, "Reconstructing South Africa's Cities?," 214.
[79] Ibid, 214-215.
[80] See e.g. ed. P. Harrison, G. Gotz, A. Todes and C. Wray*, Changing Space, Changing City: Johannesburg after Apartheid* (Johannesburg: Wits University Press, 2014).
[81] P. Harrison, G. Gotz, A. Todes and C. Wray, "Materialities, Subjectivities and Spatial Transformation in Johannesburg," in *Changing Space, Changing City: Johannesburg after Apartheid*, ed. P. Harrison, G. Gotz, A. Todes and C. Wray (Johannesburg: Wits University Press, 2014), 5-11.
[82]Mandy, *A City Divided,* xviii; Gotz, Wray and Mubiwa, "The 'Thin Oil of Urbanisation'?," 42-48.
[83] Gotz, Wray and Mubiwa, "The 'Thin Oil of Urbanisation'?", 52; R. Ballard, R. Dittgen, P. Harrison, and A. Todes, "Megaprojects and Urban Visions: Johannesburg's Corridors of Freedom and Modderfontein," *Transformation: Critical Perspectives on Southern Africa* 95 (2017): 119-120.
[84] Gotz, Wray and Mubiwa, "The 'Thin Oil of Urbanisation'?," 52-54.
[85] ibid, 49, 58; Beavon, "The Role of Transport," 8-9.

significant feature of Johannesburg. The private sector, for example, continued to develop and invest in suburbs like Randburg and Sandton. At the same time, there has been less progress in improving underprivileged areas and better connecting these areas to the rest of Johannesburg.[86] Similarly, there has been little done about the different buffer zones, such as the mining belt, which still "poses limitations on post-apartheid spatial reintegration" of the city.[87]

Alongside these developments, the segregated and unconnected urban fabric of Johannesburg is also reflected in the transport sector. On the one hand, the middle- and high-income population predominantly uses private cars as their mean of transport, and urban sprawl has increased the use of private cars. On the other hand, "the majority of residents does not own cars" and hence travels by (mini-bus) taxi, bus or train.[88] The taxi industry developed during apartheid since the public transport for non-white residents was inadequate and often not accessible in the expanding townships.[89] It has become "the dominant transport system in operation" for those with lower incomes.[90] The "metro-rail system", the train system in Johannesburg, connects places such as Soweto to the inner city, but is infamous for its lack of quality, reliability and safety.[91] The insufficient integration of and investments in the public transport sector and land use, and the dominance of the use of the private car, result in a lack of spatial integration, and "highly inefficient and unequal spatial landscapes".[92]

As Robinson mentions, it has become clear that changing "the old order … especially that fixed in the built environment and embodied in professional knowledge and language" is a long-term process, despite all the attention for changing the urban fabric after apartheid so as to create "one city" in order to counter apartheid injustices.[93] Tissington argues that it is especially difficult to undo the "physical legacies of apartheid planning (…) because of the protections of private property guaranteed in South Africa's Constitution".[94] All in all, the

[86] Mabin, "Suburbanisation," 53.
[87] Gotz, Wray and Mubiwa, "The 'Thin Oil of Urbanisation'?", 47.
[88] City of Johannesburg Metropolitan Municipality, "Joburg 2040," 68.
[89] G. Bickford, introduction to *How to Build Transit-Oriented Cities: Exploring Possibilities*, by South African Cities Network (2014), 4.
[90] City of Johannesburg Metropolitan Municipality, "Joburg 2040," 68.
[91] Ibid. There are some bus networks such as Putco and Metro Bus, but these are also infamous for their lack of reliability and their network connections. See, for example, S. Greyling, "How to Be a Metro Bus Commuter in Joburg," *Jhblive* (website), accessed 7 February 2019, http://www.jhblive.com/Stories-in-Johannesburg/article/how-to-be-a-metro-bus-commuter-in-joburg/8762.
[92] Bickford, Introduction, 5.
[93] Mabin and Smit, "Reconstructing South Africa's Cities?," 218; Ballard, Dittgen, Harrison and Todes, "Megaprojects," 119.
[94] J. Budlender and L. Royston, "Edged Out: Spatial Mismatch and Spatial Justice in South Africa's Main Urban Areas," *Socio-Economic Rights Institute of South Africa* (November 2016), 6.

"geographies of exclusion" are thus partly due to the legacy of apartheid and partly due to new developments that have strengthened separation.[95]

To summarise, Johannesburg has developed from being a small mining town into South Africa's largest city. It has faced a range of different developments over time, and the economic and political landscape of the wider area around Johannesburg and of South Africa as a whole, as well as the consequent large urbanisation flows, have played an important role in shaping the city. From its origins onwards, Johannesburg developed along racial lines, and these intensified over time. While the old order of segregated and unconnected areas remains visible within Johannesburg's urban fabric today, spatial divisions have become more complex and new forms of separation have emerged since the end of apartheid. The city continues to be predominantly car-oriented, and public transport remains inadequate as a means of enhancing spatial integration. The next chapter will elaborate on present-day policies of the City that aim to counter the spatial injustices in Johannesburg.

[95] Mabin, "Suburbanisation," 56.

3. A Bus Rapid Transit system as the backbone for change in Johannesburg's urban fabric

"We use the instruments of planning to reverse [apartheid's practices]. And people accused us: "But it's social engineering". Well, it's actually social re-engineering, because apartheid was wrong".[96]

This chapter will begin by explaining the City of Johannesburg's (CoJ) planning initiative around a new transport system resulting from continuous thinking about and initiatives for spatial transformation in Johannesburg.[97] It will then describe the City's current view on this programme after a shift in municipal politics since Herman Mashaba (DA) became mayor in 2016. Subsequently, and to gain a better understanding of the City's intentions, it will outline the effects of transport development in other major cities which have aimed to restructure their urban fabric to deal with urban problems. Finally, it will elaborate and focus on the role of the BRT system in Johannesburg as the ongoing development for change.

3.1 Johannesburg's Corridors of Freedom

The spatial segregation of Johannesburg that is a result of the city's history and the "new patterns of spatial unevenness", as explained in the previous chapter, mean that the city remains spatially divided and unconnected.[98] To break with the apartheid legacy, the CoJ, led by ANC mayor Parks Tau, introduced the CoF initiative in 2013.[99] This initiative was aimed at restructuring "the city's geography" by creating three "development corridors" in which different areas of the city are connected by means of "transport corridors" that are themselves linked to "interchanges around which land use will be intensified to drive economic growth and social change".[100] The transport corridors in Johannesburg consist of a BRT system called Rea Vaya. A BRT system is "a rapid mode of urban public transport that combines the high quality and speed of a rail system with the operating flexibility and low cost of a bus

[96] Wits School of Architecture & Planning, "Cllr Parks Tau - Faces of the City, Aug 2018 (WITS School of Architecture & Planning)," *YouTube* (website), 13 September 2018, accessed 17 November 2018, https://www.youtube.com/watch?v=lLQ6aqzEw7g&feature=youtu.be.
[97] 'CoJ' and 'the City' will be used interchangeably to refer to the 'City of Johannesburg Metropolitan Municipality' in this thesis.
[98] Rogerson and Rogerson, "Johannesburg 2030," 350-353.
[99] Dittgen, "The Corridors of Freedom Initiative."
[100] Ibid; Rubin and Appelbaum, "Spatial Transformation," 4.

network".[101] It is a bus network with lanes that are dedicated to be used only by the BRT, with BRT stations along the routes, as shown on the picture below.[102]

Figure 2: Rea Vaya station Thokoza Park in Soweto[103]

The form of development around the transit nodes is called Transit-Oriented Development (TOD) and "is generally considered to be mixed-use development near, and/or oriented to, mass transit facilities".[104] It is a form of urban planning which is people-central and therefore focused on transportation without private cars and instead directed at transit by means of public transport and non-motorized transport (NMT).[105] The "mixed-use development nodes with high density accommodation, supported by office buildings, retail developments and opportunities for education, leisure and recreation" along the transport network, together form

[101] A. Wood, "Learning Through Policy Tourism: Circulating Bus Rapid Transit From South America to South Africa," *Environment and Planning A* 46 (2014): 2654.
[102] A. Wood, "The Politics of Policy Circulation: Unpacking the Relationship Between South African and South American Cities in the Adoption of Bus Rapid Transit," *Antipode* 47 no. 4 (2015): 1062-1063.
[103] Own photo, 15 March 2018.
[104] D. Pojani and D. Stead, "Ideas, Interests, and Institutions: Explaining Dutch Transit-Oriented Development Challenges," *Environment and Planning A* 46 (2014): 2401.
[105] Pojani, "Ideas," 2401.

the development corridors.[106] Each development corridor in Johannesburg has its own Strategic Area Framework (SAF) with "development guidelines and parameters" and "the projects and programs required to realise" the vision of the City in that corridor.[107] The three corridors are called the Louis Botha, Empire Perth and Turffontein development corridors.[108]

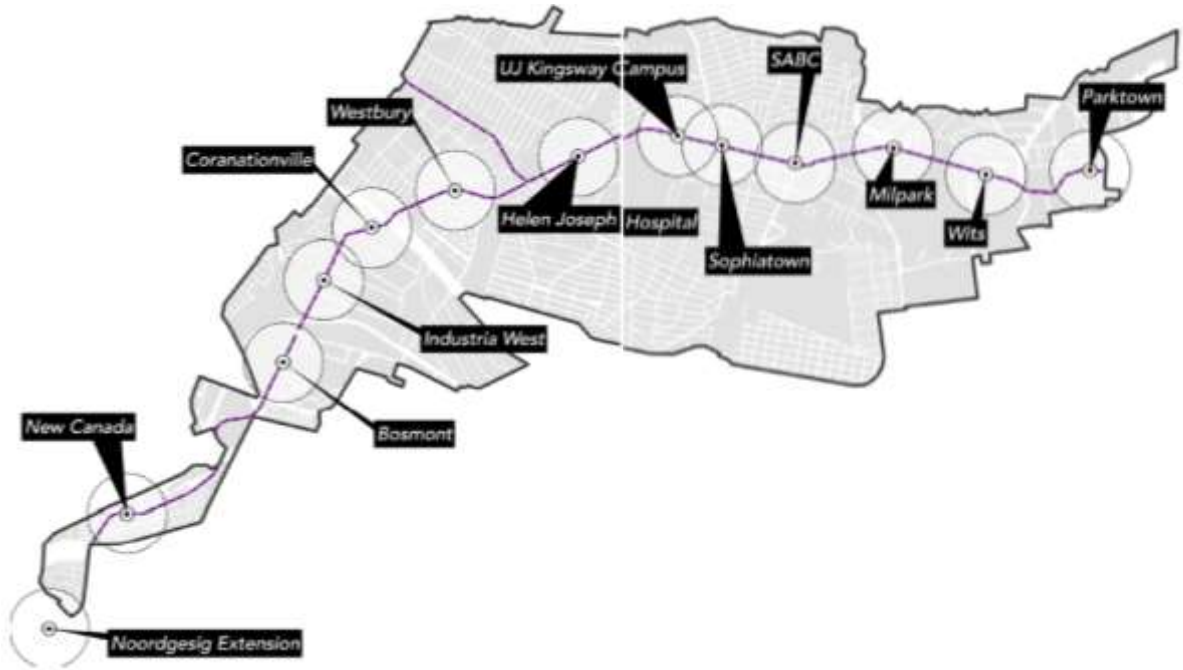

Figure 3: Rea Vaya phase 1B stations, Empire Perth Corridor[109]

[106] City of Johannesburg, "Corridors of Freedom: Re-stitching our City to Create a new Future," *Group Communication and Tourism Department*, 1.
[107] "Strategic Area Frameworks," *City of Johannesburg* (website), accessed 26 July 2018, https://www.joburg.org.za/departments_/Pages/City%20directorates%20including%20departmental%20sub-directorates/development%20planning/Corridors%20folder/Strategic-Area-Frameworks.aspx.
[108] Rubin and Appelbaum, "Spatial Transformation," 3. The names of the corridors refer either to the names of the roads used by the BRT or the name of the suburb central to that corridor.
[109] Edited image, JDA, "Strategic Area Framework," 28-29.

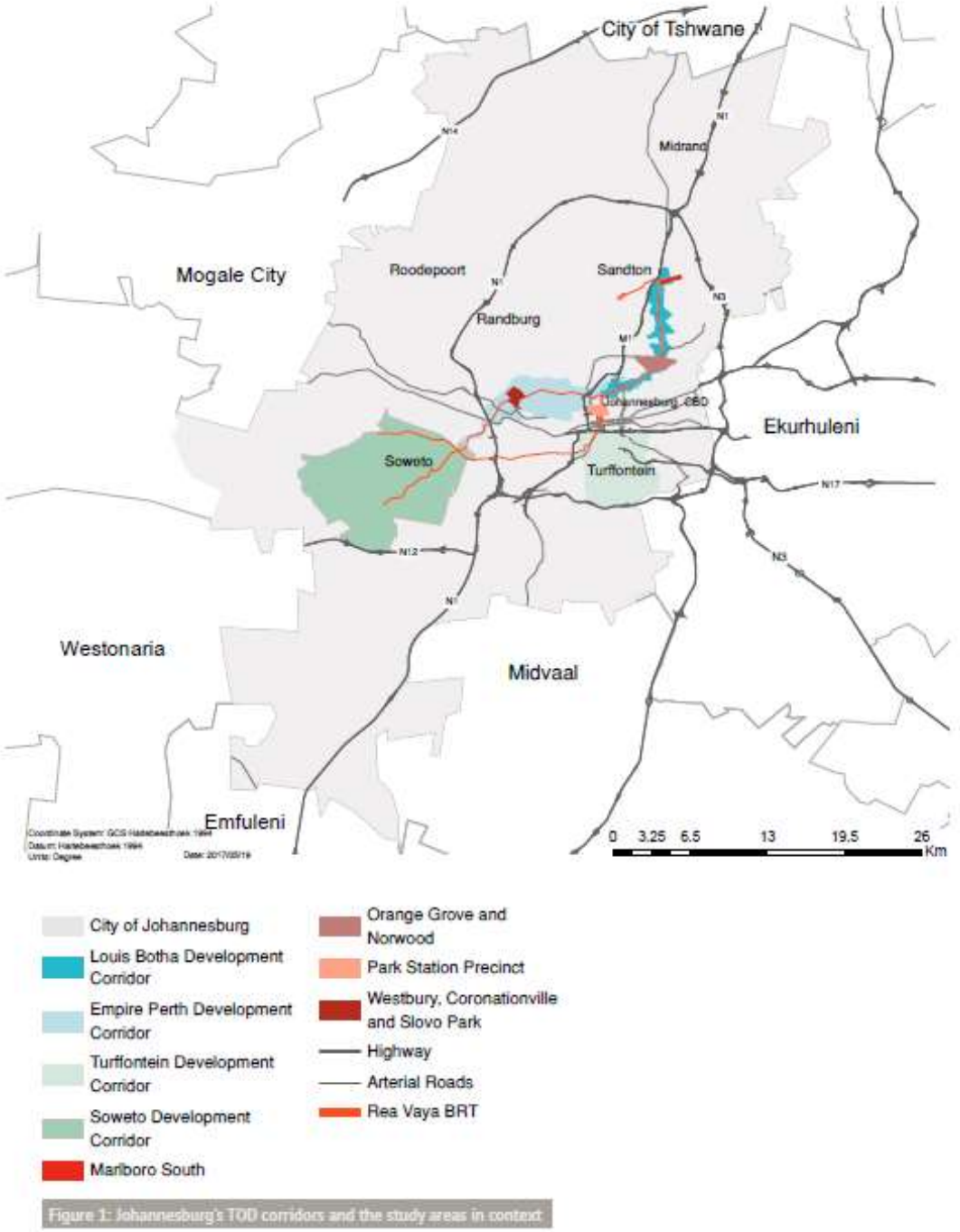

Figure 4: Johannesburg's TOD Corridors: the Louis Botha, Empire Perth and Turffontein development corridors.[110]

[110] Rubin and Appelbaum, "Spatial Transformation," 3. The introduction of the Rea Vaya bus system from Soweto to the city centre and several developments within Soweto are part of the Soweto Development Corridor developed during 2000-2011. See: Ballard, Dittgen, Harrison and Todes, "Megaprojects," 119-120.

Following this approach of TOD and BRT, development in Johannesburg is intended first of all, and as focused on in this thesis, to reconnect different parts of Johannesburg and to ease people's access to jobs, facilities and recreational opportunities by means of an "affordable" and "swift, convenient and safe" transport system.[111] The transport system is intended to improve the "freedom of movement" and consequently the access to economic opportunities in the more central parts of the city, especially for the people who live on the outskirts of Johannesburg.[112] In addition, it aims to reduce the time and money people currently spend on transportation and to reduce greenhouse gas emissions by reducing the use of cars and increasing the use of public transport.[113] Secondly, the programme is intended to change the inefficient way land is currently used within the city. It aims to increase the densities in the city and stimulate various economic activities and social integration within the corridors by means of mixed-use development.[114] In this way, the corridors do not only seek to bring people closer to work, but also to "bring opportunities to where people are".[115] Hence, it aims to alter "the settlement patterns which have shunted the majority of the residents to the outskirts of the [c]ity" so people "will be able to work, stay and play in the same place".[116] As such, the CoF is described as a "comprehensive policy to integrate the city" and to achieve "urban efficiencies" through "spatial transformation in the long term".[117]

3.2 A new mayor, different interests and different strategies

As described in the introduction, however, three years after the launch of the CoF, DA candidate Herman Mashaba became Johannesburg's new mayor, in August 2016. With the support of the Economic Freedom Fighters (EFF), he became the "first non-ANC mayor of Johannesburg since the end of apartheid".[118] This was the fourth big city over which the ANC lost control.[119] Mashaba has stated that his focus is on such things as business development, cutting Johannesburg's unemployment rate, redeveloping the inner city, eliminating corruption and developing public services.[120] Although Tau pleaded that the CoF project should be maintained, Mashaba told Tau "that he has no projects he can call his own" and he

[111] Rubin and Appelbaum, "Spatial Transformation,"4.
[112] City of Johannesburg, "Corridors of Freedom," 1.
[113] Ibid, 1, 10.
[114] Rubin and Appelbaum, "Spatial Transformation," 4.
[115] Wits School of Architecture & Planning, "Cllr Parks Tau".
[116] City of Johannesburg, "Corridors of Freedom," 1.
[117] Wits School of Architecture & Planning, "Cllr Parks Tau".
[118] Dludlu, "The Capitalist as Accidental Politician," 30.
[119] "Where We Govern," *DA* (website).
[120] Louw, "Meet Johannesburg's new Libertarian Mayor," 37-39; Cox, "Joburg Mayor's Ten-Point Plan for the City."

"announced serious changes in the city".[121] He stressed the importance of economic growth to counter "poverty and inequality" and said that the new corridors will not function without economic growth.[122] Due to this political shift, the future of the corridors seems to have become uncertain.

Likewise, as the CoF is a "City government-led initiative", it does not have a lot of provincial support.[123] Moreover, the future of this "long-term mega project", especially the "second phase of the project (i.e. densification of the housing component)", is unclear.[124] Its success and execution are dependent on the involvement of many different actors, such as the private sector and real estate development, as well as the various communities within the corridors.[125] These all have their own interests, and it has proven to be difficult to move away from local and short-term interests, to see the initiative as a whole and to include different groups as participants.[126]

Furthermore, while it is clear that the level of political support and attention for the CoF have decreased, it has not been clear what strategy the City is currently following and putting into place. There are a number of strategic frameworks the City refers to, such as the 'CoJ Strategic Integrated Transport Plan Framework', the 'Complete Streets Guideline' and the 'Gauteng 25 year Integrated Master Plan'.[127] In addition, the 'Growth and Development Strategy 2040' is often mentioned as a guideline to adhere to as it provides development goals in an overarching framework for Johannesburg's future.[128] However, Monyake Moteane, a CoJ senior specialist in City Transformation & Spatial Planning, explained me in an email that the CoF "is still a relevant programme of the City" and is "now called the Transit-orientated Development (TOD) Corridors".[129] He clarified that "the existing plans as captured

[121] P. Dlamini, "Your Time Is Up: Herman Mashaba Tells Parks Tau," *Sowetan Live* (website), 13 September 2016, accessed 18 January 2018, https://www.sowetanlive.co.za/news/2016-09-13-your-time-is-up-herman-mashaba-tells-parks-tau/.
[122] H. Mashaba, "We Need Services, Not Taxpayers' Adspend," *Daily Maverick* (website), 16 May 2016, accessed 18 January 2018, https://www.dailymaverick.co.za/opinionista/2016-05-16-we-need-services-not-taxpayers-adspend/#.Wyj4B6czbIV.
[123] Ballard, Dittgen, Harrison and Todes, "Megaprojects," 126.
[124] Ibid, 125-127.
[125] Rubin and Appelbaum, "Spatial Transformation," 2.
[126] Ballard, Dittgen, Harrison and Todes, "Megaprojects," 115, 125-127; Wits School of Architecture & Planning, "Cllr Parks Tau". For details with regard to early CoF challenges, results and advice of the SA&CP, see: Rubin and Appelbaum, "Spatial Transformation". For details on possible cooperation with the taxi (minibus) industry, see, for example, C. Venter, "Assessing the Potential."
[127] M. Suleman, *Lecturer - Transportation Planning (Wits),* email correspondence, 20 June 2018.
[128] "Strategic Area Frameworks," *Corridors of Freedom* (website), accessed 21 June 2018, http://www.corridorsoffreedom.co.za/index.php/saf.
[129] M. Moteane, *Senior Specialist: City Transformation & Spatial Planning, City of Johannesburg*, email correspondence, 29 June 2018.

in the Strategic Area Frameworks (SAFs) are still in place and currently stand; implementation is underway. The TOD Corridors are reinforced in the Spatial Development Framework (SDF) 2040 as they form part of the Transformation Areas, which are priority areas for investment of the City."[130] He makes clear that "projects that fall within key transformation areas are more likely to get capital budget allocation on the basis of their importance and ability to effect optimal transformation".[131] He acknowledges that "since the coming of the new political administration, there has been a reprioritization of budget which has reduced the initial capital programme intended for the implementation of the TOD Corridors."[132] However, "the City will continue to implement until we [the City] exhaust latent service infrastructure in the absence of any additional funding to increase capacity. When we reach that point, considerations that would have to be made will likely be the support for less intense developments".[133] He adds that "plans are still underway for the expansion of the BRT" and mentions that the CoJ Transport Department, as it is "better placed to respond to the BRT programme […], can also respond to the capital expenditure outlay programme for the next phases of the BRT".[134]

According to Moteane, "more detailed frameworks/Precinct Plans have been developed for catalytic precincts with a more localized focus" in addition to the SAFs.[135] He points out that the SDF must be followed as the overarching strategy of the City and "as such where the SDF is in contradiction with a more localized plan, the SDF may override the provisions of those plans (excluding SAF 2014 and local plans since and including 2015)".[136] He adds that the "Turffontein [corridor] has been put on hold for now as the City has not built Bus Rapid Transit (BRT) infrastructure and more energy is centred around Empire-Perth and Louis Botha Corridor".[137]

In August 2018, during a seminar at the School of Architecture and Planning at the University of the Witwatersrand, Tau noted, politically correctly, that the key "spatial policy remains", such as the BRT, but that the new administration has a different orientation. Therefore, the "implementation mechanisms are not the same".[138]

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[130] Moteane, email correspondence, 29 June 2018.
[131] Ibid.
[132] Ibid.
[133] Ibid.
[134] M. Moteane, *Senior Specialist: City Transformation & Spatial Planning, City of Johannesburg*, email correspondence, 2 July 2018.
[135] Moteane, email correspondence, 29 June 2018.
[136] Moteane, email correspondence, 2 July 2018.
[137] Moteane, email correspondence, 29 June 2018.
[138] Wits School of Architecture & Planning, "Cllr Parks Tau".

3.3 Global experiences of transport development

It has thus become clear that there is less attention and support for the TOD Corridors, while the current administration has also limited the budget allocated and has different focus areas. However, research done by the South African Research Chair in Spatial Analysis & City Planning (SA&CP) before the administrative change demonstrates that "transit corridors" can be an effective approach in "restructuring the spatiality of the [c]ity of Johannesburg and dealing with some of the most intractable urban problems".[139]

Before the launch of the CoF, the City had looked at corridor approaches used by several other cities around the world since the end of the 20th century. These cities wanted to reshape their geography to counter different forms of exclusion, "as well as [to counter] increasing traffic congestion and environmental concerns borne from urban sprawl".[140] By means of study tours, South African officials, planners and various stakeholders have observed and learned about the BRT corridors in cities such as Bogotá, Colombia.[141]

Although the outcomes of the TOD and corridor approaches vary across different cities, there are similarities in the effects of transport developments.[142] First of all, according to Nasri and Zhang, living near transport facilities creates opportunities to be connected to the entire transport network and thus to "job centres, educational opportunities, and cultural facilities".[143] Similarly, transport networks are important as people are dependent on access to social and economic opportunities by means of transport. Transport development is an important mechanism for increasing access to economic opportunities, especially for marginalised people in society who have previously been disadvantaged in terms of transport.[144] Secondly, TOD has become more popular with city planners and governments seeking to increase the use of public transport and at the same time limit the use of private cars in the city as it has a positive effect on the environment, energy consumption and traffic safety.[145] Thirdly, transport developments and investments that reduce marginal costs and

[139] S. Croese, "International Case Studies of Transit-Oriented Development-Corridor Implementation," Report 3, *Spatial Transformation through Transit-Oriented Development in Johannesburg Research Report Series*, South African Research Chair in Spatial Analysis and City Planning (Johannesburg: University of the Witwatersrand, 2016): IV.
[140] Rubin and Appelbaum, "Spatial Transformation," 2.
[141] Wood, "Learning", 2661; A. Wood, "Moving Policy: Global and Local Characters Circulating Bus Rapid Transit Through South African Cities," *Urban Geography* 35 no. 8 (2014): 1245.
[142] Ibid, 2.
[143] A. Nasri and L. Zhang, "The Analysis of Transit-Oriented Development (TOD) in Washington, D.C. and Baltimore Metropolitan Areas," *Transport Policy* 32 (2014): 172.
[144] ECMT*, Assessing the Benefits of Transport*, (Paris: OECD Publication Services, 2001), 13-14.
[145] Nasri and Zhang, "The Analysis," 172; ECMT, *Assessing the Benefits of Transport*, 13. Research on well-established TOD nodes has shown an increase in the use of public transport. Mixed-use development is

time will in turn lead to lower commuting prices, shorter trips and increased use of the specific form of transport.[146] Fourthly, as these transport developments may increase access to employment opportunities, they may result in a rise in income and consumption.[147] Fifthly and finally, as public transport can structure "patterns of accessibility and land value", it plays an important role in "attracting particular types of development and in shaping urban growth".[148]

However, there are also arguments against formal new transport networks. The "benefits of flexibility and demand-responsiveness" of the informal transport networks could disappear as a result of these new networks, and this will be at the expense of the poor's inclusion in the new network.[149] Venter explains that travel distance, travel time, affordability and distance to the transport system are important aspects to take into account when considering accessibility for the urban poor.[150] He describes that a combination of a new BRT network supplemented by taxis (minibuses) for feeder services, with progressive fares set by the public authority, will have a positive effect on accessibility for the urban poor. However, he argues that this will only be really effective if TOD is realised, such as proposed within the TOD Corridors.[151]

Likewise, Todes, for example, argues that it is important to link "strategic spatial planning" and transport planning.[152] The South African White Paper on National Public Transport (1996) emphasises the need to integrate land use policies and public transport as they are "mutually dependent": one of them alone will not bring about "spatial restructuring".[153] Since the end of apartheid, the lack of this cooperation has resulted in "highly inefficient and unequal spatial landscapes".[154]

3.4 Rea Vaya in Johannesburg

Although the CoF, now called the TOD Corridors, have increasingly lost attention within Johannesburg's political landscape, various parts of the Rea Vaya BRT network have been

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therefore an important aspect for increasing the number of BRT commuters. See: Nasri and Zhang, "The Analysis," 172.

[146] ECMT, *Assessing the Benefits of Transport*, 12.

[147] Ibid, 13.

[148] A. Todes, "New Directions in Spatial Planning? Linking Strategic Spatial Planning and Infrastructure Development," *Journal of Planning Education and Research* 32 no. 4 (2012): 401-402.

[149] Venter, "Assessing the potential," 442.

[150] Ibid," 442.

[151] Ibid," 448-449.

[152] Todes, "New Directions," 400.

[153] Bickford, Introduction, 2-5.

[154] Ibid, 5.

developed since 2009.[155] The idea for the Rea Vaya was established as early as 2006 and was seen as fundamental "to the idea of linking spatial planning to infrastructure".[156] However, the implementation process has been slowed down by conflicting interests of the CoJ, "property owners and ratepayer associations in some of the upmarket areas on one hand and by some taxi associations on the other".[157] These first organisations, especially in the northern part of Johannesburg around the Louis Botha Corridor, opposed the proposed BRT route as they argued that the planned route would "require the destruction of trees or will negatively affect the character of the area".[158] This resulted in an altered route for this corridor. Likewise, the minibus taxis objected to the BRT. Taxis account for the largest share of all public transport rides in Johannesburg and "are well adapted to sprawling South African cities".[159] As the associations did not want to lose their routes and jobs, the City had extensive discussions with the taxi industry about its role in the new system. Hence, the CoJ suggested that the taxi operators should be stakeholders in Rea Vaya. This would "replace jobs and incomes lost through the displacement of taxis on key routes".[160] The 2007 study tour to Bogotá, which included representatives of taxi and bus associations, convinced some of them that it would be more efficient to work together to "be better able to negotiate with the [C]ity for their share of the BRT" and played a decisive role in some associations' decision to participate.[161]

Driven by the need to have a working BRT system between Soweto's soccer stadiums, the city centre and the Ellis Park stadium in Doornfontein in the east of Johannesburg for the Wold Cup of 2010, the City had constructed the first Rea Vaya bus lanes by 2009.[162] A commuter on the bus therefore commented: "Rea Vaya wouldn't be here, if it wasn't for the World Cup".[163] These first Rea Vaya lanes have been integrated into the development corridors.[164]

Rea Vaya's first two construction phases have now been completed, while the construction of the last phase to the north of Johannesburg continues to be held up by

[155] "Construction," *Rea* Vaya (website), accessed 20 June 2018, http://www.reavaya.org.za/construction-149.
[156] Todes, New Directions," 408.
[157] Ibid.
[158] Ibid.
[159] Ibid.
[160] Ibid.
[161] Ibid; Wood, "Learning," 2662.
[162] Todes, "New Directions," 408. The World Cup of 2010 was also important for other infrastructural projects, including the international airport and the Gautrain. See: Speech by Finance Minister P. Gordhan, "South Africa's Infrastructure and Legacy After the 2010 FIFA World Cup and What It Means for an Emerging Economy," (22 July 2010), http://www.treasury.gov.za/comm_media/speeches/2010/2010072201.pdf.
[163] Field notes (8 March 2018).
[164] Ballard, Dittgen, Harrison and Todes, "Megaprojects," 120.

opposing parties. Phase 1A consists of the trunk routes described above, two feeder routes which bring passengers from Protea Glen in Soweto and Eldorado Park to the main routes, and an "inner city circular route [which] travels around the CBD, from Hillbrow and Braamfontein".[165] In 2014, phase 1B added "routes through Cresta, Windsor West, Parktown, Yeoville, and to (…) the University of Johannesburg [in] Soweto", to the Rea Vaya network.[166] This route connects people to "public health care centres" and various "educational institutions".[167] It also added several feeder routes to the routes in places such as Soweto and to Florida. The last phase, phase 1C, concerns the routes in the Louis Botha TOD corridor. This will go from Parktown to Alexandra and from Alexandra to Sandton, "with complementary services between the CBD and Ivory Park; and from the CBD to Sunninghill", which are northeast and north of Sandton.[168]

In September 2017, Mashaba and representatives of the affected taxi operators and other bus companies in Sandton, Alexandra and the CBD signed an agreement that "sets out the rules and processes to guide the negotiating process including the negotiation structure, agenda, code of conduct of the parties and dispute resolution" for the expansion of Rea Vaya's network.[169] Several bus stations, a bridge for the BRT and a pedestrian bridge have been constructed, and the BRT was supposed to be running from October 2018 onwards.[170] Although October 2018 was after my fieldwork period, I heard via email that "Although there is no official statement, (…) the development had to stop due to taxi protests about the route".[171] In other words, the BRT is still not running to northern Johannesburg.

Nevertheless, the BRT development in Johannesburg adds to the debate on the effects of transport development. Hence, this thesis sheds light on the effects that the policies and practices of the BRT in the TOD Corridors have on commuters.

In summary, the CoF initiative of the CoJ, led by mayor Parks Tau, attempted to restructure Johannesburg's urban fabric to counter spatial injustices. However, due to such things as a

[165] "Construction," *Rea Vaya* (website).
[166] Ibid.
[167] Ibid.
[168] Ibid. For an overview of all the routes, see: "The Routes," *Rea Vaya* (website), accessed 20 July 2018, https://www.reavaya.org.za/consumer-information/the-routes.
[169] "Executive Mayor Signed a Negotiation Framework Agreement With Mini Bus Taxi Industry and Bus Companies Signalling Ongoing Partnership," *Rea Vaya* (website), 29 August 2017, accessed 29 July 2018, http://reavaya.org.za/news-archive/march-2015/345-news/september-2017/1378-executive-mayor-signed-a-negotiation-framework-agreement-with-mini-bus-taxi-industry-and-bus-companies-signalling-ongoing-partnership.
[170] "Executive Mayor Signed a Negotiation Framework," *Rea Vaya* (website).
[171] M. Suleman, *Lecturer - Transportation Planning (Wits),* email correspondence, 22 November 2018.

change in Johannesburg's political administration resulting in a loss of support, and the challenges in corridor implementation, the current strategy of the City has become less clear. Nevertheless, the CoF, now called the TOD Corridors, are part of the priority areas of the City and have been incorporated into the SDF 2040. Although slowed down, various parts of the transport corridors (the Rea Vaya BRT system) are still going to be constructed. Transport development in other major cities around the world has shown the possible effects of transport development, such as improved access to different facilities, and a decrease in traffic jams and commuting prices. The next chapter will elaborate on how the effects of transport development have an impact on justice for commuters.

4. Transport, social and spatial justice for Johannesburg

The BRT is a "major improvement in transportation"[172]

The Rea Vaya BRT system in Johannesburg is intended to enhance the integration of the city and to ease people's access to different parts of the city, and thus to various social and economic facilities, so as to counter the injustices of the city's segregated and unconnected spatial planning. In order to be able to reflect on the policies and practices of the BRT, this chapter will first outline what is meant by the concept of justice, and will then attempt to distinguish and show the relationship between social and spatial justice. Secondly, it will explain the link between transport and social and spatial justice so as to be able to look at the intentions and outcomes of the BRT network in Johannesburg in the analysis of this thesis. Lastly, the chapter will explicate how using transit systems can, in theory, facilitate people's access to and shaping of the city by outlining the concept of the 'right to the city'.

4.1 Justice: social and spatial?

The concept of justice is highly debated and there is more than one definition of justice.[173] The Cambridge Dictionary describes justice as "fairness in the way people are dealt with".[174] Likewise, Smith mentions that the "notion of justice invokes equity or fairness, with persons treated as they deserve to be: advantage bestowed by some measure of entitlement and penalty according to the magnitude of the offence".[175] Subsequently, there are three broad types of justice enforcement. Firstly, "retributive justice", which is concerned with "punishments dealt out to those deemed to have behaved unjustly according to the law".[176] Secondly, "restorative justice", which focuses on the "compensations given to victims" of injustices.[177] And, thirdly, "distributive justice", which addresses "systemic, group-level, or spatial[ly]" unequal outcomes resulting from the distributions of goods and services.[178] Social

[172] Field notes (22 February 2018).
[173] "Justice," *Oxford Reference* (website), accessed 10 July 2018, http://www.oxfordreference.com/view/10.1093/acref/9780199599868.001.0001/acref-9780199599868-e-997.
[174] "Justice," Cambridge Dictionary (website), accessed 10 July 2018, https://dictionary.cambridge.org/dictionary/english/justice.; P. Marcuse, "Justice," in *The Oxford Handbook of Urban Planning*, ed. R. Crane and R. Weber (Oxford: Oxford University Press: 2012), 3.
[175] D. M. Smith, "On the (im)possibility of Social Justice in South Africa," *Transformation: Critical Perspectives on Southern Africa* 58 (2005): 45.
[176] "Justice," *Oxford Reference* (website).
[177] Ibid.
[178] Ibid; Marcuse, "Justice," 5.

justice is mostly concerned with this last form of justice: "the distributional outcomes from the fairness of the process involved".[179] Beyazit describes social justice as the "just distribution of what is owned, gained and lost by the members of a society".[180] It thus looks at the impact that distributions of goods and services have on people.[181]

Furthermore, justice depends on "actual human experience" and "the historical legacy of specific forms of discrimination".[182] Accordingly, it is important to contextualize events.[183] In the case of Johannesburg, for example, the effects of apartheid's segregation and certain current developments have led to new forms of unevenness, thus resulting in present-day Johannesburg being seen as a "city of extremes", with underprivileged areas lacking adequate goods and services.[184] The current experiences of people in these areas, resulting from the legacy of discrimination, show the unjust outcomes in these places.

Social scientists have varying ideas on how social and spatial justice come into being and how corresponding injustices should be countered. Marcuse, for instance, argues that economic, social and political processes are the main causes of injustices and can be increased by and are related to spatial injustices.[185] Hence there should be "spatial remedies", but these will not suffice to counter all injustices as the latter are dependent on changing embedded "social, political and economic conditions" within society.[186] Marcuse thus argues that processes, such as the capitalist expansion of the city, are social, and their outcomes have a spatial dimension.[187]

Soja, on the other hand, explicitly argues for the 'spatiality' in justice as a critical form of looking at justice.[188] He explains that the spatial and the social constantly shape each other

[179] Smith, "On the (im)possibility," 45.
[180] E. Beyazit, "Evaluating Social Justice in Transport: Lessons to Be Learned from the Capabilities Approach," *Transport Reviews* 31 no. 1 (2011): 117.
[181] "Spatial Justice," *Oxford Reference* (website), accessed 10 July 2018, http://www.oxfordreference.com/view/10.1093/acref/9780199599868.001.0001/acref-9780199599868-e-1773.
[182] Smith, "On the (im)possibility," 49.
[183] Marcuse, "Justice," 6; D. Harvey, "Debates and Developments: The Right to the City," *International Journal of Urban and regional research* 27, no. 4 (2003): 940.
[184] Murray, *City of Extremes*, xv.
[185] K. Iveson, "Social or Spatial Justice? Marcuse and Soja on the Right to the City," *City* 15, no. 2 (2011): 252.
[186] Iveson, "Social or Spatial Justice," 252.
[187] Ibid, 254.
[188] I refer explicitly to Marcuse and Soja in this chapter as they clearly have different views on the 'spatiality' of justice. Although they are both Western scholars, both have been referred to in, for example, J. Eliastam, "Interrupting Separateness, Disrupting Comfort: An Autoethnographic Account of Lived Religion, *Ubuntu* and Spatial Justice," *Theological Studies* 72 no. 1 (2016).

and that the spatial is not a by-product of other injustices.[189] He elaborates that "spatial justice is not an alternative to social justice, but a formative aspect of it – that is, social justice or injustice is expressed in specific geographies, while at the same time it is itself shaped by the geographies in which it is embedded".[190] According to Soja, therefore, spatial justice should be seen as a product and a process.[191] As Soja explains, "distributional inequality" is "the most basic and obvious expression of spatial injustice … ranging from such vital public services as education, mass transit, police and crime prevention, to more privatized provisioning of adequate food, housing, and employment".[192] Spatial justice thus focuses on the unequal outcomes of the "distribution of resources and rights" between different spaces, and subsequently "seeks a fairer redistribution".[193]

Although both social and spatial justice are concerned with the impact on the public in general rather than on the individual, the discussion on what spatial justice exactly concerns, and whether spatial justice is in itself a separate form of justice, continues. Additionally, the relationship and interaction between justice, space and social processes and a final definition of different kinds of justice remain debatable.[194]

To understand the reasons behind policies and to evaluate their outcomes, it is necessary to see how these are shaped by the striving for a just city.[195] The analysis of this thesis will focus on the policies and practices of the BRT within the context of Johannesburg and hence examine the ways in which the City hopes to counter the injustices within the city.

4.2 Linking transport and justice

The relationship between transport and social justice has become more visible since the 1990s, and has received increasing attention from governments and academics.[196] While research on transport and justice first focussed mainly on economic cost-benefit analyses, other social aspects, such as "capabilities, opportunities and freedoms", appeared later on.[197] In an urbanising world, "urban land-use and transportation issues" are seen as "one of the most important equity and social justice challenges governments and public administrations

[189] Iveson, "Social or Spatial Justice," 253; G. Câmara, "Inclusive Infrastructure: Large Scale Projects and the Consequences for Urban Development and Social Justice in the City of Fortaleza," *EMU Thesis* (2014): 23.
[190] Soja, *My Los Angeles,* 219-220.
[191] Iveson, "Social or Spatial Justice," 253; Câmara, "Inclusive Infrastructure," 23.
[192] T. P. Chapman, "Spatial Justice and the Western Areas of Johannesburg," *African Studies* 74, no. 1 (2015): 90.
[193] "Spatial Justice," *Oxford Reference* (website).
[194] Eliastam, "Interrupting Separateness," 4; Marcuse, "Justice," 3.
[195] Harvey, "Debates and Developments," 940; Câmara, "Inclusive Infrastructure," 23.
[196] Beyazit, "Evaluating Social Justice in Transport," 118.
[197] Ibid.

face".[198] Resources are clearly scarce and when used by one person cannot be used by another. Likewise, "urban mobility, (…) the capacity to move from one point to another in large cities" is seen as a social justice challenge.[199] The "transit-dependent" urban poor often live far away from job opportunities, such as on the outskirts of Johannesburg.[200] They lack private cars, and historical patterns of discrimination in transport facilities and urban planning limit their mobility.[201]

Beyazit states that "in [a] transport context, social justice refers to the fairness in the physical distribution of goods, accessibility for people, affordability of all types of services and distribution of other gains (such as increases in land and property prices)".[202] The distributional effects on people in different geographical areas thus depend on the fairness of the distribution process. In turn, this fairness is based on the needs of the "rich and the poor" in the different geographies.[203]

Soja elaborates on this by explaining how equitable investments in mass public transport "enhanced the search for spatial [and social] justice" in Los Angeles by referring to a case "known as the Bus Riders Decision" of 1996.[204] The "larger pattern of discriminatory investment, [namely the large investments in road provisions compared to the lack of the construction of public transport facilities,] had shaped the geography and built environment of Los Angeles".[205] This resulted in an "unjust (…) transit geography", which benefitted people who can afford private cars and obstructed those dependent on public transport "for their basic needs".[206] The transport authority in charge had to "give its highest budget priority to improving the quality of bus service and guaranteeing equitable access to all forms of public mass transit" combat the historical injustices.[207] Moreover, it had to secure bus affordability and safety and "provide special services to facilitate access to jobs, education, and health

[198] J. Mercier, "Equity, Social Justice, and Sustainable Urban Transportation in the Twenty-First Century," *Administrative Theory & Praxis* 31, no. 2 (2009): 145.
[199] Mercier, "*Equity*," 146.
[200] Soja, *My Los Angeles*, 229.
[201] Ibid, 230-231.
[202] Beyazit, "Evaluating Social Justice in Transport," 117.
[203] Soja, *My Los Angeles*, 220, 232.
[204] Ibid, 227. I used this American case study as an example of the effects of transport development because this corresponds with the CoJ's plans for developing public transport.
[205] Ibid, 229.
[206] Ibid, 226, 229.
[207] Ibid, 226.

centers".[208] This is in line with what Harvey stated in 1973, i.e. that transport is a necessity for "reaching other services and […] the job market".[209]

The eventual decision was based on the "geography of transit need", namely the area where people dependent on mass transit lived, and was especially directed at countering the historical discrimination of underserviced transit areas.[210] The consequent effects of the fairness in the distribution of the resources spent on transit facilities was thus a result of looking at the lived experience of people and directed at the needs of the people most dependent on public transport.[211]

The aim of achieving a fair distribution of resources and rights, such as in the layout of a transit network covering various areas of Johannesburg, and thus allowing access to various social and economic opportunities, as examined in this thesis, is to enhance spatial and social justice within the city.

4.3 The 'right to the city' (RTC)

The concept of the RTC is strongly related to social and spatial justice. Marcuse and Soja state that striving for the RTC, and thus using and producing space, is not "only a matter of re-ordering urban space, it is also a process of attacking the wider processes and relations which generate forms of injustices in cities".[212]

The RTC, first described by Henri Lefebvre, a Marxist sociologist, in 1968, is a concept that describes the right, or rather "cry and a demand", of all urban citizens to engage in shaping or "transforming" the urban space.[213] This implies that all urban people, including the marginalised, have the right to participate in this. This concept "refers to the idea that justice is embedded in social and spatial processes, and accordingly cities are spaces of inequality and resistance" shaped by these processes.[214] Likewise, as explained by scholars such as Philippopoulous-Mihalopoulos, space, and thus cities, is a "product and producer of [social] relations".[215] Subsequently, conflict "over which urban residents have legitimate

[208] Soja, *My Los Angeles*, 227.
[209] Beyazit, Evaluating social justice in transport," 118.
[210] Soja, *My Los Angeles*, 230.
[211] Ibid, 230-231.
[212] Iveson, "Social or Spatial Justice," 251.
[213] E. Lyytinen, "Congolese Refugees' 'Right to the City' and Urban (in)Security in Kampala, Uganda," *Journal of Eastern African Studies* 9, no. 4 (2015): 595; N. C. Gibson, *Fanonian Practices in South Africa: From Steve Biko to Abahlali BaseMjondolo* (Scottsville: University of KwaZulu-Natal Press, 2011): Xvi.
[214] Lyytinen, "Congolese Refugees," 593, 595.
[215] A. Philippopoulous-Mihalopoulos, *Spatial Justice: Body, Lawscape, Atmosphere* (Abingdon; New York: Routledge, Taylor & Francis Group, 2015), 39.

access to and rights over specific places and available resources" lies at the heart of "what it means to belong to the city".[216]

According to Lefebvre, the RTC refers, among other things, to two elements: "the right to appropriate urban space" and "the right to participate in the spatial production of that city".[217] The first point refers to the right that every inhabitant should be able to access and shape the urban space, implying the ability to make use of the urban space in their daily life.[218] The aim of this idea is to counter segregation within the city and therefore refers to the "freedom to physically access, occupy and use urban space".[219] Likewise, Purcell describes this as a way to "reclaim and reconfigure urban space (…) and to maximise use value for residents rather than to maximise exchange value for capital".[220] The second point implies that all urban citizens have the right to participate in "decision-making over the production of urban space at all levels".[221] It thus aims to counter the power relations of the status quo which drive the urban development in capitalist societies. This also implies that urban citizens have the right to use various "methods of resistance to counteract exclusion".[222] Often, due to a "lack of institutional supports", protests demanding the RTC are an example of these actions.[223] However, these actions are much disapproved of by the authorities.[224]

The RTC is often linked to the concept of citizenship, which is tied to a "mechanism of social inclusion: having a steady income, decent housing and access to basic urban services".[225] For that reason, the RTC is frequently touched upon in the context of homelessness and the right to housing for the marginalised and urban poor, who have less or no access to these forms of "physical and social infrastructure of the city" due to "a failure of the mechanisms of social integration to incorporate [them] into the mainstream of urban life".[226] However, as the focus of this thesis is the use of a new public transport system, this

[216] Murray, *Taming the Disorderly City*, 26.
[217] Lyytinen, "Congolese Refugees," 595.
[218] Harvey, "Debates and Developments," 941.
[219] Lyytinen, "Congolese Refugees," 595.
[220] A. Vasudevan, "The Autonomous City: Towards a Critical Geography of Occupation," *Progress in Human Geography* 39, no. 2 (2015): 320.
[221] Lyytinen, "Congolese Refugees," 595.
[222] Ibid, 596.
[223] Murray, *Taming the Disorderly City*, 22.
[224] Ibid, 23. The explanation of the participation in decision-making on the production of urban space is rather short as it is not the focus of this thesis. The criticism the CoJ received for its top-down approach and the various communities' lack of participation in the initiative do however touch upon this. See: Rubin and Appelbaum, "Spatial Transformation," V-VI.
[225] Ibid, 18. For an elaborate explanation of the relationship between the RTC and citizenship, see: Murray, *Taming the Disorderly City,* chapter 1.
[226] Ibid. See, for example, M. Huchzermeyer, "Inaugural Lecture: Humanism, Creativity and Rights: Invoking Henri Lefebvre's Right to the City in the Tension Presented by Informal Settlements in South Africa Today,"

chapter aims to link the first point of the RTC mentioned (i.e. the collective right to access and use the urban space) to the use of the BRT.

In an unjust situation, taking the BRT as a "spatial practice" shows that the RTC is a right that can be acquired or "claimed through social practices".[227] This is because the action of taking the bus gives people the opportunity to access and use different parts of the city.[228] As such, taking the BRT can be seen as a means or 'remedy' to counter the spatial and social injustices of the past. It is a way of providing people with access to different spaces in the city and the social activities present in those spaces. In addition, taking the bus is also a way of reforming the city. Instead of "reproducing" the spatial and social patterns set during times of segregation, a new transport network is a way of reforming the produced city.[229] Such a network attempts to look at the needs of people instead of reinforcing the power relations as it is an system that connect the different areas so that people can exercise the right to access, use and produce different spaces in the city.[230]

In summary and conclusion, social and spatial justice are concerned with the outcomes of the fair distribution of resources and rights between groups and spaces respectively. The fairness is subsequently based on the needs and lived experience of the people, taking into account the legacy of historical discriminatory practices. If investments in public transport are equitably distributed, they can enhance social and spatial justice within unjust geographies in the city. Using the transport network then enables people to access other areas in the city and make use of the space and opportunities they offer, which is in essence described by the RTC. Additionally, instead of reproducing the spatial and social structures of segregation, the transport facility connects different areas in the city and is thus a means of attacking the wider processes and relationships which generate injustices. The concepts of social justice, spatial justice and the RTC therefore provide a lens to see how the policies and practices of the BRT affect commuters' social and spatial justice in Johannesburg.

Transformation: Critical Perspectives on Southern Africa No. 85 (2014); Murray, *Taming the Disorderly City*, chapter 1.

[227] E. S. Nkooe, "Contested Public Space: A Lefebvrian Analysis of Mary Fitzgerald Square," *University of the Witwatersrand, Master Thesis, School of Geography, Archaeology and Environmental Studies* (2015): 46.

[228] Nkooe, "Contested Public Space,"46.

[229] Gibson, *Fanonian Practices,* 25.

[230] Ibid.

5. Methodology

Courage is not the absence of fear, but the triumph over it[231]

This chapter will outline and reflect on the research design I used to answer the research question of this thesis. It will first elaborate on how I approached the research by describing the different research methods I used during my fieldwork to obtain the stories of different commuters using Rea Vaya, as well as how I approached the policy documents on the BRT. Subsequently, I will outline how I conducted my comparative analysis of the policies of the BRT and the data obtained from the commuters. In the last sections I will touch upon the results of the study and reflect on how I approached the research and my own position within it.

5.1 Approaching the research

As the previous chapters have shown, Johannesburg's segregated and unconnected spatial fabric, as well as discriminatory investments in transportation, have developed over time and resulted in the city's unjust geography. The CoJ wants to change this by means of the BRT. To find out whether the BRT impacts commuters in policy *and* practice, this thesis will answer the following question:

"In what ways do the policies and practices of the BRT in the Empire Perth TOD corridor in Johannesburg impact commuters in terms of social and spatial justice?"

In order to answer the research question I have made use of a comparative analysis that looks into the policies and practices of Johannesburg's BRT by means of a case study. First I will describe the research methods I used to gain insights into the practices of the BRT. Then I will elaborate on how I studied the City's policies with regard to the BRT and how I made a comparative analysis of the policies and practices.

Looking into practices

To gain insights into the experiences of Rea Vaya commuters I made use of a qualitative research approach. I chose this "research strategy" because I wanted to gain insights into

[231] Following Nelson Mandela, who said "I learned that courage was not the absence of fear, but the triumph over it. The brave man is not he who does not feel afraid, but he who conquers that fear".

people's personal experiences, which, as outlined in the previous chapter, are constructed by social and spatial processes and are hence not quantitatively measurable.[232] To understand people's experiences I conducted ethnographic fieldwork by means of interviews and observations.[233] My interviews consisted of open-ended and semi-structured questions.[234] The questions, based on information I had read about Rea Vaya beforehand, provided the structure of the interview. My respondents could answer the questions by recalling their personal experiences.[235] Although I had written my questions down in a particular order to guide the interview, respondents often elaborated on an answer and at the same time touched upon another question, which led to a natural flow of the interview.[236] Using the same open-ended questions for each interview enabled me to compare the answers of my respondents in my analysis, while also leaving enough space for comments or questions respondents wanted to share with me during the interview.[237]

What was quite significant about my research was that I took the BRT myself in order to interview people on the bus. As described in this thesis, taking the bus can have an impact on people's social and spatial justice. Instead, therefore, of waiting until people got off the 'remedy', I asked people about their experiences while I was using the bus. The bus was thus the setting for my interviews and observations.

Conducting the interviews sounded easy: Get on the bus, interview someone and get off the bus. Then get on another bus to interview someone else and get off once I am back at the starting station. In practice, however, this was more difficult and there were multiple things I had to think of before I could really start doing my interviews. For example, what bus line should I take?[238] After some try-out rides on two different bus routes and some good conversations with Muhammed I decided, for multiple reasons, to select the T3 bus route as my case study.[239] Firstly, I picked this route because I wanted to focus on a bus route that was a "trunk route" (T), which is a main route "from one destination to another", rather than a

[232] S. Viljoen, "Doing Research in Black Communities," In *Truth Be in the Field: Social Science Research in Southern Africa*, ed. P. Hugo (Pretoria: University of South Africa, 1990), 288.
[233] I conducted my fieldwork in Johannesburg from the beginning of January until the end of March 2018.
[234] See Appendix 1 for the standard interview questions.
[235] M. J. McIntosh and J. M. Morse, "Situating and Constructing Diversity in Semi-Structured Interviews," *Global Qualitative Nursing Research* 13, Vol 2. (August 2015): 1.
[236] S. Devereux and J. Hoddinott, "Issues in Data Collection," in *Fieldwork in Developing Countries,* ed. S. Devereux and J. Hoddinott (Boulder Colorado: Lynne Rienner Publishers, 1993), 30.
[237] McIntosh and Morse, "Situating and Constructing," 1.
[238] While writing this chapter I found out that Rea Vaya had uploaded the route map that is present at the stations onto its website; see: "Rea Vaya Route Map," *Rea Vaya* (website), accessed 24 July 2018, http://www.reavaya.co.za/images/stories/maps/route_map_all_latest1.pdf.
[239] Muhammed Suleman was a colleague during my internship at CUBES.

"complementary route" (C), which adds an "extended, circular route[s] to the main route[s]", or one of the "Feeder routes" (F), "which are routes from outer suburbs that join the trunk route at a key station".[240] The T routes connect Soweto to the centre of Johannesburg and beyond. Secondly, I choose the T3, instead of the T1 or T2, because this bus route goes all the way from Thokoza Park in Soweto, via the neighbourhoods on the northwest side of central Johannesburg, the University of Johannesburg (UJ), South African Broadcasting Corporation (SABC) Media Park, Wits and Park Station to Library Gardens in the CBD. The T3 thus passes various different areas, including residential areas, hospitals and a variety of educational institutions and job centres on its way.[241]

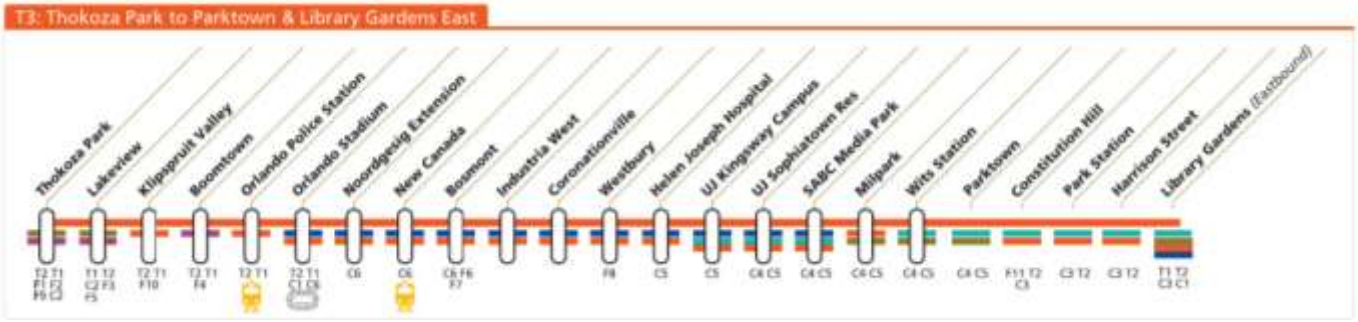

Figure 5: The T3 bus route[242]

While the T1 and T2 also depart from Thokoza Park and pass the centre of Johannesburg, both these routes pass the south side of the mining belt via the Soweto Highway and therefore pass through more industrial than residential areas, resulting in fewer people getting on the bus and going to specific facilities along the way.[243] Thirdly, as I was residing on the Wits Braamfontein campus it was easiest for me to take a T3 as "Wits Station" is on the T3 route. In this way I did not have to commute by other modes of transport or use other Rea Vaya buses to reach my hop-on station for the T3.

Furthermore, I focused on the whole T3 route and thus covered both the Empire Perth TOD corridor and part of Soweto. I did this because the SA&CP report showed that only a small percentage of commuters in Westbury, Slovo Park and Coronationville, which are areas

[240] "The Routes," *Rea Vaya* (website), accessed 16 July, 2018, http://www.reavaya.org.za/consumer-information/the-routes.
[241] "T3 Thokoza Park to Parktown & Library Gardens East," *Rea Vaya* (website), May 2012, accessed 16 July 2018, http://www.reavaya.org.za/images/stories/2012/may/thokoza_lib_large.jpg.
[242] "T3 Thokoza Park to Parktown & Library Gardens East," *Rea Vaya* (website).
[243] "T1 Thokoza Park to Ellis Park East," *Rea Vaya* (website), accessed 16 July 2018, http://www.reavaya.org.za/routes/images/t1_thokoza_to_ellisparkeast.gif; 'T2 Thokoza Park to Braamfontein via Soweto Highway," *Rea Vaya* (website), May 2012, accessed 16 July 2018, http://www.reavaya.org.za/images/stories/2012/may/t1_cbd_large.jpg.

that are part of the Empire Perth TOD corridor, knew about or used the BRT.[244] Additionally, I noticed that most people on the bus came from and went back to stations in between Thokoza Park and Noordgesig Extension, which are in Soweto. Therefore, it was logical to focus on the entire route of the T3 instead of limiting the research to the stations which are part of the Empire Perth TOD corridor.

Once I decided which bus line I wanted to focus on and got a Rea Vaya smartcard, I wanted to make a test ride to see how it would be to interview someone.[245] I had prepared my questions, which I had written down in my little notebook. I brought my voice recorder in case I felt comfortable enough to ask someone whether it would be fine with him or her for me to use it. I left Wits campus and walked to Wits Station on Empire Road. The station is in the middle of the road: two lanes of cars, a Rea Vaya bus lane, the Rea Vaya station and then, once again, a Rea Vaya bus lane and two lanes for cars.

Figure 6: Rea Vaya station Wits Station[246]

[244] Rubin and Appelbaum, "Spatial Transformation," 46.
[245] The Rea Vaya smartcard (a plastic card like a credit card) can be used to load money to pay for travel. You can pay for all rides by 'tapping in' and 'tapping out' with this card. This is significantly cheaper than using single paper tickets, which cost 15 Rand each. See Appendix 2 for an example.
[246] Own photo, 15 March 2018.

At the station I tapped in with my blue Rea Vaya smartcard and walked to the place where some other people were waiting. I was nervous, what if no one wanted to talk with me? A lady entered the station and stood next to me. I tried starting a conversation. As there is no screen with time schedules for the buses at the stations I had no idea when the next bus would come. Once the bus was there I entered the bus and sat down next to her. I asked whether it was OK to ask her some questions about her experience for my research and ensured her it would be anonymous and she could stop at any time.[247] I took some quick notes while she answered my questions. The notes I took during all my interviews were often single words or short interpretations of answers and did not consist of full sentences. When I got back to Wits, I typed out my notes and other comments I recalled being made during the interview.

Once the interview was over, we still had half of the ride to go to Thokoza Park. We talked about things such as Soweto, where she was from, how she liked the bus and more. I was glad to see she was open to answering my questions for my research, which were not too personal, and happy to chit-chat the rest of the ride.[248] The small talk after the interviews was important for my sense of confidence because it gave the commuters an opportunity to ask me more about the research and I could see how they perceived it. Moreover, although the interview was quite informal and had officially ended, this small talk gave an extra opportunity to gain insights in participants' lives and their opinions about and experience with Rea Vaya. This was a way to contextualise the answers the respondent had just given.

At Thokoza the woman explained to me where to wait for my T3 bus back to Johannesburg. The left side of the crush barriers that were placed in the middle of one side of the station was for T1 commuters, and the right side for people waiting for the T3. After some more rides and interviews I could imagine how busy it was at Thokoza Park during morning rush hours and understood why they used fences to try to organise it. Once I got back to campus I was exhausted, but satisfied. It was a good try-out. The ride made me realise how important it was how I approached people, how I was perceived by people, how I phrased my questions and at what time I had to take the bus. As I was the person wanting to start a conversation, I was the one who had to break the ice and make people feel comfortable to talk to me. Taking the bus during peak hours would mean I had to stand or the bus would just be too full to interview the person next to me. In addition, I realised the ride was too bumpy and

[247] C. Wasunna, J. Tegli and P. Ndebele, "Informed Consent in an African Context," in *Research Ethics in Africa: A Resource for Research Ethics Committees,* ed. M. Kruger, P. Ndele and L. Horn (Stellenbosch: Sun Press, 2014), 58.

[248] All interviews took 20-60 minutes during the journey. The exact length of the interview and subsequent conversation depended on the dialogue, on how busy it was on the bus and on the traffic.

the bus too loud to record anything. Although it was not very easy to take notes during the ride I noticed that, both for the respondents and for me, recording the interviews or using consent forms would not make the interviews easy. I therefore did everything orally while taking notes. I am aware this is not in line with the formal "ethical conduct of research".[249] However, this way of asking for consent was appropriate to the situation. I believe there was no other way to obtain the trust of and subsequently this information from people.

Furthermore and although the stations were very safe, I only conducted interviews on the bus and not, for various reasons, at the stations. Firstly, many people seemed shy and it was very quiet at the stations, which made it uncomfortable to do my interviews there. On the bus, the seats provided people with their own space, and the noise of the bus meant it was easier to talk to the person next to me without attracting everyone else's attention. Secondly, at the stations I did not know where someone was going or what bus he or she was going to take. On the bus, however, I knew we would take the same route and so I could ask where someone was going as a way of starting a conversation. Thirdly, at the station I did not know how long it would take for the next T3 to arrive. So even if I found someone who was also going to take the T3, I was not sure how much time I would have at the station and whether I would be able to continue my interview in the bus.

My other interviews proceeded in a similar way as my try-out. I took the T3 at Wits Station to Thokoza Park and at Thokoza I waited on the right-hand side to take the T3 – which was often the same bus and had just turned around – back to Wits. Once I sat down next to someone I often started with the common South African greeting 'Good morning, how are you?' and asked where he or she was going. I conducted all the interviews in English. I assume that this was not the first language of any of my respondents, and neither is it my first language.[250] When I felt like someone was willing to talk to me, I explained what I was doing and asked whether they would be OK for me to ask them some questions for my research. I reassured them that I would treat all information confidentially and anonymously and explained that they could withdraw at any moment.[251] One woman commented "Even if you used my name, they would never know who it was".[252] Although I did not ask about highly personal or private information, I do refer to some of my respondents' places of work and

[249] Wasunna, Tegli and Ndebele, "Informed Consent," 57.
[250] I am aware that this has impacted my research process. However, due to the fact that I do not speak any other South African language and all my respondents were able to communicate with me in English, this was our language of communication.
[251] Wasunna, Tegli and Ndebele, "Informed Consent," 58.
[252] Field notes (22 February 2018).

neighbourhoods in the city and Soweto in my thesis. Hence I have treated the obtained information responsibly in order to use the interviewees' experiences as examples and not as private cases as such. In addition, some respondents gave me their email address at the end of the interview and I will send them a version of my thesis if they want to.

As I was conducting the interviews on the bus, the bus was not only the setting for my interviews, but also for my observations. While I also paid attention to what happened at stations and on the bus during my interviews, I used the rides on which the bus was too full – because I took the bus too late – or the times I could not get into a good conversation with the person next to me as opportunities to observe what was happening around me. Being on the bus meant that I was going back and forth myself and hence could gain a grasp of who used Rea Vaya, the places where people live and commute to, how people use the transportation method and how the bus drove. Although I was not part of the group I studied, these participant observations gave me insights into people's practices.[253] These insights enabled me to contextualise the answers of my respondents in the "physical settings" in which their actions took place.[254] As such, taking part in the practices of the people I studied helped me to cross-check or 'confirm' the answers to my interview questions.[255] I could see, for example, the commuters waiting at Thokoza Park for their feeder buses to take them home and experienced myself how full the buses were later in the afternoon. This also worked the other way around. Through the observations I gained new information which I could use during the interviews. On one of the trips, for instance, we almost had a collision with a car that did not give priority to the BRT.[256] Once someone then brought up the driving style and safety of the bus, I asked whether they had ever experienced something like that on the BRT or other means of transport. I could also observe how the commuters perceived me on the bus. Most of the time I was the only white person on the bus and therefore stood out. During the interviews I often observed surprised, but positive attitudes towards me being on the bus and going to Soweto. I have taken into account that my appearance may have resulted in some of the respondents being predominantly positive about Rea Vaya. I am thus aware that my presence had an influence on the situations on the bus.

[253] P. Skalník, "On the Impossibility of Doing Fieldwork (An Anthropologist's Experience from South Africa)," in *Threefold Wisdom: Islam, the Arab World and Africa*, (s.n.) (Prague, 1993), 221.
[254] M. Angrosino and J. Rosenberg, "Observations on Observation: Continuities and Challenges," in *The Sage Handbook of Qualitative Research,* ed. N. K. Denzin and Y. S. Lincoln (Los Angeles: SAGE, 2011), 467.
[255] Devereux and Hoddinott, "Issues in Data Collection," 35.
[256] Field notes (21 February 2018).

Looking into policies

As mentioned earlier, I contacted Monyake Moteane, a Senior Specialist: City Transformation & Spatial Planning of the CoJ, and who was able to clarify the current strategy and framework of the City for me to focus on. Hence, for my analysis I used the formal documents of the CoJ, i.e. the SAF of the Empire Perth TOD corridor, as the T3 is the trunk route of this corridor, and the SDF 2040 as the overall strategy of the City. I focused on these documents because, as explained above, the bus I took connects large groups of people from Soweto, as well as "the wider western regions of Johannesburg", "with employment, education and recreational facilities situated along the corridor and in the CBD".[257] All the policy documents I used were publicly available online and Monyake Moteane gave me permission to quote his clarifications on the current policy of the City.

I concentrated on the BRT in these documents as the other planning components are related to the BRT development, but are not part of the scope of this thesis. In these documents I aimed to identify the motivations for and reasoning behind the layout of the Rea Vaya network in the context of Johannesburg. I did this in line with the impact that BRT development can have on people in the city, as described in chapter 3, and the effects that BRT development can have on people's justice, as described in chapter 4.

Doing the analysis

For my analysis, I compared my fieldwork data on commuters' experiences with the policies on the BRT. In order to do this I thematically ordered all my respondents' answers into a schedule, which corresponded with the various questions in my interviews. Afterwards, I colour-coded the different terms or explanations within the themes or "categories" to see what kind of answers came up frequently, but also which answers were deviant.[258] Subsequently, I compared the various objectives of the City with regard to the BRT with the various themes in my empirical data. One of the City's aims, for example, is to reduce the use of private cars. In this case I looked at the answers of the commuters to the category of 'previous transport'. Once I compared the two and elaborated on the similarities or differences, I looked at the ways in which policy and practice led to a more just situation by reflecting on the envisioned and actual situations through the use of the social and spatial processes described in the

[257] Johannesburg Development Agency (JDA), "Strategic Area Framework: Empire Perth Development Corridor," 22.
[258] M. Alvesson and K. Sköldberg, *Reflexive Methodology: New Vistas for Qualitative Research* (London: SAGE, 2009), 62.

previous chapter. See 5.3 for a reflection on the choices and hence interpretations in the analytical process.

5.2 Results of my research

In the end I conducted 18 interviews on the bus and did various observation rounds. My participants ranged from the ages of 18 to 58 and the group consisted of 10 women and 8 men.[259] All the participants came from areas in Soweto, and were travelling to or from Johannesburg.

Conducting interviews on the bus was an innovative way of doing my fieldwork. When I told researchers at my internship place, CUBES, about my research topic and methods, they said it was innovative and had not been done before. Moreover, using this method was most likely to result in my direct target group giving the most accurate answers about their experience as they were using the specific means of transport during the interview. Additionally, doing research into people's experience with the BRT, instead of solely conducting cost-benefit analyses or household questionnaires about the BRT and people's living area, provided new insights in its impact on commuters.

According to Andersson, "travelling" as a research method means that the study is neither about the place of departure nor the place of arrival.[260] It thus does not look at the situation in one of these places specifically, but rather at how both places and the relationship or journey between these shape people's social lives. Hence, my research is not seeking to link any "dichotomies" to certain places.[261] Instead I intend to portray in what ways taking Rea Vaya impacts people's lives by means of commuting through and giving access to the urban space.

5.3 Reflexivity of the study

Alvesson and Sköldberg describe four main levels of reflexive research that can be used to reflect on a study. These are:

1) Systematics and techniques in research procedures,
2) Clarification of the primacy of interpretation,
3) Awareness of the political-ideological character of research, and

[259] I saw several groups of schoolchildren entering the bus. However, I merely observed them, and only interviewed people aged 18 or older.
[260] J. A. Andersson, *Going Places, Staying Home: Rural-Urban Connections and the Significance of Land in Buhera District, Zimbabwe,* PhD Wageningen University (2002), 2.
[261] Andersson, *Going Places, Staying Home*, 2, 8, 10, 12.

4) Reflection in relation to the problem of representation and authority.[262]

I focus on the first and fourth levels to reflect on my research. The reason I chose to focus on the first level was because certain choices in my research approach, such as travelling along with the commuters to gain information, had an important impact on the research. Similarly, the reason I chose to focus on the fourth level was because I think it is vital to reflect on my own position within this research as this has an influence on every part of the research process.

The first point refers to the systematic way of approaching the research, including obtaining the empirical information and the "processing [of] the data".[263] My research required me to make several choices with regard to my methods, and these in turn had an influence on various aspects of the research. As described above, I chose to focus on commuters and to interview them solely on the bus and not at stations. This resulted in me interviewing the right target group, but also in a relatively small number of interviews. Furthermore, during peak hours (from 5.00 a.m. - 8.30 a.m. and after 2 p.m.) the bus was too full to conduct interviews. I therefore tried to get on the bus between 10 and 12 a.m.[264] However, this meant that I did not commute, while large groups of Rea Vaya users commute to and from work or school. The working people I interviewed from Soweto to Johannesburg were consequently often people on later shifts. My research methods thus had an influence on who was included in my research.

Likewise, I am aware that the way in which I documented my fieldwork information has an influence on the research. The short notes I took on the bus are my representations and not literal recordings of my respondents' answers and observations. Subsequently, the analysis of my field notes is a re-interpretation of these answers and observations and is in turn influenced by who I interviewed and observed.[265]

With regard to the analysis, I am aware that the selected parts of the policy documents are of course interpreted from the perspective of answering my research question. I chose to start off with the City's objectives and to compare these with the data I got from the commuters. This gave me a certain structure for approaching the fieldwork data as I could

[262] Alvesson and Sköldberg, *Reflexive Methodology*, 11.
[263] Ibid.
[264] Conducting the interviews during off-peak hours resulted in fewer people on buses and less traffic in general. This could have had an influence on people's responses about the BRT. I therefore recommend doing further research among peak-time commuters, as well as comments posted by people on Rea Vaya's Facebook page. See "Rea Vaya Bus transit" on Facebook.
[265] K. Wilson, "Thinking About the Ethics of Fieldwork," in *Fieldwork in Developing Countries,* ed. S. Devereux and J. Hoddinott (Boulder Colorado: Lynne Rienner Publishers, 1993), 181-182.

match the objectives with the commuters' answers and compare them. In this way I could interpret whether the policies were having the desired effects in practice. Approaching the analysis in this way meant I interpreted the commuters' experiences against the background of the policies' intention. Afterwards, I interpreted the policies and practices by means of the social and spatial processes that influence justice, as outlined in chapter 4. This reflection, and hence this study, is a theoretically informed analysis of these processes in policy and practice.

The last of the four levels concerns the question of being able to show 'reality,' the 'real' world out there. It is questioned whether the researcher and thus the study can show "extrinsic reality".[266] For my own research, I think this is an important point because the research on 'the world out there,' the object under study, is influenced by my own position and shaped by my interpretations. "(P)ositionality refers to the stance or positioning of the researcher in relation to the social and political context of the study – the community, the organization or the participant group."[267] Things such as my personal values, experiences, knowledge, background and relationship to the commuters have an influence on every part of the research process, and thus on the knowledge produced.[268] With regard to my stance regarding the topic of my research, it is valid to know that I am a female student from the Netherlands and that I am used (most of the time) to good and safe public transport systems, both within and between cities. For that reason, I have also never perceived any disadvantage caused by my distance to a school or a hospital, for example. However, I had been to South Africa before doing my fieldwork in Johannesburg and I believe these experiences have given me some insights into the public transport sector and great spatial inequalities in South Africa. I therefore attempted to interpret all the information in a South African context, more specifically in that of Johannesburg, while being aware of my background. Nevertheless, my position in relation to the different aspects of the research means that I in comparison with my own background in the Netherlands, have noticed certain things during my fieldwork and when conducting my analysis, but that because of that same background there will be other things that I did not see.

Furthermore, I believe the fact that I am white plays an important role in the research process in a South African context. As a white woman able to go to South Africa and doing research on a means of transport used predominantly by black people, I was aware that my

[266] Alvesson and Sköldberg, *Reflexive Methodology*, 11.
[267] "Positionality," *Sage Research Methods* (website), accessed January 4, 2019, http://methods.sagepub.com.ezproxy.leidenuniv.nl:2048/Reference/encyclopedia-of-action-research/n254.xml.
[268] Wilson, "Thinking About the Ethics of Fieldwork," 181.

appearance stood out and could have led to stereotypes or assumptions among the commuters. Some people asked, for example, where I was from and why I was on the bus. Others asked me "Are you sure you are going to Soweto?" or said halfway during my journey "Don't you have to get off here?".[269] Depending on how comfortable I felt, I explained what I was doing, or said I was visiting a friend. The relationship between me and my respondents on the bus was thus partly determined by the commuters' experience of a "stranger".[270]

Additionally, halfway during my time in Johannesburg I became so conscious of and concerned about a possible image I portrayed and the relationship between myself and others on the bus that I had difficulties with approaching people. As the bus arrived, I took a deep breath and said "courage, courage, courage" to myself. I thought of the quotation from Nelson Mandela that I had written on a post-it hanging above my desk: "I learned that courage was not the absence of fear, but the triumph over it".[271] Every time I managed to do an interview I was happy I had done it again. The interview and the chit-chat that often followed helped me to think differently about how people experienced me as a young, white, foreign, female researcher on the bus.

Overall, I believe the fact that I remained a relative outsider to the people I studied means that I will never be able to fully understand their experiences, but that my interviews and observations on the bus have given me first-hand experience and material for my analysis.

In summary, in this chapter I outlined the research approach I used to answer the research question in this thesis. I used a qualitative research approach to gain insights into the commuters' experiences and the City's objectives and motivations with regard to the BRT. Significantly, I looked into the practices of the BRT through the use of interviews and observations while being on the bus myself. Furthermore, I reflected on the choices in this research design and my own position during my fieldwork and the analytical process. In the next chapter I will compare the policies and practices I studied to see in what ways these have an impact on commuters' social and spatial justice.

[269] Field notes (9 and 21 March 2018).
[270] S. Devereux and J. Hoddinott, "The Context of Fieldwork," in *Fieldwork in Developing Countries,* ed. S. Devereux and J. Hoddinott, (Boulder Colorado: Lynne Rienner Publishers, 1993), 18.
[271] Following Nelson Mandela, who said "I learned that courage was not the absence of fear, but the triumph over it. The brave man is not he who does not feel afraid, but he who conquers that fear."

6. Using Rea Vaya: Practices challenge policies

"Rea Vaya is my plan A, taxis plan B"[272]

This analysis will compare the CoJ's intentions for the BRT in the Empire Perth TOD corridor with the practices of commuters. It will highlight the main objectives for Rea Vaya in these policy documents so as to then see this in line with the overall goal of creating a "spatially just" city.[273] Thereafter these objectives will be compared to the conversations with my respondents on the bus. Subsequently, the intentions and outcomes will be reflected on to see in what ways these impact the social and spatial justice of commuters.

6.1 A dual function

Both the SDF 2040, as the overarching "model of strategic planning" for the city, and the SAF for the Empire Perth development corridor, which elaborates on the envisioned functioning of the BRT and the goals for this corridor as a whole, start off by sketching the scene of Johannesburg's current spatial fabric.[274] They emphasise that since the end of apartheid "the majority of working class and poor citizens are still living on the fringes of the city", with restrained access to "economic opportunities", due to "costly and distant commuting".[275] The city is described as having "severe urban inefficiencies and an urban form and social profile that makes it one of the most inequitable cities in the world".[276] The TOD corridors are central to the City's approach in both documents to counter the different "urban inefficienc[ies] and inequality[ies]".[277] The CoJ aims to transform the spatial to work "towards social transformation and cohesion" so as "to create a spatially just world class African city".[278]

One of the main things repeatedly stated in the documents is that the BRT network is seen as the "backbone" of the TOD corridors.[279] The function of the BRT as the backbone is

[272] Field notes (22 February, 2018).
[273] City of Johannesburg (CoJ), "Spatial Development Framework (SDF) 2040," *Department of Development Planning* (2016), 18.
[274] CoJ, "SDF 2040," 18.
[275] Ibid, 17; Johannesburg Development Agency (JDA), "Strategic Area Framework: Empire Perth Development Corridor," 5.
[276] JDA, "Strategic Area Framework," 8.
[277] Ibid, 8.
[278] Ibid; CoJ, "SDF 2040," 18.
[279] CoJ, SDF 2040," 100; JDA, "Strategic Area Framework," 10.

twofold: “moving people and as [a] structuring element for mixed use intensification”.[280] The first point refers to the corridor as a “transport corridor” with the purpose of moving people from A to B as “corridors are fundamentally origin and destination driven”.[281] The latter point is not the focus of this analysis, but refers to the transit nodes around which mixed-use TOD and densification will be encouraged.[282]

In practice, the BRT certainly functions as a transit corridor. All the respondents described that they used it for long distances from Soweto to the centre of Johannesburg or facilities in the Empire Perth corridor and back.[283] It can thus be said that the BRT is directed at those people who need to use public transport to travel long distances to reach various amenities.

6.2 A new public transport system

The documents state that “past spatial planning practices have left Johannesburg with sprawling low-density areas of settlement lacking viable public transport systems”.[284] Therefore everyday commuting is “often at considerable cost, [with] long distances to access work and economic opportunities”.[285] Thus, the fact that there is a “job-housing mismatch significantly contributes to inequality in the city”.[286] According to the National Household Travel Survey, people commuting by public transport travel an average of 59 minutes each way. This results in more than two hours a day being spent on commuting in addition to 30 minutes walking and waiting time.[287] The SAF states that a “more effective public transport” system, such as the BRT, will reduce travel time and mean “workers will come to work on time”.[288] In addition to this, “16.4% of Gauteng residents spend more than 20% of their monthly income on transport”.[289] Having the BRT as a new public transport network will mean commuting becomes cheaper.[290]

Cheaper and shorter commuter trips as a result of constructing a new public transport network to areas which previously had an inadequate public transport system will counter

[280] CoJ, “SDF 2040,” 110.
[281] CoJ, “SDF 2040,” 99; JDA, “Strategic Area Framework,” 10.
[282] JDA, “Strategic Area Framework,” 10; CoJ, “SDF 2040,” 156.
[283] Appendix 3: Respondents.
[284] JDA, “Strategic Area Framework,” 5.
[285] Ibid.
[286] CoJ, “SDF 2040,” 17.
[287] JDA, “Strategic Area Framework,” 6.
[288] Ibid, 6-7.
[289] Ibid, 6.
[290] Ibid.

previous discriminatory investments and target people who are dependent on public transport for reaching services.

On the bus, I asked commuters which means of transport they used before using Rea Vaya. More than half of them answered that they used between one and three taxis to get to their destinations before they started using the BRT.[291] One student said she previously used taxis and the MetroBus to get to school.[292] Only one person answered that Rea Vaya was the only means of transport she has been using to go to town. This can be explained by the fact that she had just turned 18 and had therefore been using Rea Vaya to get to school since it started running in 2010.[293] Three respondents, however, mentioned that they had used the train and taxis for their daily commuting. One of them, a woman, said that "They often don't work" and in that case she took a taxi.[294] The other two respondents also said they used to go to work by train, but would take a taxi if the train was not running.[295] None of them use the train anymore and all use only Rea Vaya, or Rea Vaya and taxis. This shows that all the commuters have chosen to take Rea Vaya instead of using other public transport for these particular trips.

I continued by asking why the commuters now travelled by Rea Vaya. The respondents had a variety of answers. Most answers compared using Rea Vaya to the use of taxis, and sometimes trains and taxis. Trips by taxis were either said to be more expensive, or taking Rea Vaya was mentioned as being cheaper. Looking at all the reasons, more than half the respondents said they used the BRT because it was "cheaper [than taxis]".[296] A woman who worked at Amalgamated Banks of South Africa (ABSA) bank explained that she used to spend 1200 Rand on taxis each month, while using Rea Vaya means she spends around 440 Rand a month on transport.[297] A clinical assistant working at Wits explained she had to take two taxis before, each costing 13 to 14 Rand. Since she has been using Rea Vaya, she only spends 7 Rand in off-peak hours.[298] The woman who used to take the train explained that

[291] Appendix 3: Respondents.
[292] Field notes (8 February 2018).
[293] Field notes (15 March 2018).
[294] Field notes (21 February 2018).
[295] Appendix 3: Respondents.
[296] Ibid.
[297] Field notes (15 March 2018). 440 Rand is 30.08 Euros (exchange rate: EUR 1/Rand 14.63 on 15 March 2018). See: "South African Rand (ZAR)," *European Central Bank* (website), accessed 5 February 2019, https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-zar.en.html.
[298] Field notes (8 February 2018). During off-peak travel hours, commuters have a 10% discount. During the week, this is from 8.30 until 15.00h and "any time on Saturdays, Sundays and public holidays". See "Rea Vaya

she had to spent only 160 Rand a month to commute by train and that this remained the cheapest option. However, she now goes to work by Rea Vaya as she described the train as inconvenient because it "takes long", is "not safe" and not "on time".[299]

"The trip is shorter" or Rea Vaya is "faster", resulting in a shorter trip, was stated by around 40% of the commuters.[300] This answer is in line with the policy of the transport corridor. Several people said they would now be at work or school on time, and one student mentioned she now only spends 30 minutes on travelling instead of 45 minutes.[301]

The commuters also mentioned other reasons for using Rea Vaya. More than half of them said they used the BRT because of its "convenience".[302] They explained this had to do with things such as the timetable, not being in a traffic jam because of the separate Rea Vaya lanes, having fewer transfers with Rea Vaya buses than with taxis, and that the bus stops at the right places in town.[303] A third of the people explicitly stated that they used Rea Vaya because it is "safe" or "safer" than other means of transport.[304] Other answers ranged from accompanying a friend to "this is how we budget".[305] The man giving the latter answer explained that he had 700 Rand on his smartcard and in this way did not spend it on other things.[306] However, while the bus is seen as a "major improvement in transportation", half of the people mentioned that buses should run more often, especially in peak hours, as they are consistently very full.[307]

The above answers show that people have diverse reasons for using Rea Vaya and that taking the BRT instead of other transport modes has multiple advantages. Both in theory and practice, therefore, using the BRT has several positive effects for people who are dependent on public transport for commuting to work, school or other services.

6.3 Strengthening public transport services

Currently, "minibus taxis and rail transport [still] constitute the largest proportion of the existing public transport mode share".[308] "A priority focus for the City's investment

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Fares," *Rea Vaya* (website), accessed 20 January 2019, https://www.reavaya.org.za/consumer-information/fares.

[299] Field notes (21 February 2018).

[300] Appendix 3: Respondents.

[301] Ibid.

[302] Ibid.

[303] Ibid.

[304] Ibid.

[305] Field notes (8 February, 8 March 2018).

[306] Field notes (8 March 2018).

[307] Field notes (22 February 2018).

[308] JDA, "Strategic Area Framework," 28.

programmes over the next decades" is to "strengthen public transport services between the CBD and Soweto" within the Empire Perth corridor.[309] The T3 Rea Vaya route "will function as the trunk route along which services will operate between Soweto and the CBD".[310] In addition to this, the BRT network should be supported and extended by improved facilities, other buses, taxis and the train network that crosses the corridor.[311]

The CoJ wants taxis, for instance, to become part of the "BRT operating Entity".[312] The "long-term role of taxi services within the corridor is likely to be that of localized feeder service".[313] At some strategic nodes, therefore, there should be "taxi facilities" to promote the complementary service of the taxis.[314] During the interviews, however, it became clear that, in addition to taking the T3, more than three quarters of the respondents either went to Thokoza Park (the last station on the T3 route) or Lakeview (the second last station) to continue their journey on a Rea Vaya feeder bus to get home.[315] Except from walking to and from the bus stop, which took them between 5 and 30 minutes, this shows that the respondents used Rea Vaya buses for their complete journey, instead of using complementary services. The other commuters walked home once they got off their T3 bus. In this way, therefore, it could be interpreted that the Rea Vaya network reaches commuters' areas of residence and that complementary transport is, therefore, not necessary. Those who depend on public transport for their access to the city, workplaces and other services are connected by this BRT network.

However, I came across an exception during one of my bus trips. Two students studying at UJ explained to me that they travelled from Protea Glen in Soweto to UJ Auckland Park.[316] One of them, however, did not own a Rea Vaya smartcard. As people cannot buy single tickets on the feeder buses or at bus stops, but solely at bus stations, they had to take a taxi to Thokoza Park in order to buy a ticket and take a T3 bus to UJ.[317] The need for a valid ticket on the bus while it is not possible to buy a ticket in these areas rather shows the opposite to the above interpretation. These students used a taxi not because it was part of the network as such, but because practical issues made it impossible to use the BRT from their starting point. As such, this is a barrier to using this means of transport, easing the journey and subsequently enabling people to reach their destination.

[309] JDA, "Strategic Area Framework," 28.
[310] Ibid, 29.
[311] Ibid, 9, 28.
[312] Ibid, 32.
[313] Ibid.
[314] Ibid.
[315] Appendix 3: Respondents.
[316] See Appendix 4: Map of Soweto, for an impression of Soweto.
[317] Field notes (8 February 2018).

In addition to the taxis, the City also wants to integrate the commuter train and BRT services and improve the "linkages between the rail and Rea Vaya stations" to stimulate the use of public transport.[318] However, none of the commuters I talked to made use of the train network. A man said he had not used the train for over five years as he did not see any improvement in the train services. He described that "sometimes it stopped in the middle of nowhere because the cables were stolen and then you just had to wait".[319] The maintenance, service, safety, duration of and uncertainty about the trip were all reasons for the commuters not to take the train anymore.[320]

Likewise, the City wants to integrate the BRT and MetroBus services. MetroBus is currently already operating in the Empire Perth TOD corridor, having routes through some parts of the suburbs around the trunk route.[321] None of the commuters I interviewed, however, was using MetroBus at that time, let alone a combination of MetroBus and Rea Vaya. One student used to take MetroBus to go to high school. However, now she goes to UJ, the timetable is "not convenient" and she takes the BRT.[322] Although the aim is to strengthen cooperation between the Rea Vaya and train network, as well as Rea Vaya and MetroBus, in practice none of the commuters I talked to use the train or MetroBus for any parts of their journeys. So far, therefore, the various means of transport have not been integrated.

Within the areas of the corridor, the CoJ wants it to be easy to access, as well as safe and close enough to walk and cycle to, a station or "urban opportunities".[323] Moreover, "[c]onvenient transit stops and stations [will lead to] increasing ridership levels."[324] All the commuters I interviewed walked to a Rea Vaya bus stop or station in Soweto and, once they got off the bus, walked to their destination. Everyone said that the stations were close enough to the places they wanted to go to in town. One woman explained that she feels safe with Rea Vaya and that the stations are close to the places she goes to:

"If I go to Ellis Park I take a T1. This feels safe. I did not dare to go there before."[325]

[318] JDA, "Strategic Area Framework," 32.
[319] Field notes (16 February 2018).
[320] Field notes (16, 21 February and 3 March 2018).
[321] JDA, "Strategic Area Framework," 34.
[322] Field notes (8 February 2018).
[323] JDA, "Strategic Area Framework," 34.
[324] Ibid, 13.
[325] Field notes (22 February 2018).

A student also said that she feels very safe at the stations.[326] This is probably because of the physical construction and security measures in place.

Figure 7: Wits Station[327]

Figure 8: Thokoza Park Station[328]

With regard to Soweto, however, one out of every four commuters explicitly said the station and stops were not close enough to the places they wanted to go to or said there should be more stops on certain routes.[329] Not only does it take some of the respondents up to 30 minutes to walk home from the nearest bus stop or station, many areas or facilities that commuters want to go to in Soweto cannot be reached by BRT.[330] One man said, for example, he would like to see a Rea Vaya from Orlando to Bara hospital, but now he has to take a taxi.[331] And a high school student living in Protea Glen explained she would prefer to go by Rea Vaya to visit friends in Snake Park, but has to use a taxi as Rea Vaya does not go there.[332]

The CoJ wants to ease the access to and improve the connection between Soweto and the CBD by means of an integrated public transport network. In essence it wants to reverse a previous lack of investments in the public transport sector and enhance social and spatial justice within a previously underserviced area. In practice, however, this integration has not

[326] Field notes (8 February 2018).
[327] Own photo, 16 February 2018.
[328] Own photo, 21 March 2018.
[329] Appendix 3: Respondents.
[330] Ibid.
[331] Field notes (8 March 2018). 'Bara' refers to Chris Hani Baragwanath Hospital.
[332] Field notes (15 March 2018).

yet worked. None of the commuters indicated they used means of transport other than Rea Vaya buses as part of these particular journeys from their homes in and around Soweto to their destinations along the Empire Perth corridor. In Johannesburg people walked from their BRT station to their destinations, which were easily accessible. In Soweto, however, some commuters explained that different areas are underserviced and that this results in long walks home from the closest Rea Vaya stop or in having to take a taxi to other facilities in Soweto.

The fact that these commuters only use Rea Vaya makes me wonder whether there has been an examination of the connections between the different means of transport, transit maintenance and safety, and the current travel patterns and needs of commuters. Another important reason for only using Rea Vaya is that making use of the BRT and an additional means of transport makes the journey more expensive as a result of double charges.

6.4 Reducing the use of private cars

Another goal of the BRT network is to reduce the use of private cars in the city. This will decrease "energy consumption and greenhouse gas emissions in the city".[333] Through "limited managed parking" and providing a choice in "sustainable travel alternatives", the City is aiming to discourage the use of "private vehicles".[334] The SAF acknowledges that this will work best when TOD has been established so that people live and work in close proximity to the transport stations, which will increase the use of the BRT.[335] All the respondents said they used other means of public transport before they started using Rea Vaya and did not use private cars. However, I had a short conversation with a woman at a station who had just dropped off papers for her work in Braamfontein. She said that she prefers to take Rea Vaya on the rare occasions she goes to town "because there is limited parking in the city centre".[336]

Overall and although it would have a positive effect on energy consumption and the environment, this goal seems not to be targeted at the people I met on the bus. However, it might be more effective if the network is expanded to areas in the city with high numbers of car users. Next to Thokoza Park, however, there is a field where many cars are parked during the week. Muhammed explained to me that people in Soweto drive here and then take Rea Vaya to town to avoid traffic in the mornings and afternoons.[337] Although I did not talk to rush-hour commuters in the morning, I could see that there were many cars parked near the

[333] JDA, "Strategic Area Framework," 5.
[334] Ibid, 13, 47.
[335] Ibid, 7, 13.
[336] Field notes (9 March 2018).
[337] M. Suleman, conversation, 31 January 2018.

station when I was waiting at Thokoza Park. The BRT may, therefore, be used by people dependent on public transport to move around, as well as by people who prefer to use it so as not to get stuck in traffic.

6.5 Improved access to social and economic opportunities

One of the major aims of the BRT network in Johannesburg is to improve the "accessibility to economic and social opportunities".[338] This specific corridor links areas that were "traditionally marginalised", such as Soweto, to "economic, educational and recreational opportunities situated not only along the corridor, but in Central Johannesburg".[339] Facilities such as hospitals, educational institutions, student accommodation and various companies are located along Perth and Empire roads.[340]

In theory, the BRT can play an important role in accessing these facilities. Through the social practice of riding the bus from Soweto to Johannesburg, people are using a service that is intended to reduce injustices of the past: it allows people to access places in an easier and more convenient way. In this way, their access to different urban spaces and the social and economic opportunities in these places is improved; for example, "unemployed people will benefit because it will be easier to get to places to look for work [and] factories will benefit because workers will come to work on time".[341]

The commuters I interviewed were on the bus for various reasons. Most of them took Rea Vaya either to go to work, or to go to school or university.[342] Other respondents mentioned that they were using the bus to reach other services, such as a doctor or Home Affairs, or were on their way to buy a book in the CBD.[343] Additionally, well over half the people said they used the same Rea Vaya route, four to six times a week, to go to work or educational institutions.[344] One of these people explained, for instance, that she travelled to Wits University five times a week, but, depending on which campus she had to go to, took either a T1 or T3 bus.[345] Although my respondents were not commuters travelling in the early morning or afternoon rush hours, this practice shows taking the BRT was part of their everyday life. As Harvey described, transit is a necessity in order for people to reach various

[338] JDA, "Strategic Area Framework," 16.
[339] Ibid, 23.
[340] Ibid.
[341] Ibid, 7.
[342] Appendix 3: Respondents.
[343] Ibid. I was not able to interview people on the bus during rush hours. I am aware this has an influence on the reasons why my respondents were on the bus at the time of the interview.
[344] Ibid.
[345] Field notes (8 February 2018).

services. The social practice of using the BRT to reach these places therefore allows people to access these various spaces and, consequently, the services provided in these places. This inherently means people are able to claim the RTC.

Some of the people mentioned they did not take the T3 bus frequently. A mother who was taking her son to Wits' introduction week explained, for example, that she prefers to take a T1 if she needs to go to town.[346] And a student who stated she preferred to go by taxi said she rarely travels by Rea Vaya. This time, she was just accompanying her friend on her first day at UJ.[347] Although these respondents are not regular Rea Vaya commuters, they can use the BRT network laid out in their area. Again, this is in line with the idea that people who need to go to town can use the BRT for "easy access to the city".[348]

All respondents used Rea Vaya buses to go to and from their destinations. Of the respondents, however, two women and one male student mentioned that they "would not travel when it's dark" and would therefore always take a Rea Vaya while it was still light outside.[349] However, a third of the people explained that whether they were able to take a bus back to Soweto depended on the time of their shift. The buses run from 5 a.m. in the morning until the last one leaves at 9 p.m. during the week, and run until 7 p.m. during the weekend.[350] This means that people whose shift ends after 9 p.m. cannot use Rea Vaya to go back home. A man who works at UJ and teaches music classes near Milpark station explained, for instance, that in those cases he has to arrange transport beforehand, such as asking family members to pick him up or ordering an Uber.[351] Other people explained they either take a "special" (an organised taxi back from their workplaces) or take a taxi to Bree station (the taxi rank in Newtown) to get another taxi to Soweto.[352] Either way, this costs them at least 30 Rand, while a trip by BRT would cost a maximum of 15 Rand.[353] The fact that people are not able to use the same means of transport for their return journey shows that Rea Vaya's service is inadequate for some of its commuters. No account is taken of the lived experience and needs of some of Soweto's commuters dependent on Rea Vaya to get home from work. In these situations, therefore, they have to rely on their previous means of transport.

[346] Field notes (31 January 2018).
[347] Field notes (8 February 2018).
[348] JDA, "Strategic Area Framework," 5.
[349] Field notes (8 February 2018).
[350] "Bus times," Rea Vaya (website), accessed 20 December 2018, https://www.reavaya.org.za/consumer-information/bus-times. I assume this timetable is tuned to the daytime shifts of a working week and therefore Rea Vaya does not run late in the evening or frequently at the weekend.
[351] Field notes (8 March 2018).
[352] Appendix 3: Respondents.
[353] Field notes (8, 15 March 2018). "Rea Vaya Fares," *Rea Vaya* (website).

In addition to the daily and occasional trips to reach various amenities, I wondered whether people had also started using Rea Vaya to go to new social and economic opportunities in town and Soweto since the BRT network had become available to them. Surprisingly and although almost half the respondents explicitly mentioned that Rea Vaya had made it easier to go to places, only two people said they now use the BRT to go to places they did not go to before.[354] As mentioned above, one woman now goes to Ellis Park by Rea Vaya, while she did not previously dare to go there.[355] And a 27-year-old woman working at ABSA bank said she now goes to other places, such as the mall in Cresta, and takes a T1 to go to Rosettenville and a T2 if she goes to Braamfontein.[356]

Alongside the T3 route taken during the interviews, almost all the respondents used Rea Vaya – either instead of or as well as taxis – to go to places and access facilities they already used to go to in Soweto, as well as in central Johannesburg. These range from malls in Soweto, visiting friends and family in other areas of Soweto or going to places such as Carlton Centre, Florida and Newtown.[357] Only a few of the commuters used Rea Vaya solely to go to work or as an alternative to the school buses that were not running during the holidays, as they preferred to use taxis to travel around.[358]

It is remarkable to see that while people use Rea Vaya for their daily travelling, only a few of the people I interviewed use it to go to places that they did not go to before. Nevertheless, many of the respondents have partly or completely replaced other means of transport by the BRT when going to facilities they already went to in Soweto or in town. It might be that people do not go to newly accessible places in Johannesburg to use different facilities because Soweto itself already has many social, economic and recreational services to offer.

6.6 Reconnect the city

Finally, the CoJ wants to use the BRT to reconnect the city. It aims to "restructure the apartheid city toward a more integrated city form which seeks to make the city more accessible to disadvantaged groups".[359] By means of the BRT it wants to create "connected neighbourhoods" so that people can access different areas of Johannesburg.[360] Furthermore,

[354] Appendix 3: Respondents.
[355] Field notes (22 February 2018).
[356] Field notes (15 March 2018).
[357] Appendix 3: Respondents.
[358] Ibid.
[359] JDA, "Strategic Area Framework," 16.
[360] Ibid.

the City also sees the BRT as an important factor in connecting the whole Empire Perth corridor to other transport arteries in the regions around the corridor.[361] An example of the latter is the Gautrain, which the City wants to link to the Rea Vaya services at Park station so that people who get off the Gautrain can use public transport to access various economic and educational institutions in the area.[362] Although this would indeed link the Rea Vaya network to the Gautrain network, which in turn connects Johannesburg to Pretoria and OR Tambo International Airport, the Gautrain is, in practice, too expensive for the Rea Vaya commuters I talked to.[363] A single trip from Park station to Pretoria costs 72 Rand.[364] Only one student said she would use Rea Vaya from Soweto to Park station in order to take the Gautrain to Rosebank. She explained this was easier and safer than taking a taxi.[365]

The other commuters said there are several places they would like to go to, but that there is no Rea Vaya route to these places. The most popular place was Sandton, mentioned by just under half the people.[366] One man explained that "People [from Soweto] who work there now, have to go by taxi".[367] Other places in or to the north of Johannesburg were also mentioned, such as Rosebank, Midrand, Fourways, Wijnberg, Pretoria, and "places out of Joburg".[368] As previously stated, no Rea Vaya network has yet been laid out in the north. Due to opposing interests of different groups, such as the taxi industry, the construction of the route to Sandton had to be halted and it is not clear when this will be finished.[369] However, this then means that people are not able to be connected to various areas they would like to go to. They are prevented from using these spaces and, therefore, from using facilities they have the right to access. In addition to these places, one in four people said the network in Soweto should be expanded because certain places in Soweto are not accessible by BRT.[370] They would like to see more stops on the existing routes and new bus lines to other areas in Soweto, such as a Rea Vaya line from Orlando East to Bara Hospital.[371] Owing to the layout of the BRT transit network, therefore, people in some areas of Soweto are currently deprived of access to certain places, while other areas are well-services, which in turn leads to another unjust situation.

[361] JDA, "Strategic Area Framework," 36.
[362] Ibid, 32.
[363] "Routes," *Gautrain* (website), accessed 18 January 2019, https://www.gautrain.co.za/routes.
[364] "Fares," *Gautrain* (website), accessed 18 January 2019, https://www.gautrain.co.za/commuter/farecalc.
[365] Field notes (8 February 2018).
[366] Appendix 3: Respondents.
[367] Field notes (8 March 2018).
[368] Appendix 3: Respondents.
[369] M. Suleman, *email correspondence*, 22 November 2018.
[370] Appendix 3: Respondents.
[371] Ibid.

While connecting the various areas of the city by means of a new public transport network will ideally reform the produced city and hence counter segregation and allow people to make use of different places in the city, this had not yet materialised in practice by the time my fieldwork ended. The Rea Vaya route planned in the north of Johannesburg, including the areas of Rosebank, Alexandra and Sandton, has not yet been constructed. The Gautrain, as an available option for going to places north of the centre of Johannesburg, is too expensive for most of the commuters. Therefore, gaps in the network mean the city remains partly unconnected and segregated, and so does not counter wider processes that generate injustices in the city. Moreover, certain areas and amenities in Soweto cannot be reached by Rea Vaya, while other areas are accessible with the BRT. The unfair distribution of the network thus leads to unequal access to social and economic facilities.

To conclude, I argue that spatial change, such as a new BRT network, has an effect on the social. However, I do not aim to give a conclusive argument on the ultimate social effect it has. Instead, this analysis has shown that the construction and use of the network has an impact on people's justice in a variety of ways.

The CoJ wants this specific BRT network to be the backbone of the development corridor transporting large numbers of commuters from Soweto to Johannesburg. This network is supposed to provide fast and affordable public transport. The CoJ also wants to link the BRT spine to other transport facilities so as to strengthen the public transport services between Soweto and Johannesburg and, at the same time, reduce the use of private cars. Additionally, the BRT is intended to reconnect the different parts of the city so that Johannesburg becomes more accessible for disadvantaged groups. In this way, the CoJ hopes to improve access to various places and, therefore, to diverse social and economic opportunities. It hopes that this system will counter the spatial segregation of the city, reverse a lack of investment in public transport and enhance social and spatial justice within a previously underserviced area.

In practice, the BRT is seen as "a major improvement in transportation". Rea Vaya is regarded as a fast, cheap, safe and convenient means of transport which is used for daily and occasional commuting trips from Soweto to Johannesburg to get to work, educational institutions and other amenities. The BRT is also used to get around in Soweto, either instead of or in addition to taxis. Through use of Rea Vaya, therefore, commuters can access and make use of various places in the city. Although people say the BRT has improved access to the city, only a small number of people use it to get to new places in Johannesburg now that

these are accessible by Rea Vaya. However, the commuters indicated they would also like to go to places in the north of Johannesburg. These places are not currently accessible by BRT because this network has not yet been constructed. This means that they are limited in their 'right to the city'; their right to make use of various urban places. Other factors limiting their use of the BRT include the frequency and timetable of the buses, and the layout of the network itself. Commuters indicated that certain areas in Soweto are not accessible by Rea Vaya, while buses are very full during peak hours, and people on late working shifts and dependent on public transport to get home cannot use Rea Vaya as the buses do not run after 9 p.m. These practices show that there are several issues preventing people from making full use of the city.

7. Summary and conclusions

By means of the TOD corridors "we will be re-defining and re-stitching our City together to create a new future"[372]

This thesis set out to answer the question of *"In what ways do the policies and practices of the BRT in the Empire Perth TOD Corridor in Johannesburg impact commuters in terms of social and spatial justice?"*

To begin with, this thesis shows that various developments over time have led to the current segregated, unconnected and consequently unjust spatial fabric of Johannesburg. The city has developed from a small mining town established in 1886 into South Africa's largest city. From its origins onwards the city developed along racial lines: the white affluent citizens moved to areas north of the gold ridges while Indian, coloured and black people lived mainly in locations to the south-west of Johannesburg which later on developed into townships. The availability of various means of transport contributed to the expansion and development of white areas, while other areas had highly inadequate transport modes with solely a commuting function. The Group Areas Act of 1950 as one of the apartheid acts meant that residential areas in cities became segregated and reserved for specific racial groups leading to the official development of the black township of Soweto. In the 1950s and 1960s the northern part of the city expanded enormously which led to an expanded road network and car-dependency, while the black townships were under-serviced and had inadequate modes of transport for the long commuting distances. Although all apartheid-related acts were eliminated, this segregation was still highly visible after 1994.

Due to economic growth after apartheid, Johannesburg continued to expand. This resulted in urban sprawl in the form of public housing, some sort of gated community or informal settlements. Additionally, the city is characterised by fragmented development which can be seen in the continues investments in affluent suburbs, while there is a lack of development in underprivileged areas and insufficient efforts into better connecting these areas to the rest of Johannesburg. Similarly, there has been little done about the different buffer zones which are still limiting the integration in the city. In terms of transport, the insufficient investments in the public transport sector on which the majority of the people still

[372] City of Johannesburg, "Corridors of Freedom," preface.

depend, and the dominance of the use of the private car, result in a lack of spatial integration and a highly unequal city.

To break with these old and continuing patterns of spatial injustices the City introduced the CoF programme in 2013. This initiative was aimed at changing the spatial fabric of the city by creating three development corridors. In these corridors different areas of the city are connected by means of "transport corridors" that are themselves linked to "interchanges around which land use will be intensified to drive economic growth and social change".[373] This thesis focused on these transport corridors which consist of the BRT system Rea Vaya. The bus network is aimed at reconnecting different parts of Johannesburg and to ease people's access to jobs, facilities and recreational opportunities by means of an affordable, fast, safe and convenient transport system. Additionally, it aims to reduce greenhouse gas emissions by reducing the use of cars and increasing the use of public transport.

The future of the corridors however, seems to have become uncertain. Due to the change in Johannesburg's political administration in 2016 there has been a decrease in the attention and budget allocated to the corridors which are now called the TOD Corridors. DA mayor Mashaba has a different orientation from his predecessor Tau (ANC). Nevertheless, the corridors remain priority areas of the City and are integrated into the overall development programme of the CoJ to create a spatially just city. Alongside this decrease in political support, the future execution of the programme is dependent on support of several different interest groups such as the various taxi associations.

The Rea Vaya's first two construction phases have now been completed, while the construction of the last phase to the north of Johannesburg continues to be held up by opposing parties such as the taxi industry. However, BRT development can have multiple effects on people. Transport development in other major cities around the world has shown effects such as improved access to different facilities, and a decrease in travel time and commuting prices. Hence, the decreased attention and budget are not in line with academic debate on transport restructuring and impacts the effects the BRT can have.

In turn, the effects of transport development have an impact on commuters' justice. In a transport context, justice is concerned with the outcomes of the fair distribution of physical objects such as the layout of a BRT network. The effects on people in different geographical areas thus depend on the fairness of the distribution process. This equity or fairness is

[373] Rubin and Appelbaum, "Spatial Transformation," 4.

subsequently based on actual human experience, the legacy of historical discrimination and should be contextualised. In the case of Johannesburg, the segregated, unconnected and consequently unjust fabric result from apartheid's segregation and current developments leading to new forms of unevenness, with underprivileged areas lacking adequate goods and services. While there are varying ideas on how these injustices come about and should be countered, social scientists agree that social and spatial processes constantly influence each other.

The equitable investments in mass public transport such as the fair layout of the BRT network directed at the needs of the people dependent on public transport to reach services has an impact on social and spatial justice within the unjust geographies in the city. The layout and use of this network counters the previous discriminatory investments in public transport and counters the segregation in the city by connecting different areas. Moreover, riding the BRT as social practice improves the access to different places in the city with various social and economic facilities. In these ways, commuters can use the right to access, make use of and shape the urban space which, in essence, is the process of the RTC.

As such, by means of the BRT the City aims to impact the social and spatial justice in Johannesburg in various ways. This specific BRT network as the trunk route of the Empire Perth TOD Corridor is intended to move large numbers of commuters by means of cheap, safe, and fast buses from Soweto to Johannesburg. It aims to improve access to various areas in the city and hence the facilities in these areas by means of the use of the BRT. Additionally, the CoJ wants to strengthen the public transport services between Soweto and Johannesburg. The BRT trunk route should therefore be supported and extended by other modes of public transport. In this way and by limiting managed parking in the city centre the CoJ wants to decrease the use of private cars. Lastly, the City wants to use the BRT to reconnect the different areas within the city so that Johannesburg becomes more accessible for disadvantaged groups. All these objectives are in line with the effects transport restructuring can have. The CoJ hopes to improve access to various places and, therefore, to diverse social and economic opportunities. It hopes that this system will reconnect the city, reverse a lack of investment in public transport and enhance social and spatial justice within previously underserviced areas.

In practice, however, it turns out to work slightly different. People are generally positive about Rea Vaya and see it as a major upgrade of public transport services. The T3 route passing through the Empire Perth TOD Corridor is used for daily and occasional commuting trips from Soweto to Johannesburg to get to work, educational institutions and

other facilities. Rea Vaya is regarded as a fast, cheap, safe and convenient means of transport and is used to go to the city centre and move around in Soweto. In the latter case, people use the BRT instead of or in addition to taxis, but never a combination of different transport modes during the same journey. Through use of Rea Vaya therefore, commuters can access and make use of various places and facilities in the city. However, while the BRT might be used by people who own a car and want to avoid traffic jams, all commuters I interviewed use the BRT instead of other public transport modes and not instead of private cars. As such it is used by the people dependent on public transport to reach services. It might decrease the use of private cars more effectively if the network is expanded to areas in the city with high numbers of car users.

Furthermore, people say the BRT has improved access to the city. However, only a small number of people use it to get to new places in Johannesburg now that these are accessible by Rea Vaya. It might be that Soweto offers enough facilities so people do not feel the need to go to other places. However, the commuters indicated they would like to go to places in the north of Johannesburg. Due to the decreased attention and budget allocated as well as the opposing interests of, for example, the taxi industry, the network to the north has not yet been constructed. This means that people are limited in their 'right to the city'; their right to make use of various urban places. Commuters indicated that there were also other factors limiting their use of the BRT and thus their ability to make use of the city. Buses are very full during peak hours, and people on late working shifts who are dependent on public transport to get home cannot use Rea Vaya as the buses do not run after 9 p.m. Moreover, commuters indicated that certain areas and facilities in Soweto are not accessible or underserviced by Rea Vaya while others can be reached by BRT, which in turn leads to unequal access to social and economic facilities. All in all, The BRT has an impact on people's social and spatial justice in several ways but there are various practical issues preventing people from making full use of the city.

As this research focussed on off-peak hours commuters it would be interesting to conduct further research on people travelling during peak-hour. Likewise, it would be good to do further research on the reasons why people do not go to new places now they are accessible by Rea Vaya. Furthermore, as this research only focussed on the first point of the RTC, further research on the participation of commuters in the decision-making over the production of urban space, such as the construction of the BRT network, will give a more complete picture of commuters' RTC.

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Appendix 1: Standard interview questions

Interview number:
Date and time:

Personal details:
Age:
Gender:

Where did you get on & off the bus? Do you have to use other transport before/ after this?

What is the purpose of your trip?

how often do you take this route/ do you always take the same route?

Before using Rea Vaya, what other transport did you use?

Why do you use Rea Vaya now?

How has it improved your journey?

Do you use it to get back and forth?

In general, do you use Rea Vaya for your daily routes or also to go different places in town and Soweto?
Does it enable you to go to different places and use different facilities in the city you did not go to before? Are the Rea Vaya stations close enough to these places?

Are there places you want to go to, but are not accessible by Rea Vaya?

Overall, can you say how it impacts your life? (time, access…)

From your point of view: Is Rea Vaya enough to access economic/social facilities, or is there a need for other measures?

Extra points after interview:

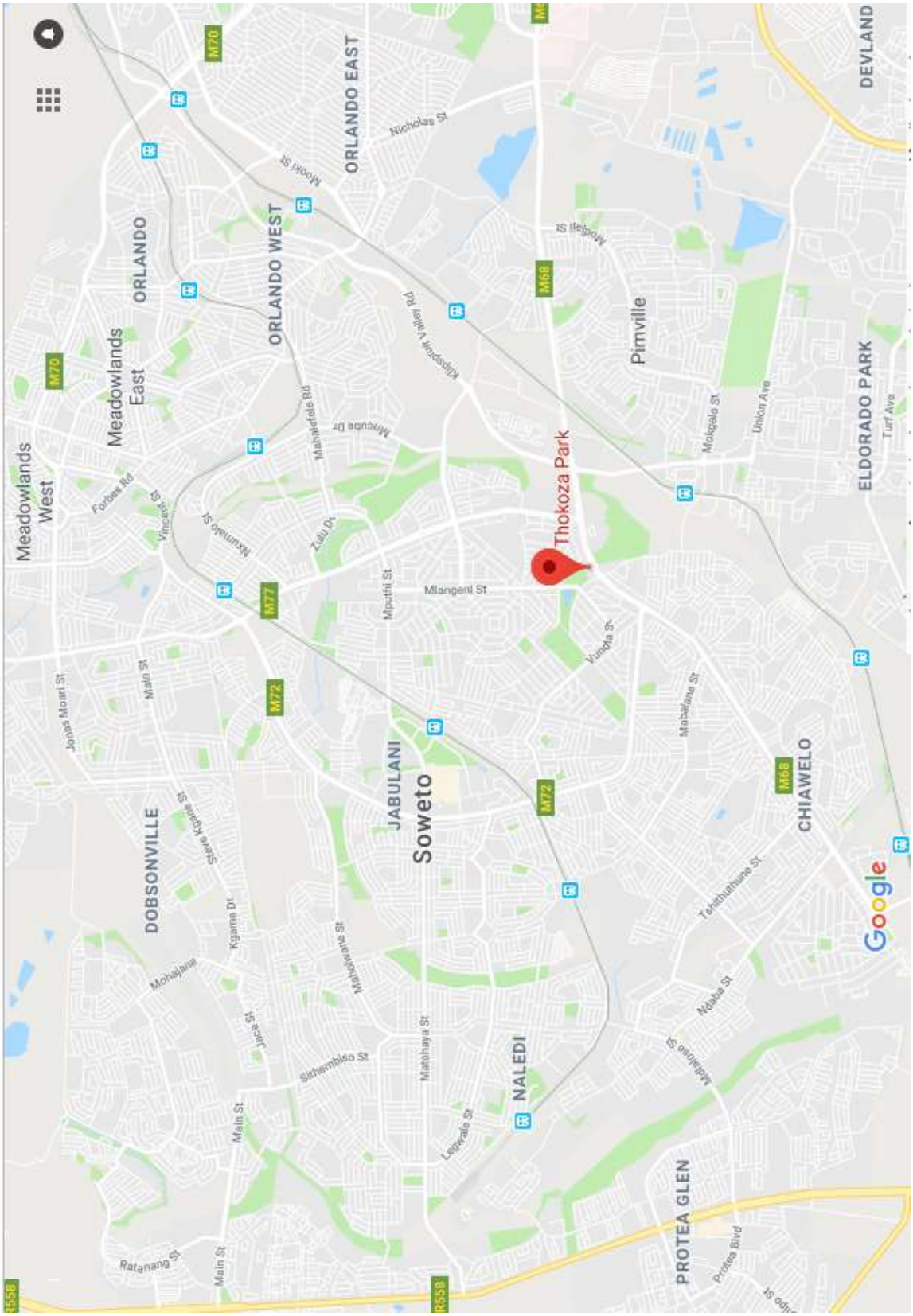
Appendix 2: Rea Vaya smartcard

Appendix 3: Respondents

Interview number	Date	Time	Gender	Direction of route (T3)
1	Wednesday 31/1/2018	12.00h	woman	Wits -> Thokoza Park --> F1 to Naledi
2	Wednesday 31/1/2018	13.00h	woman	F2 from Protea Glen to Thokoza --> T3 to UJ
3	Thursday 8/2/2018	12.00h	woman	T3 from Rissik Street to Thokoza --> F1 to Naledi
4	Thursday 8/2/2018	13.00h	woman	Taxi to Thokoza --> T3 to UJ, instead of F2 because friend did not have Rea Vaya card and you cannot buy a ticket at a bus stop
5	Thursday 8/2/2018	13.00h	woman	idem
6	Friday 9/2/2018	12.15h	man	T3 from Joburg theatre to Lakeview --> F5 to Eldorado park
7	Friday 9/2/2018	13.30h	man	an F bus from Florida, T3 from Westbury to Library Gardens to buy a book.
8	Thursday 15/2/2018	14.00h	woman	F2 from Protea Glen to Thokoza --> T3 to UJ
9	Friday 16/2/2018	11.15h	man	T3 from the city back to Thokoza --> F9 home
10	Wednesday 21/2/2018	13.00h	woman	F1 from Naledi to Thokoza --> T3 to Parktown station, 5-10 min walk to Wits education campus
11	Thursday 22/2/2018	12.00h	man	walked from Hillbrow to Park station, T3 to Lakeview, takes F10 bus to Pimeville
12	Thursday 22/2/2018	13.00h	woman	F1 from Naledi to Thokoza --> T3 to Milpark station --> C4 to Cresta
13	Thursday 8/3/2018	11.00h	man	T3 from Harrison Street to Orlando Stadium, walks home from there
14	Thursday 8/3/2018	12.00h	man	F2 from Protea Glen to Thokoza --> T3 to UJ
15	Friday 9/3/2018	13.15h	man	F9 to Thokoza --> T3 to UJ Sophia Town Res Station
16	Thursday 15/3/2018	11.00h	woman	T3 from Park Station to Thokoza --> F2 to Protea Glen, then 30 min walk home
17	Thursday 15/3/2018	12.00h	woman	F2 to Thokoza --> T3 to UJ Sophiatown Res
18	Friday 16/3/2018	11.00h	man	T3 from Park Station to Lakeview, walk home for 5 min

Interviews took 20-60 minutes, depending on the time and traffic.

Appendix 4: Map of Soweto



The T3 drives from Thokoza Park via the M68 and the Klipspruit Valley Road.

Source: Google Maps (5 February 2019)

“It always seems impossible until it’s done”

Nelson Mandela