

ESSAY 1

POSITION + SITUATION

PRE-DESIGN

1.1. p16 BACK- GROUND

1.2. p18 DEFINITION OF TERMS

1.3. p20 THE ISSUE OF SCARCITY

- 1.3.1. Scarcity as a social construct.
- 1.3.2. Scarcity and the history of South African Urban Planning.
- 1.3.3. Scarcity, insecurity and spatial division.
- 1.3.4. The City of Tshwane: Unified but not integrated.
- 1.3.5. Gated and informal communities: the anticipation versus the experience of scarcity.
- 1.3.6. Moreleta Park: Demonstrating the anticipated needs and conditions for the future South African city.

1.4. p44 THE OPPOR- TUNITY OF SCARCITY

- 1.4.1. Towards spatial agency.
- 1.4.2. Unpacking the phenomena of space, materiality, and time.
- 1.4.3. The question of scarcity and architecture.
- 1.4.4. Domicile, livelihood, mobility.
- 1.4.5. Locating the research.
- 1.4.6. An architectural methodology for the Scarce City.
- 1.4.7. Statement of approach to architecture



Figure 1.0.1: (right) Boundary wall in Cemetery View, Moreleta Park (Author 2020).

Figure 1.1.1: (below) View of gated communities from Plastic View informal settlement, Moreleta Park (Kriek 2021).

THE GENERAL, URBAN, AND ARCHITECTURAL- AL ISSUE



1.1. BACK- GROUND

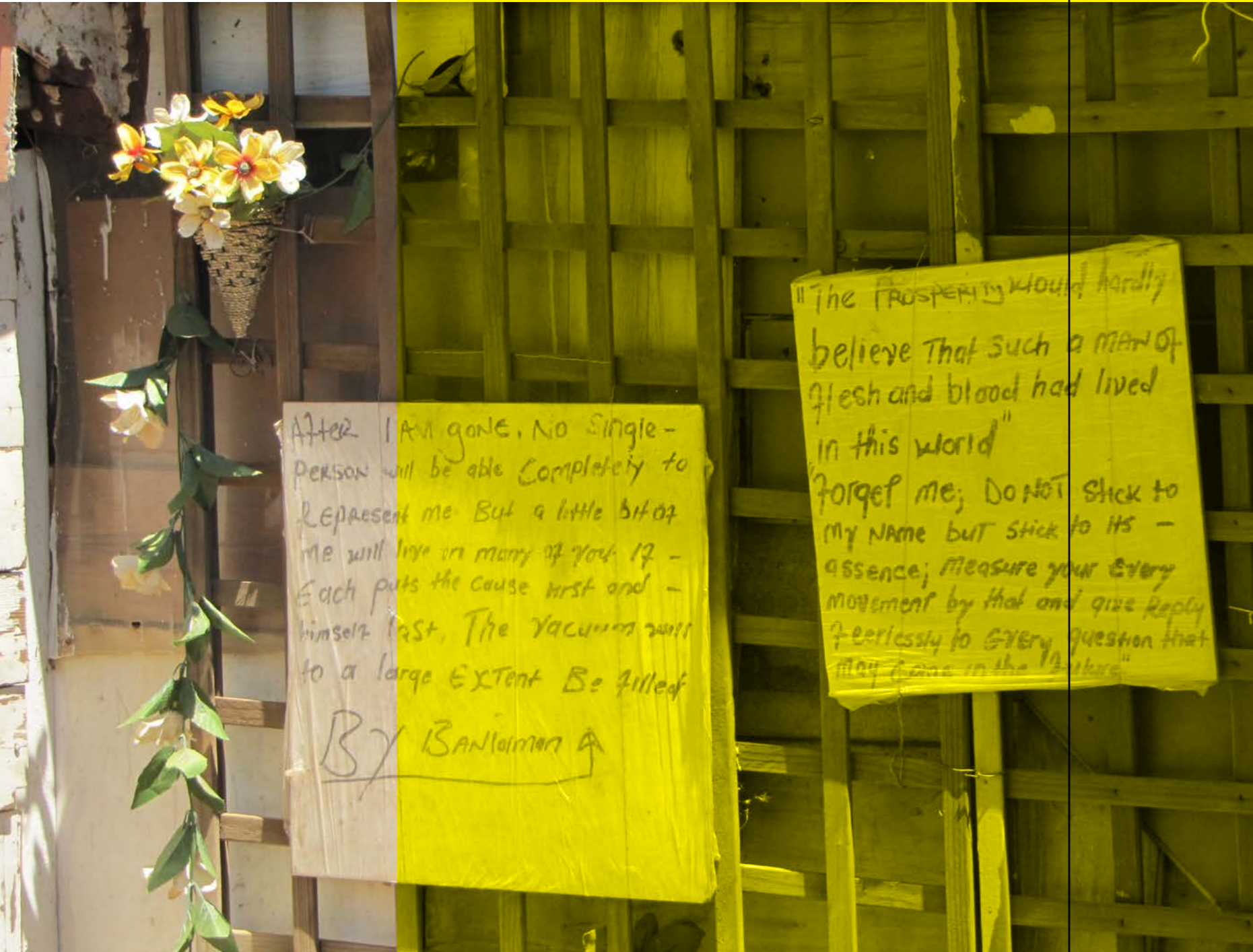
Twenty-six years into democracy, spatial inequality continues to plague South African cities (Strauss & Liebenberg 2014), despite major shifts in the political paradigm upheld by the country's constitution (Constitution of the Republic of South Africa No. 108 of 1996). Thus, spatial development frameworks are arrantly centred around mitigating the remaining oppressive economic implications of apartheid spatial planning, prioritising urban reform through principles of spatial justice, sustainability, efficiency, quality and resilience (City of Tshwane Department of City Planning and Development 2018, Spatial Planning and Land Use Management Act No.16 of 2013).

A clear schism exists between theory and practice. Today, in addition to the difficulty of realistically implementing urban reform over remnant apartheid urban morphology, new developments continue to emerge as contemporary manifestations of exclusionary apartheid values (Landman 2004, Strauss & Liebenberg 2014). This exposes the dominant neoliberal socio-political agenda fulfilled by architecture at present (Till 2014), with the polarising existence of informal settlements

and gated communities within South African cities as the natural consequence (Landman 2006).

When considering the innate role of architecture in both perpetuating and potentially mitigating the existing social, economic and physical conditions of disparity, the meaning of architecture in terms of its phenomenological ideation as the "boundary condition" or "in-between" becomes significant (Norberg-Schulz 1976:3–10). One can examine the role played by social constructs, such as scarcity and abundance, in architecture (Till 2014), and what an understanding of this role in its historical and contemporary context would mean in terms of agency (Awan et al. 2011), power (Foucault 1972), and securing equal rights to the city (Lefebvre 1968, Section 9(2) of the Constitution of the Republic of South Africa No. 108 of 1996).

Figure 1.2.1: (below) Poetry displayed on the wall of a home in Plastic View, Moreleta Park (Herbst 2021).



1.2. DEFINITION OF TERMS

1.2.1.

Scarcity Postulate:

The belief that scarcity is an unavoidable reality, resulting in a gap between man's theoretically unlimited needs, and a limited ability to meet these needs (Xenos, 1989).

1.2.2.

Apartheid:

"A policy or system of segregation or discrimination on the grounds of race" (Oxford University Press 2020).

1.2.3.

Gated community:

(see pg 31)

1.2.4.

Informal Settlement:

(see pg 33)

1.2.5.

Domicile:

A country, place, or space which a person securely identifies as their constant "home" - whereby creating one's domicile becomes the act of dwelling (Pallasmaa 1999:79).

1.2.6.

Livelihood:

Conditions and functions necessary for achieving and sustaining domicile, whether the means of generating a formal/informal income, or merely any act that secures access to human dignity.

1.2.7.

Mobility:

Refers to an individual or group's freedoms and capabilities to advance or progress on a physical (transport, movement) social, economic, and political level.

1.2.8.

Transactional

A transactional relationship, both in nature and in social structures, can be an action, system, or construct which operates competitively, prioritising individual/internal gain far beyond collective/exterior implications. Such gestures may detrimentally induce binary conditions, and promote division, exclusion, disparity, and exploitation. A clear example in which this attitude manifests is in the market driven economy, where space, materiality, and time are commodified - and the individual success of any exchange/transaction of such commodified elements is measured and awarded based on an individual attaining more value than what they yielded for it.

1.2.9.

Relational

A relational connection or gesture, characteristic of resilient systems, is distinctively mutually beneficial - because value is measured collectively; the individual understood in terms of the collective.

1.3. THE ISSUE OF SCARCITY

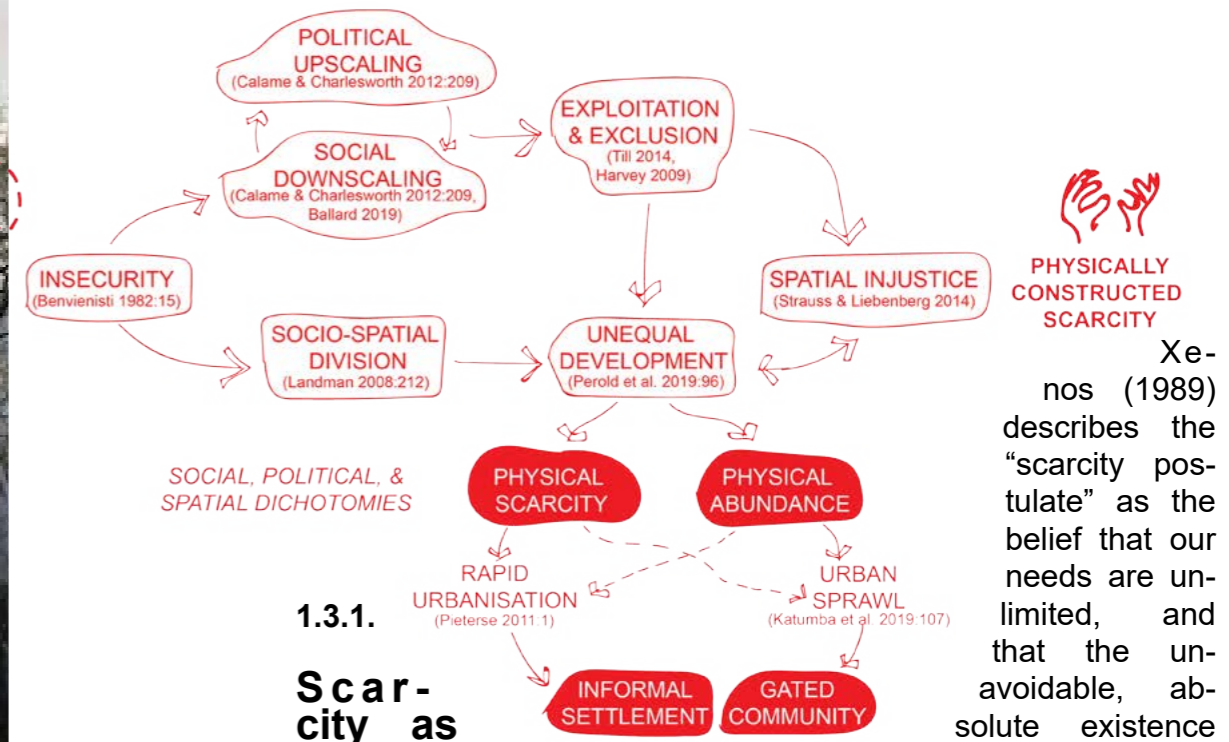
Figure 1.3.1: (below) Claim street in Johannesburg under violence by allegedly Zuma supporters (Muchave 2021).

Figure 1.3.2: (right) The relationship between scarcity and the making of our cities (Author 2021).

CAN THE WORLD BE SHARED?



SOCIALLY
CONSTRUCTED
SCARCITY
(Till 2014, Xenos 1989)



1.3.1. Scarcity as a social construct

Foucault (1972) argues that human actions are largely normalised by society, through social constructs that govern perceived needs and desires, and thus, how decisions are made. Thus, a social construct is an exertion of normalising power – not possessed by any individual or group. Although social constructs are inherently abstract, the universal participation in this “normal” results in its physical manifestation. In this way, scarcity can be understood as a social construct.

Xenos (1989) describes the “scarcity postulate” as the belief that our needs are unlimited, and that the unavoidable, absolute existence of scarcity is what restricts the satisfaction of these needs. The automatic response to this perceived reality of insecurity has been the scramble to acquire abundance, often through the exploitation of people and the environment. Thus, the belief in inevitable scarcity has been used to normalise the unequal distribution of rights and resources throughout history (Till 2014). This has formed the foundation upon which cities have been built and lends to the ideation of capitalism at the turn of the last century (Harvey 2008).

Figure 1.3.3: (right) *Sophiatown removals* (Schadeberg b. 1931; printed in 1999).

Figure 1.3.4: (far right) *Standard pattern sequence of division* (Author 2021, after Calame & Charlesworth 2012:205-236).

Figure 1.3.5a: (below) *Sectarian division lines in Belfast* (Calame & Charlesworth 2012).

Figure 1.3.5b: (below) *The Israeli 'security fence' in East Jerusalem* (Calame & Charlesworth 2012).

Figure 1.3.5c: (below) *The Green Line in Nicosia, Cyprus* (Calame & Charlesworth 2012).

Figure 1.3.5d: (below) *Boundary wall in Cemetery View, Moreleta Park* (Author 2020).

1.3.2. Scarcity and the history of South African urban planning

The relationship between constructed scarcity and the pursuit of abundance is evident in South Africa's history, such as in the Natives Land Act of 1913 (RSA 1913). This legislation sought to deal with tension over power and control of mining and agricultural capital in South Africa, by reserving the right to rent or own land to the white population. In addition, the act spatially secured exploitative access to black labour to support the production of capital at a much larger scale (Philip 2014).

In 1948, South Africa saw the election of the Nationalist Party into government, whereby apartheid was formalised on an institutional level. The party's strong "religio-political" Afrikaner nationalist agenda, which sought to further secure the interests of the white Afrikaner

minority in relation to land rights, was evident in the urban policies that followed (Janse van Rensburg 2009). Before the end of apartheid in 1991, the Group Areas Act of 1951 (RSA 1951) and the Black Homelands Citizenship Act of 1970 (RSA 1970) were some of the policies informing disparate spatial planning that critically inhibited the permanence of black citizenship in urban areas (Philip 2014).

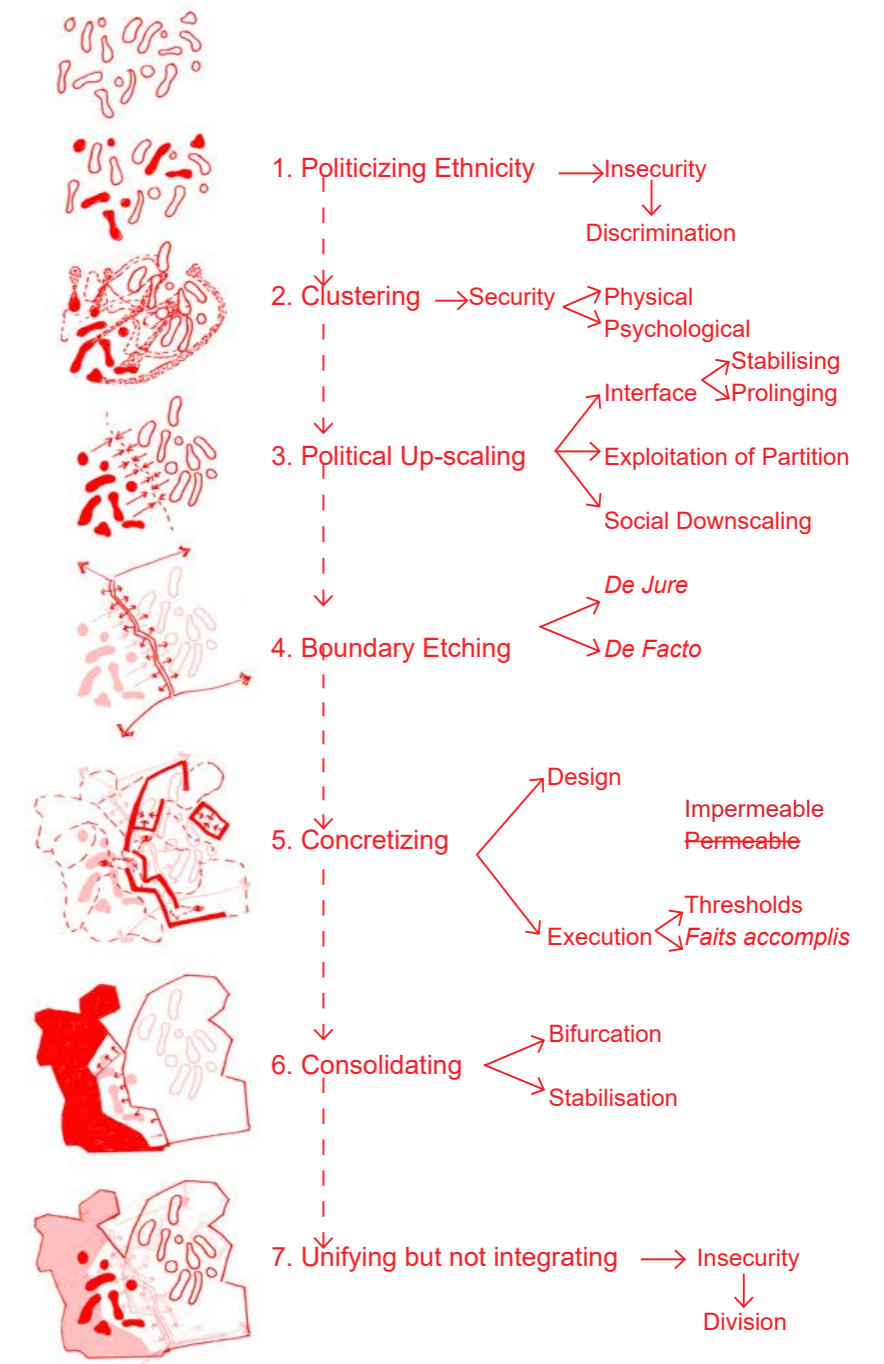
1.3.3. Scarcity, insecurity and spatial division

A firm correlation has been drawn between the insecurity induced by socially constructed scarcity, inter-ethnic tension and the subsequent socio-spatial division that prevails in South African cities. This notion is further supported globally in the study of five other divided cities where the violent spatial division lines that propagate enclosure and



physical separation constitute an attempt to ease insecurity and conflict (Calame & Charlesworth 2012:209) – a repressive assertion of power where there has been a breach in the "urban contract" (normalising power) (Calame & Charlesworth 2012:156). From this, a standard pattern sequence could be identified for

divided cities, acknowledging the significance of socio-political constructs as precursors to physical partitioning, and the importance of addressing this as a prerequisite for real spatial healing (Calame & Charlesworth 2012:205–236).



- Black Population
- Formal Black-African Suburb
- Formal Black-African Homeland
- Informal black-African Suburb
- White Population
- White Suburb
- Indian/Coloured Population
- Indian/Coloured Suburb
- ▨ Industrial
- CBD
- Informal Settlement
- Backyard Shacks
- Gated Community

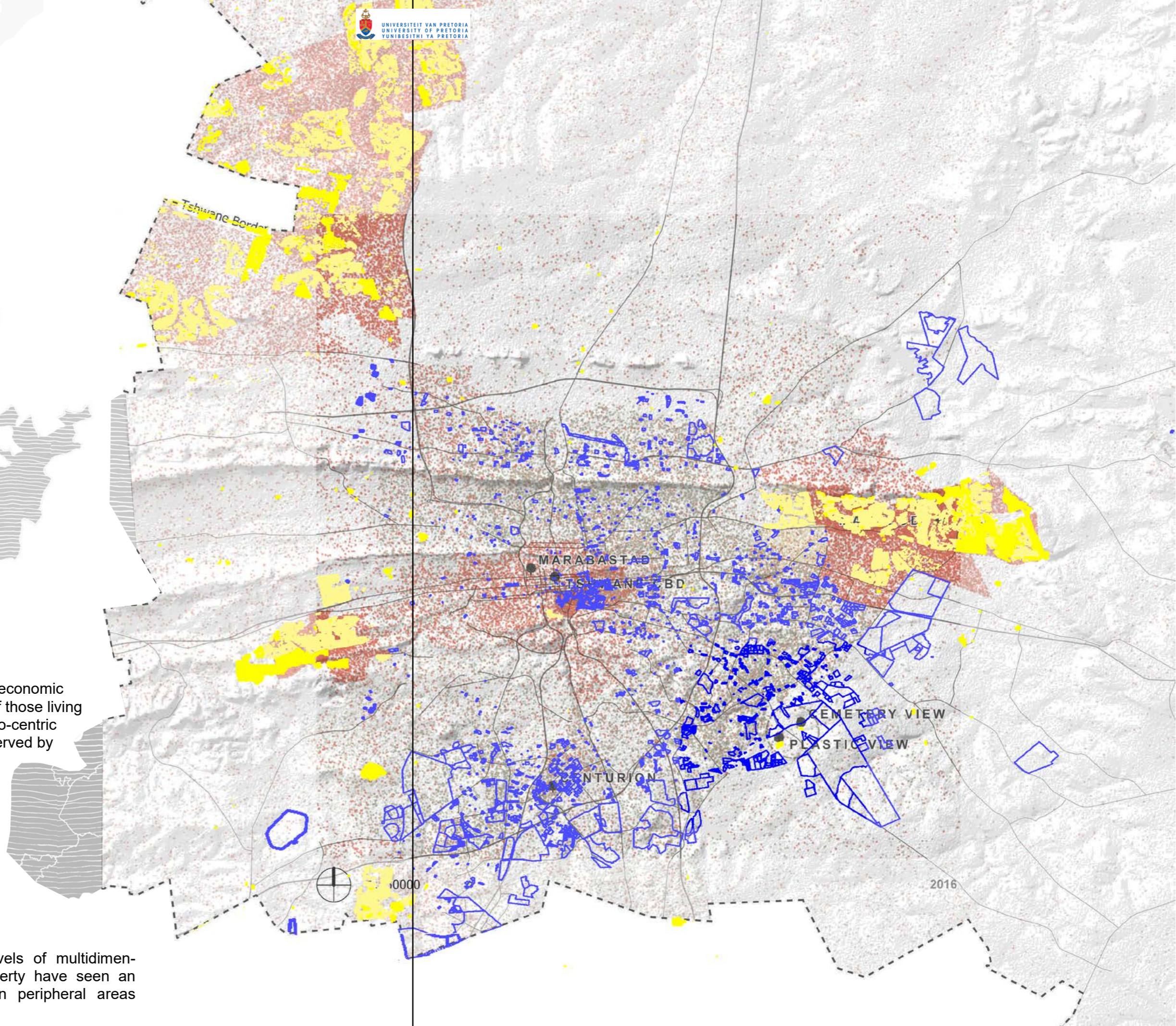


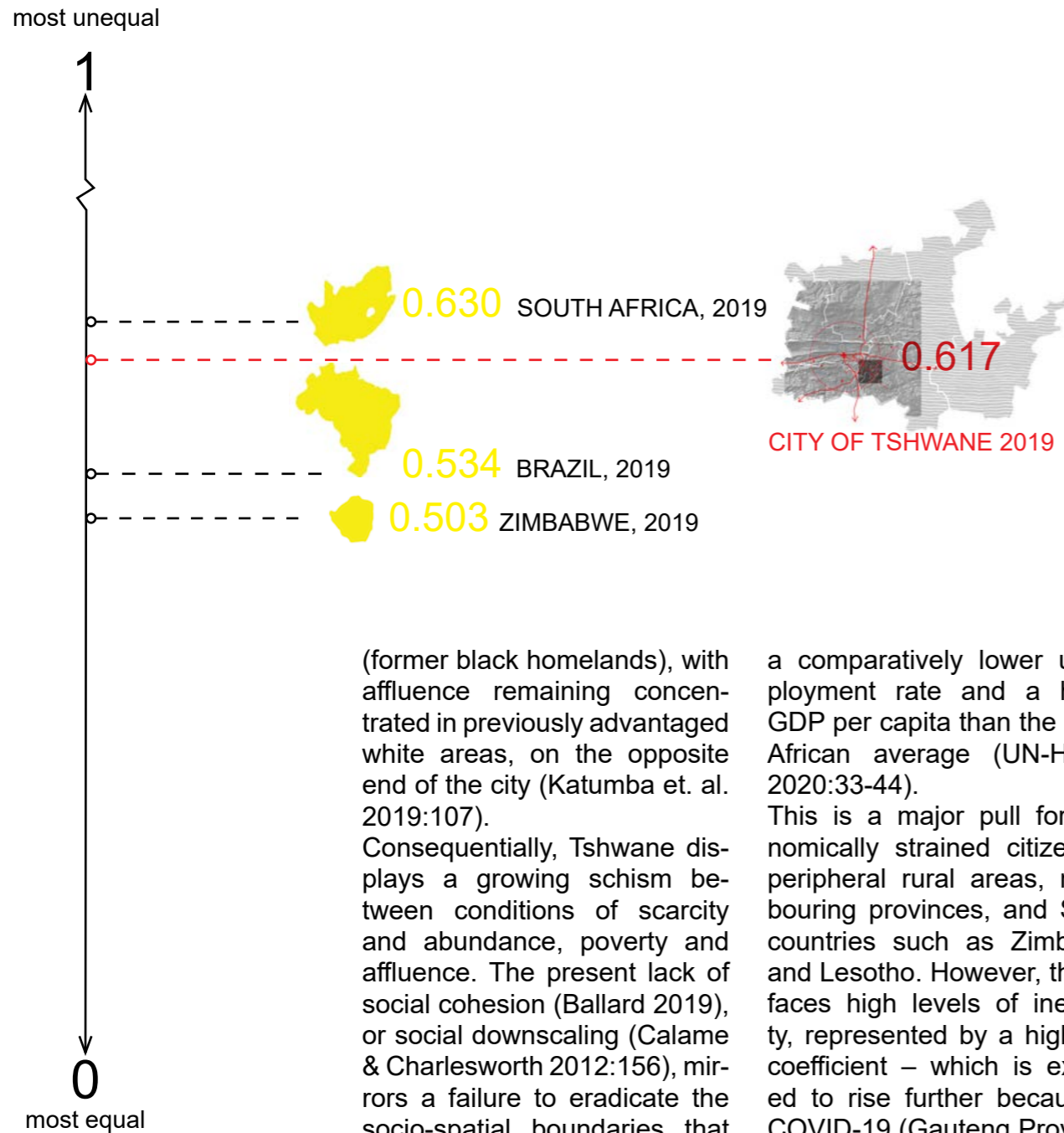
Figure 1.3.6: Locating Pretoria, the divided

1.3.4. The City of Tshwane: Unified but not integrated

Considering current legislative efforts such as the Spatial Planning and Land Use Management Act of 2013 (SPLUMA) (RSA 2013), a shift has been made regarding the planning and facilitation of urban interventions from a legal standpoint (Joscelyne 2015). Despite this, Tshwane remains a deeply divided “dual city” (Horn 2020) marked by continued uneven development,

where the economic interests of those living in the mono-centric core are served by the labour of inhabitants of the marginalised periphery (Horn 2020:5, Peberdy 2017:16).

Hence, levels of multidimensional poverty have seen an increase in peripheral areas



(former black homelands), with affluence remaining concentrated in previously advantaged white areas, on the opposite end of the city (Katumba et. al. 2019:107). Consequentially, Tshwane displays a growing schism between conditions of scarcity and abundance, poverty and affluence. The present lack of social cohesion (Ballard 2019), or social downscaling (Calame & Charlesworth 2012:156), mirrors a failure to eradicate the socio-spatial boundaries that had once served to neutralise perceived insecurity through systemic exclusion and exploitation of a racially discriminated “other”.

Rapid urbanisation without adequate industrial growth and an existing infrastructural deficit is the dominant condition subjected to most post-colonial African cities, resulting in high unemployment and poverty (Pieterse 2011:1).

Despite displaying an inefficient urban form, Tshwane boasts

a comparatively lower unemployment rate and a higher GDP per capita than the South African average (UN-Habitat 2020:33-44).

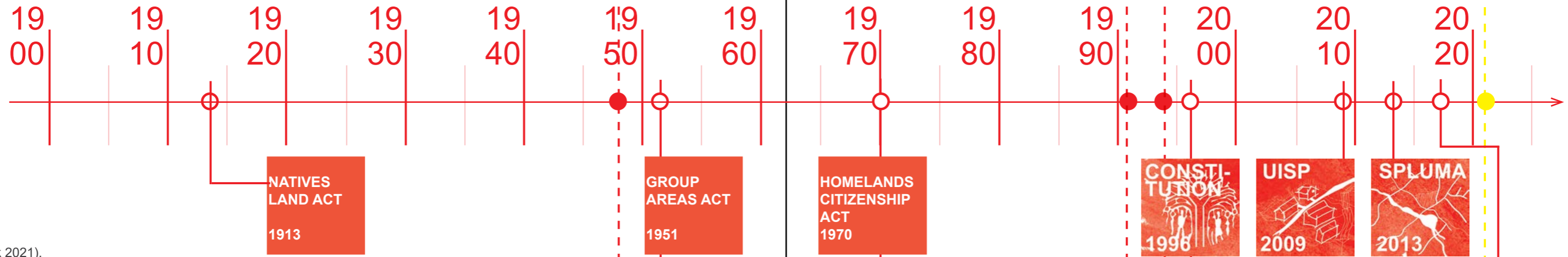
This is a major pull for economically strained citizens of peripheral rural areas, neighbouring provinces, and SADC countries such as Zimbabwe and Lesotho. However, the city faces high levels of inequality, represented by a high Gini coefficient – which is expected to rise further because of COVID-19 (Gauteng Provincial Government 2021:57).

To design integrated cities, the perspectives of an emerging, marginalised, urban majority should be considered to better address social, economic, and geographic exclusion (Landman 2008:212, Pieterse 2011:5, Till 2014, Harvey 2007).

city (Author 2021).
Figure 1.3.7: (above) Graph comparing City of Tshwane’s gini-coefficient to the averages of three unequal countries: South Africa, Brazil, Zimbabwe. South Africa has the highest gini-coefficient, an indicator of inequality, in the world (Author 2021, after Gauteng Provincial Government 2021).

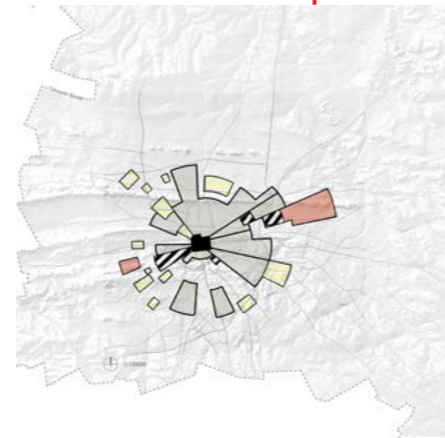
Figure 1.3.8: (right) Women gather in a street in Plastic View, Moreleta Park



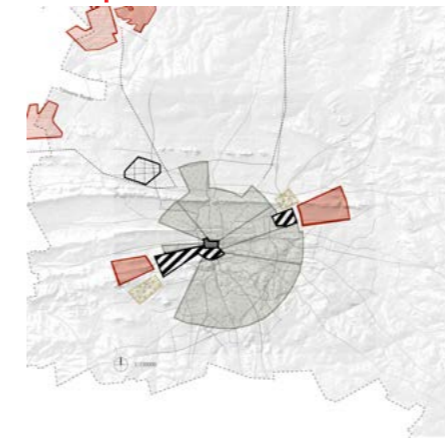


(Kriek 2021).

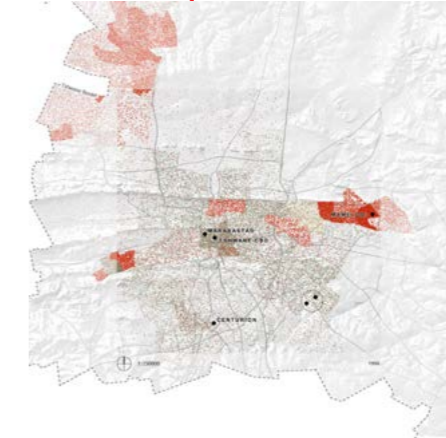
Figure 1.3.9: A timeline of the City of Tshwane's development - with reference to the standard division pattern sequence (Chalame & Charlesworth) and the Social spatial Heuristic (see fig. 1.3.11 on page. 24) (Author 2021).



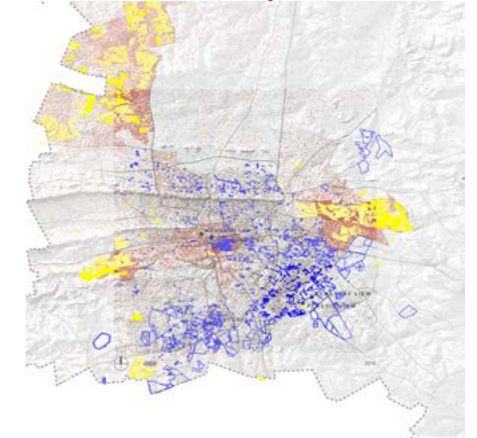
Pre-1950 Pretoria: **Segregated City**
(Davies 1981, Horn 2020, Hamann 2015 after Olivier & Hattingh 1985)



1970-1984 Pretoria:
Apartheid City & Seperate City
(Hamann 2015 after Olivier & Hattingh 1985)

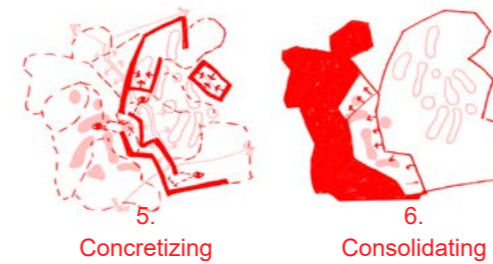
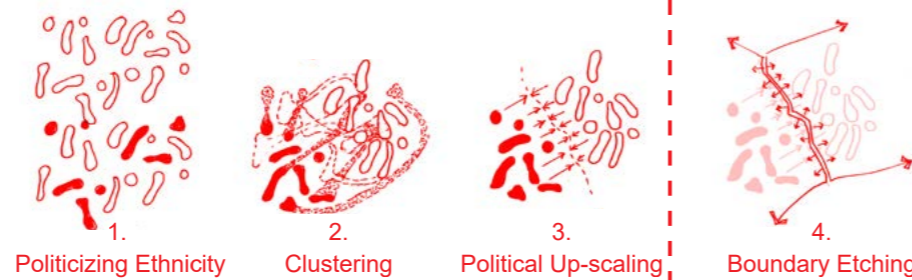


1996 Pretoria:
Post-Apartheid Unified City
(De Bruin 2020 in UP Dept Arch Hons: Moreleta Park Integration Project 2020a)



2016 - Present Pretoria: **Post-Apartheid Divided City; "Unified"**
(Author 2021, Data from GCRO database, Basemap from De Bruin 2020 in UP Dept Arch Hons: Moreleta Park Integration Project 2020a)

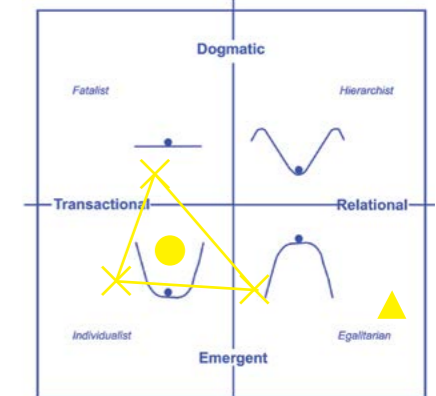
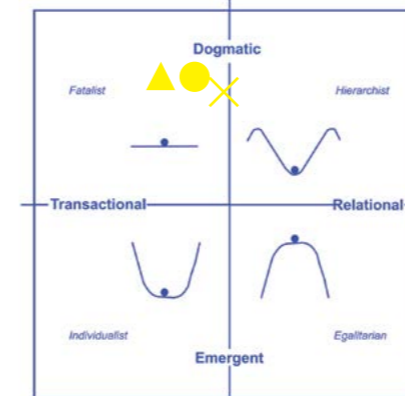
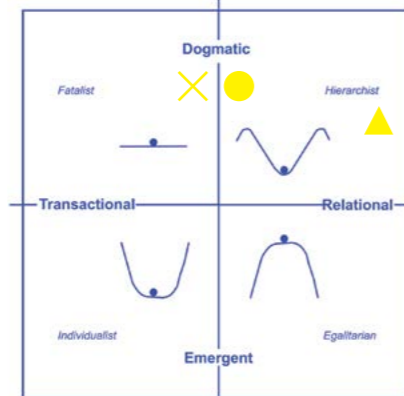
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civic imperialism

ethnic nationalism

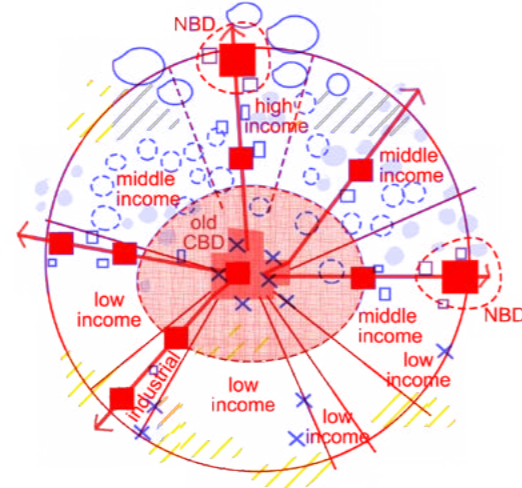
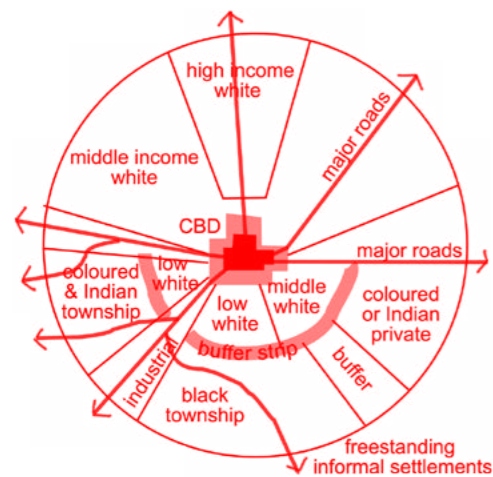
civic nationalism



1948 Apartheid Begins

1991 Apartheid Ends

1994 Democracy

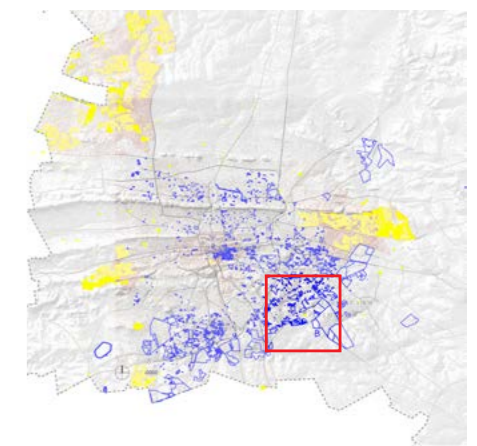
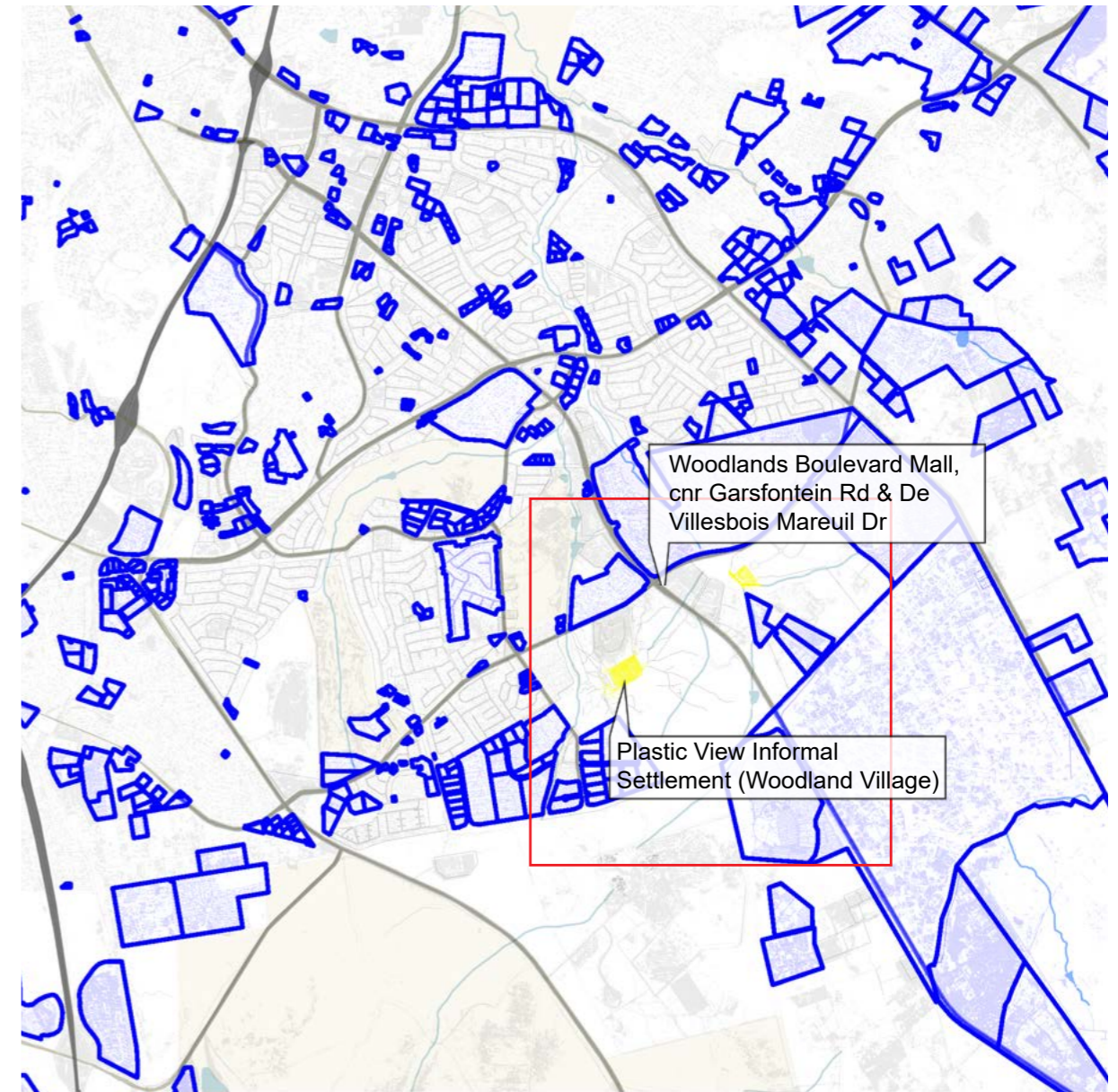
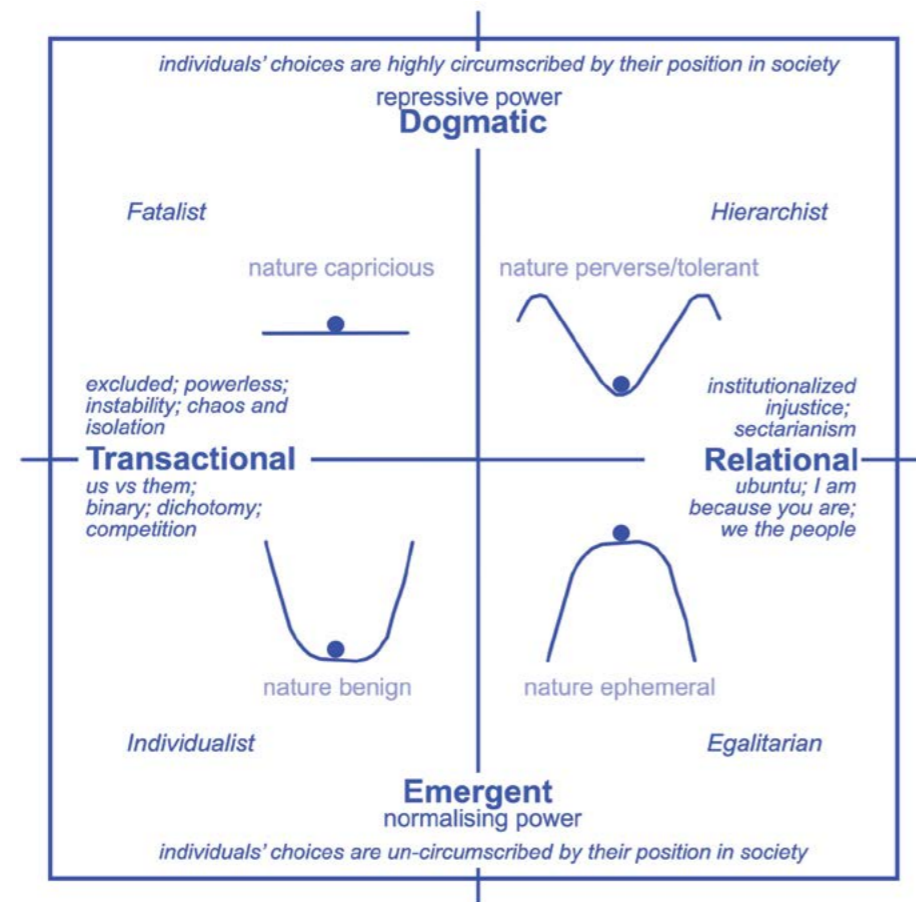


1.3.5. Gated and informal communities: the anticipation versus the experience of scarcity

Since the 1990s, Tshwane's redlines (ethnic divides) have merely been replaced and perpetuated by green lines (economic divides) (Landman 2004:151, Calame & Charlesworth 2012). Old barricades – the products of scarcity and the resulting systems of dogmatic prejudice – sit beside new exclusionary forms of enclosure. The South African gated community is argued as a response within the city core to the threat of increasing crime, alongside other socio-economic issues, such as poverty and unemployment (Landman & Schonteich 2002). This, however, also coincides with the constitutionally capacitated flow of racially and socio-economically diverse groups into previously exclusively white areas (Section 9(2) of the

Constitution of the Republic of South Africa No. 108 of 1996), revealing the lingering bias that drives defensive architecture. This suggests that where there is a transactional, binary condition, little social cohesion, and the anticipation of inevitable

scarcity we build walls. Thus, it becomes helpful to assess differing political, social and spatial paradigms with a unified socio-spatial heuristic (adapted from Wildavsky's (1957:6) models of four cultures).



Legend
 Informal Settlement
 Backyard Shacks
 Gated Community

Figure 1.3.10a: (far left above) *Apartheid City* (redrawn after Davies, as adapted by Napier et. al 1999, & Landman 2006).

Figure 1.3.10b: (left above) *Gated communities and the new apartheid city* (redrawn after Landman 2006).

Figure 1.3.11: (left) Right: A socio-spatial heuristic for assessing conceptions of power and scarcity with respect to social constructs (paradigm, worldview) legislation (political paradigm, policy, frameworks) physical constructs (architecture, urban morphology) (Author 2021 after Wildavsky 1957:6).

Figure 1.3.12: (right above) *Gated communities in Pretoria east* (Author 2021, adapted from author in Moreleta Park Integration Project 2020).

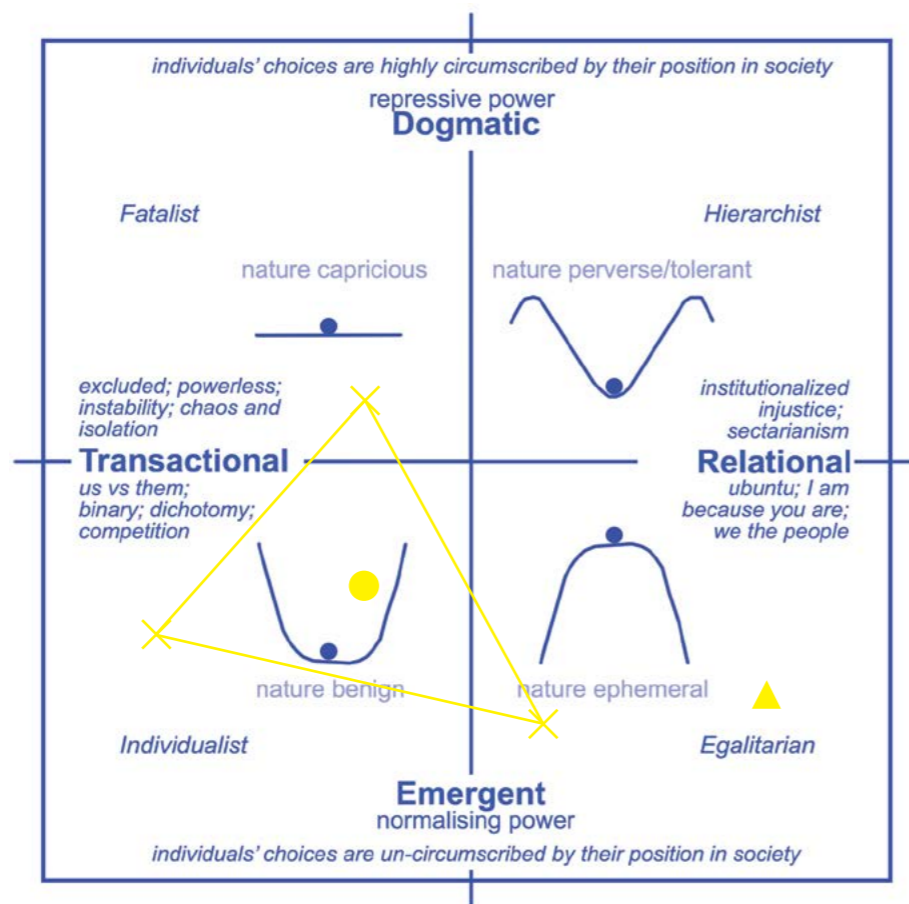


Figure 1.3.13: (left above) Houses in Woodhill Golf Estate, Moreleta Park (Kriek 2021).

Figure 1.3.14: (left) Socio-spatial heuristic broadly displaying the social, political, and spatial values that manifest gated communities and informal settlements (Author 2021 after Wildavsky 1957).

Figure 1.3.15: (above) Houses in Plastic View informal settlement, Moreleta Park (Kriek 2021).

With affordable housing located far from work, education opportunities, and amenities, many urban migrants resort to dwelling informally in temporary, self-built or rented homes on unoccupied land-parcels closer to the city core, with little to no service provision (Perold et al. 2019:96). Informal settlements are characteristically positioned close to these opportunities as a temporary steppingstone or gateway into economic advancement – a solution to the burden of distance (previously a strategic buffer) and the resulting high

transport costs (Victor 2009, Peres & du Plessis 2013). Faced with a more physical, manifestation of scarcity – often resulting in the infringement of the non-derogable right to human dignity (Section 10 of the Constitution of the Republic of South Africa No. 108 of 1996) – informal urban dwellers are forced to hyper-optimize spaces, within and between largely transient building structures in anticipation of the risk of forced removals (Perold et al. 2019:96).

We, the people of South Africa,

Recognise the injustices of our past;

Honour those who suffered for justice and freedom in our land;

Respect those who have worked to build and develop our country; and

Believe that South Africa belongs to all who live in it, united in our diversity.

We therefore, through our freely elected representatives, adopt this Constitution as the supreme law of the Republic so as to –

Heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights;

Lay the foundations for a democratic and open society in which government is based on the will of the people and every citizen is equally protected by law;

Improve the quality of life of all citizens and free the potential of each person; and

Build a united and democratic South Africa able to take its rightful place as a sovereign state in the family of nations.

May God protect our people.

*Nkosi Sikelel' iAfrika. Morena boloka setjhaba sa heso.
God seën Suid-Afrika. God bless South Africa.
Mudzimu shatutshedza Afurika. Hosi katekisa Afrika.*

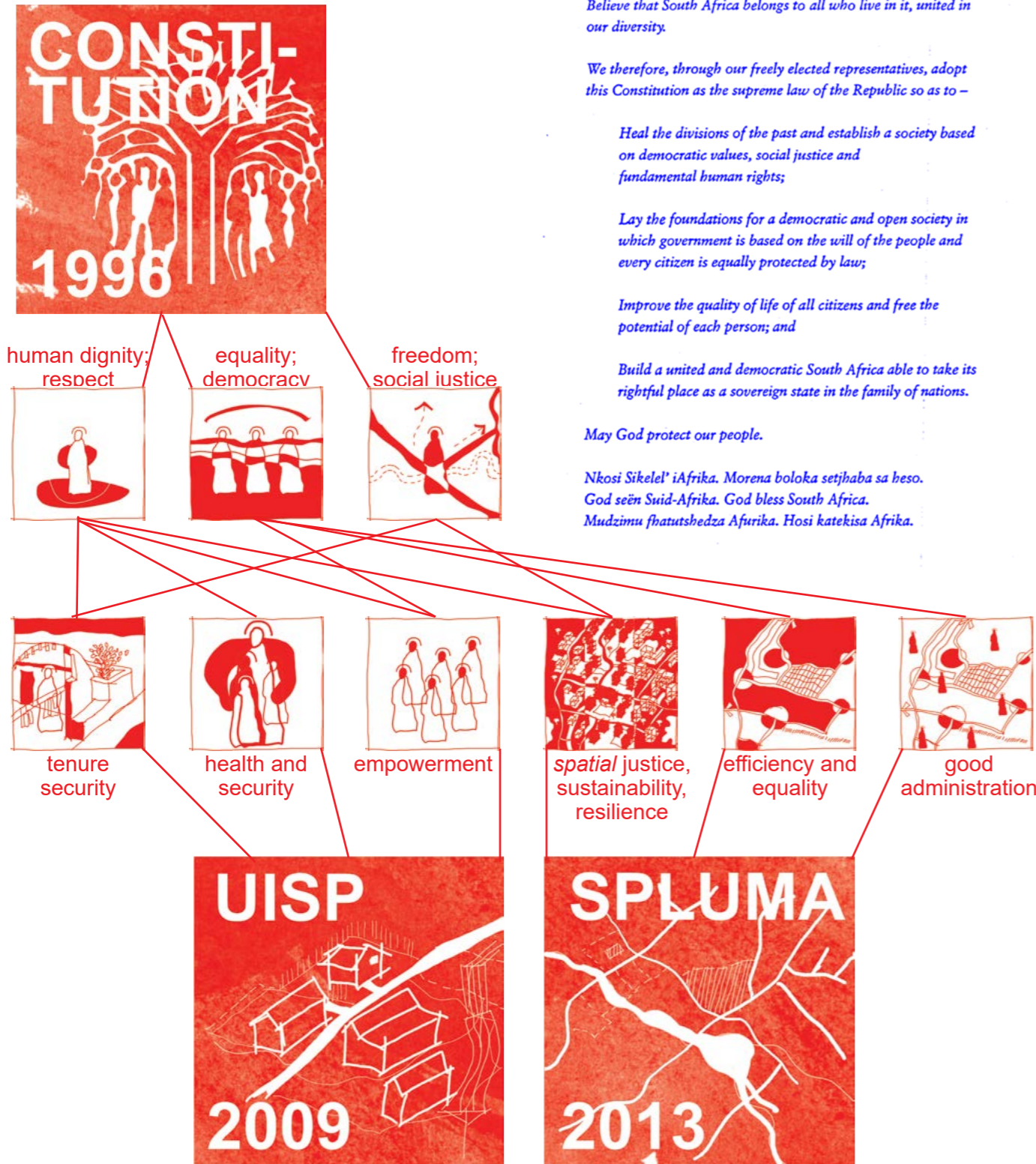


Figure 1.3.16: (far left) *Key values and intentions of relevant policy and legislation* (author 2021).

Figure 1.3.17: (far left) *Preamble to the Constitution of the Republic of South Africa No 108 of 1996* (RSA 1996).

Figure 1.3.18: (left) *Gumpole roof and support structure in Plastic View, Moreleta Park* (Kriek 2021).

1.3.6. The difficulty in translating policy to empowerment

Policy-driven efforts have failed when matched against their goals and values. One such example is the application of the Upgrading of Informal Settlements Policy (UISP) (RSA 2009), a volume of the National Housing Code dedicated to in-situ upgrading. Particularly, the policy's objective of providing empowerment has been dampened by inaction from relevant municipalities, which raises doubt on the viability of such processes to empower, especially when these policies are inaccessible to those they aim to benefit. With respect to land-tenure security, as a pre-

cursor to legitimising and developing informal settlements, Neuworth (2005) notes that, it is necessary to look beyond the demarcation of land as a means of allocating property rights.

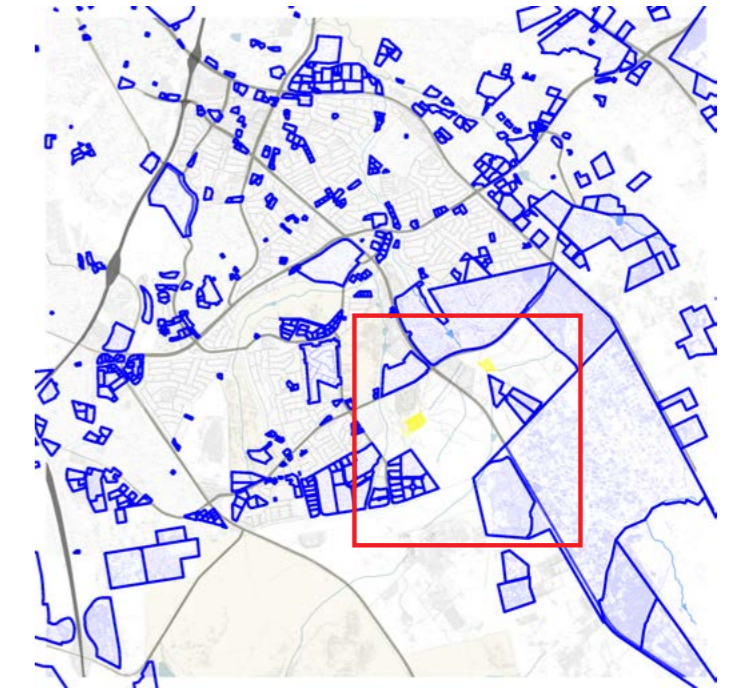
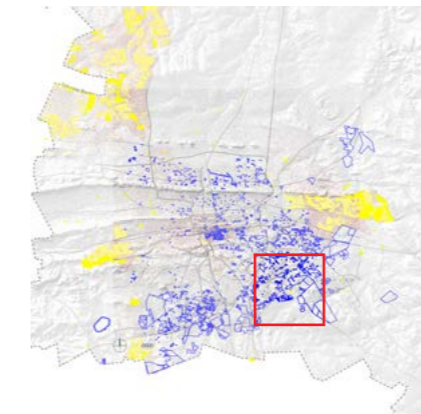
Furthermore, the gap between legislation and practice could be attributed to the lack of social transformation, as it is through this lens, that decision-makers engage with the policy. This is especially true in the case of SPLUMA (RSA 2013), where council approval of development applications is subject to criteria far removed from the context of a project, as well as the larger principles they aim to enforce. Perhaps an appropriate alternative lies beyond current form

and static performance-based codes, within a more holistic criteria for regulating development in the built environment. In undertaking the goal of integrating our cities, the decision-making process at a precinct, or even neighbourhood, level would need to accommodate the needs of informal urban dwellers to use the city to achieve their goals (Simone 2006). This requires a shift in our understanding of the "right to the city" (Lefebvre 1968) from being merely "served by the city", to having the capacity to "pursue multiple aspirations"(Simone 2006:323).



Figure 1.3.19: (left) Gated community and informal settlement in Moreleta park, site plan sketched (De Bruin & Katranas (author) & Kriek 2021)

Figure 1.3.20: (right) Locating Moreleta Park (Author 2021, adapted from author in Moreleta Park Integration Project 2020).



Legend
 Informal Settlement
 Backyard Shacks
 Gated Community

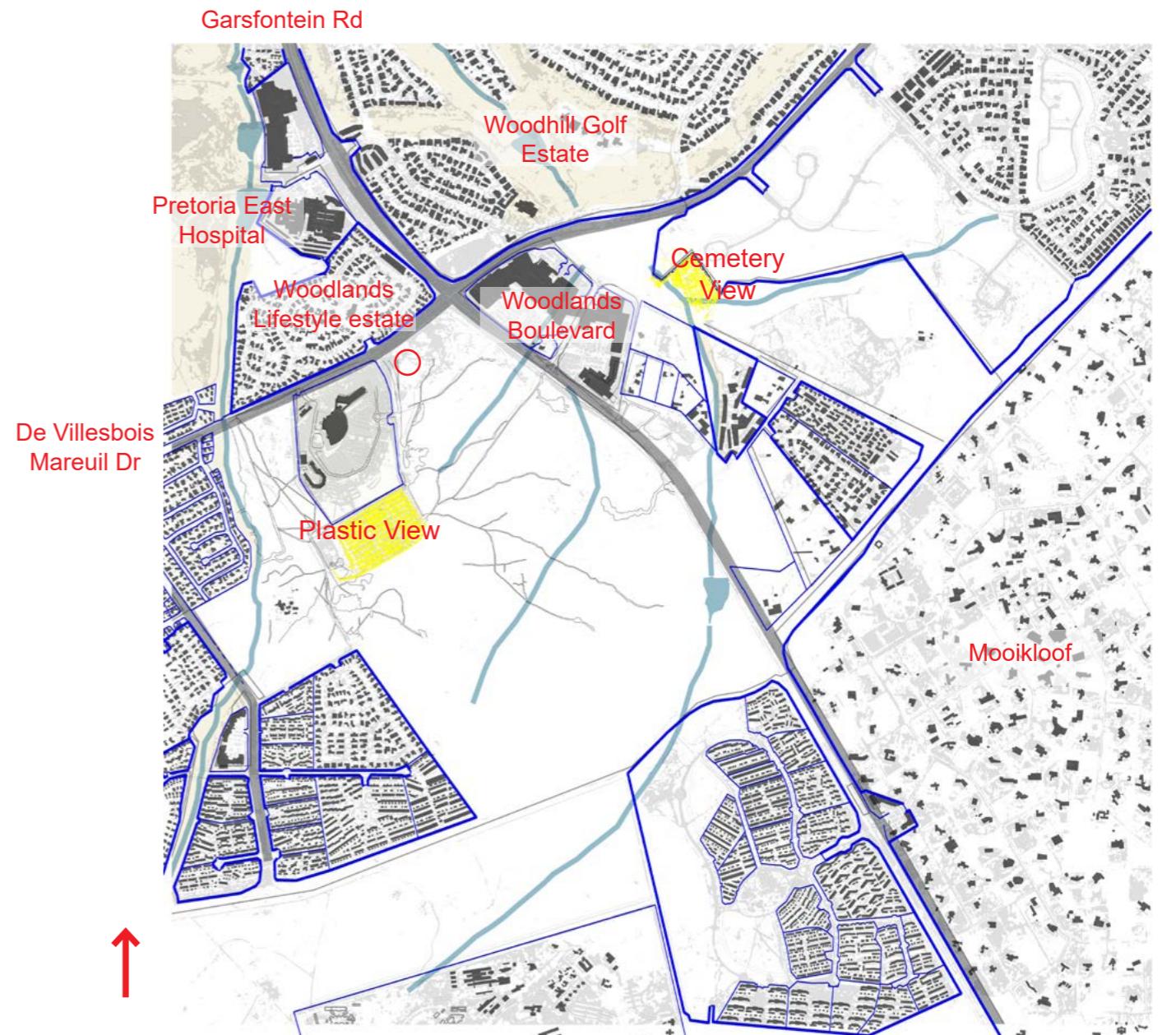
1.3.6. Moreleta Park: Demonstrating the anticipated needs and conditions for the future South African city

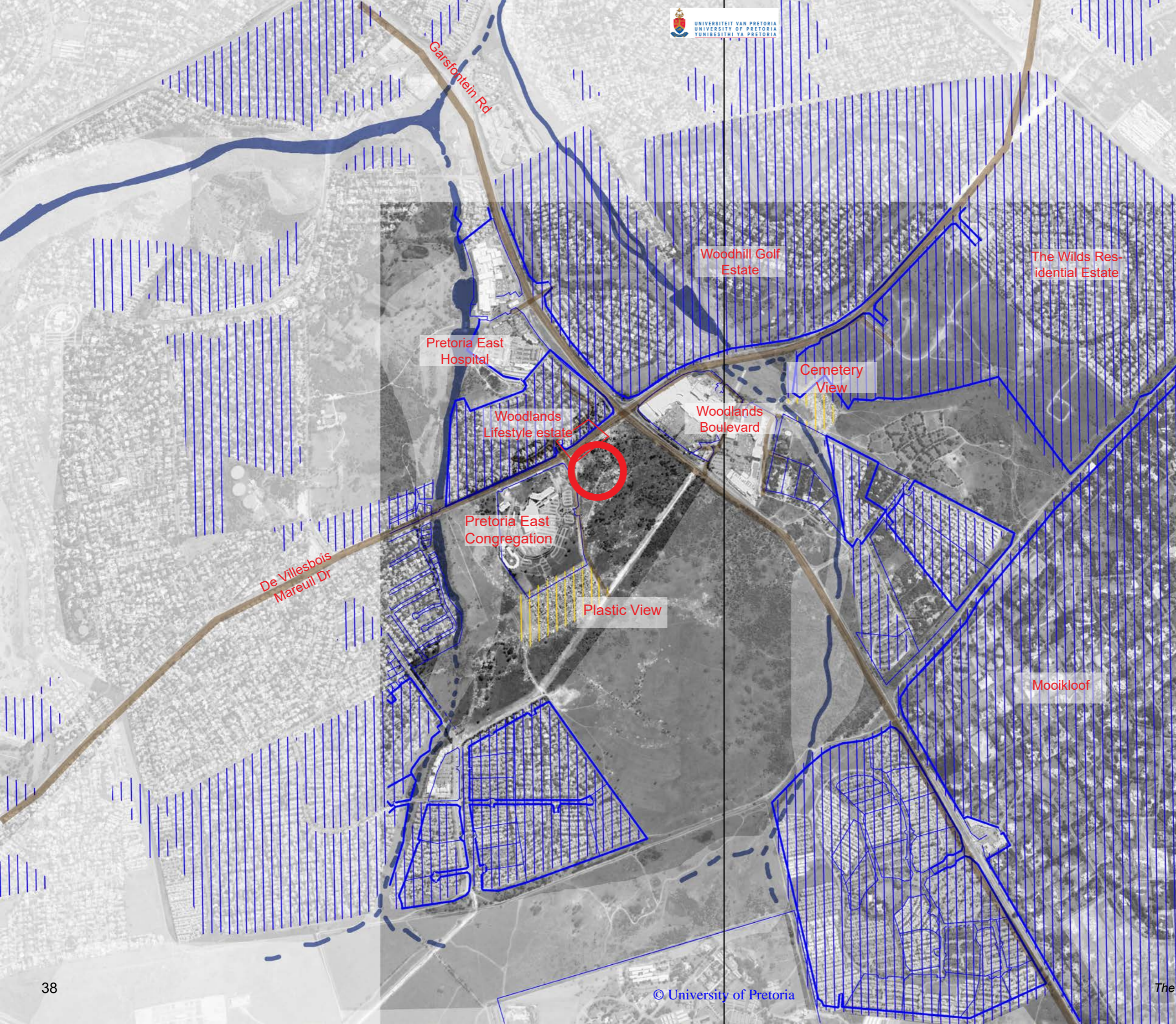
In this investigation, the spatial phenomena of gated communities and informal settlements has become an important case study, and a potentially powerful condition in which to postulate the potential of architecture regarding integration. Even more fascinating are the instances where these two types of communities are “facing off” on each other’s very doorsteps, where an architecture of abundance meets an architecture of scarcity.

This is evident in Moreleta Park, a residential suburb situated to the east of Pretoria, where the flow of urban sprawl collides with that of urbanisation – where two informal settlements have emerged from and within the residual land and resources of gated communities.

Despite the unavoidable display of socio-economic and spatial polarisation throughout the area, there also lies the ingenuity and agency of our excluded urban poor that enable their survival between fragments of the stratified, exploitative “formal” city (Simone 2006:323). The very existence of informal settlements exhibits an unideal solution to large-scale socio-spatial injustice that policy makers and high-level government actors have failed to remedy.

In this case, the threat and fear of scarcity – that we so desperately attempt to “fix” through architecture – seems to obscure what is arguably the opportunity of scarcity. Till (2014) argues that a shift away from this “problem-solving paradigm” towards one of spatial agency is necessary so that the underlying root causes and behaviours can be understood and engaged beyond just the isolated symptoms or “problems” (2014:11).





“Design agency does not presume to solve problems in relation to scarcity; it only aspires to make the best possible sense of the prevailing and often competing conditions. Is it necessary to build that building in the first instance? Are the parameters by which the project is defined the most appropriate ones? Can one measure things in other ways? What and who constructed the scarcity? All of these questions require one to challenge the brief as an a priori truth, intervening as a collaborative designer at the very earliest stages before other factors have overdetermined the project. Agency starts by questioning the original premise, and so what might first be seen as a problem to be fixed becomes a new way of looking at things.”
(Till 2014:11)

Figure 1.3.21: (left) Chosen site indicated in red, De Villebois Mareuil Road, Moreleta Park (Author 2021, Google Earth Image).

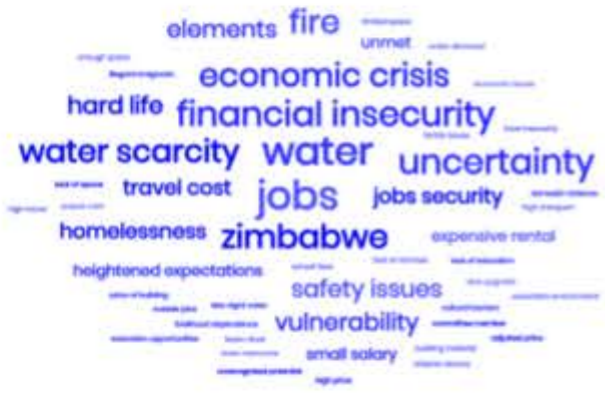
Figure 1.3.22: (pg 40-41) Scarcity in Moreleta Park (Author 2021 after Moreleta Park Integraton Project 2021).

Figure 1.3.23: (pg 42-43) Site photographs, De Villebois Mareuil Road, Moreleta Park (Author 2021, Kriek 2021, De Bruin 2021)



MAP THE SCARCITY:
MORELETA PARK

NEOLIBERALISM



we don't have enough money for rentals out there. People usually have their work. We are workers for those around us. We have got our permanent homes somewhere else. Some go every week, some live in Zimbabwe, Mozambique, Lesotho. They are looking for a cheap place to stay close to where they work to make more money for their families.

Very unfortunately Moreletapark is becoming a slum, with all the illegals and businesses just popping up everywhere, people loitering on every corner, no service to speak of. We pay taxes for security and its just pay, pay. Hopefully I can sell my property before it collapses (sic) totally.

- US vs THEM
- INSECURITY
- SCARCITY OF RESOURCES
- SPATIAL DIVISION & FORTIFICATION

currently we are running short on water - place will become filthy. Filth is not good. I am a human being like you.

Where are you from? Has anybody told you about the scarcity of water? We have many problems here. Safety issues. Priority is these kids. Diseases caused by lack of water and sanitation. Sanitation is the first priority. After that, education.

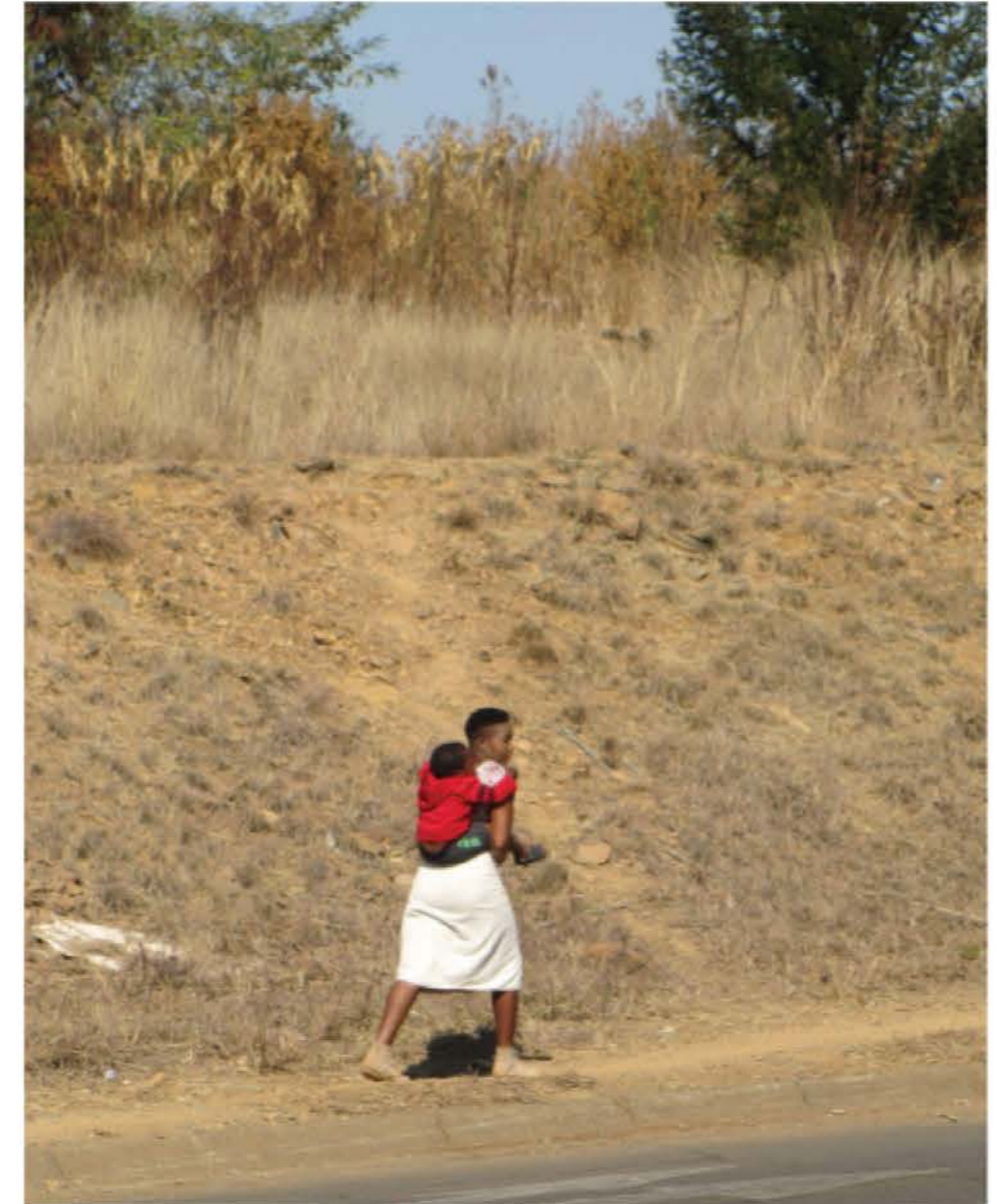
sometimes, my friend, you are going to get R10 000, me I'll get R500, but the way we use it, that money, [is what matters]

Room is better than sleeping in a bush

"SCARCITY" AS A PHYSICAL CONSEQUENCE

SCARCITY AS A SOCIAL CONSTRUCT

THEORETICAL LENS



ARCHITECTURE IS A SOCIAL PRODUCT

Figure 1.4.1: (below) A spazashop window in Plastic View, Moreleta Park (Kriek 2021).



1.4. THE OPPORTUNITY OF SCARCITY

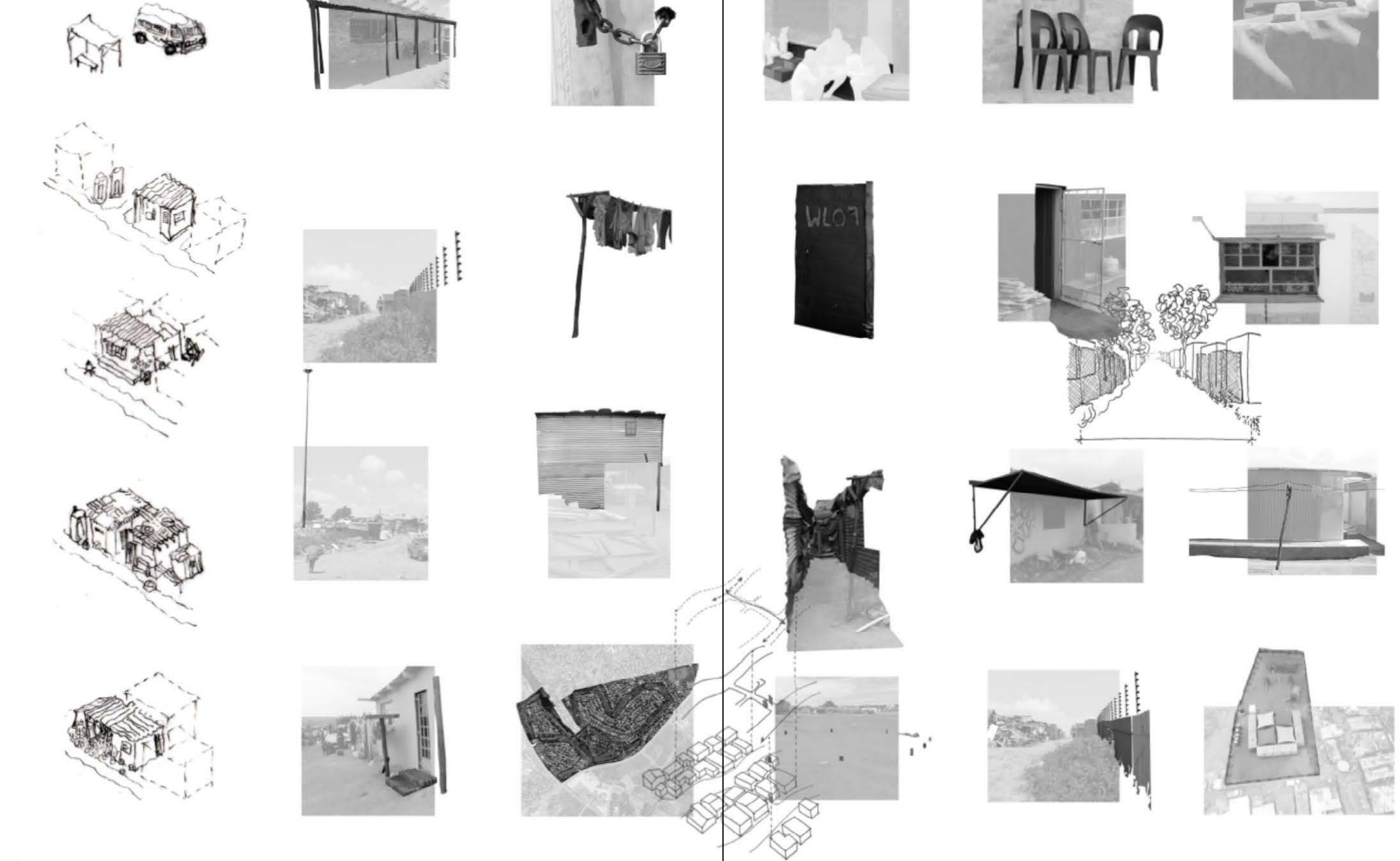
1.4.1. Towards spatial agency

To promote integration, architecture will need to better address scarcity. By reframing scarcity and acknowledging the complex facets of its social production, new opportunities may emerge in relation to the issues of injustice, segregation and schisms between policy and practice (Till 2014:11). Central to this notion is the idea that architecture is a “social product” (Lefebvre 1991:36). In this light, spatial agency is an architectural movement motivated by a desperate need to rethink the object-centric, market-driven, and sole-authored approach that constitutes mainstream architectural practice. This promotes a shift towards a co-authored, inclusive process that engages social structures to yield spatial freedoms and capabilities to the end user (Awan et al. 2011, ASF 2010:104-5). Thus, the conceptualisation of

architecture should be further explored, not only through the lens of contemporary modes of urban fragmentation, such as gated communities and the grass-root “disturbances” (Du Plessis & Peres 2013) of informal settlements, but also through an understanding of social constructs such as scarcity. In addition to engaging the socio-spatial complexities both on and off site, this understanding constitutes a responsibility to collaborate with the various actors involved.

Spatial agency positions the architect’s role as a facilitator of authentic dialogue in service of marginalised groups (Awan et al. 2011). Through the acknowledgment of social boundaries (normalising power), architecture can better address the physical boundaries that manifest and suggest a more repressive form of power (Foucault 1972). Hence, this project will follow a participatory design approach, through participatory action research (Howard & Somerville 2014).

Figure 1.4.2: (right) Excerpt from 'A Socio-Spatial Lexicon for the Future City' showing the hyper-optimisation of space, as well as threshold and boundary conditions (Author in Moreleta Park Integration Project 2021).





1.4.2. Unpacking the phenomena of space, materiality and time

Architecture or “dwelling” (dasein), as it exists within the landscape between earth and sky (Heidegger 1954, Heidegger 1993:351), serves as an artificial boundary condition or “in-between” (Norberg-Schulz 1976:3–10) that is leveraged to manifest contemporary socially constructed dichotomies. In the context of the South African city, this has been likened to a colonial construct, where a fixation on the object and the individual (“Western philosophy”), as opposed to experience and the collective (“African philosophy”), has rendered the spatial landscape as highly controlled,

commodified and void of the agency and opportunity that a more “dynamic city” may present (Van Rensburg & Da Costa 2008).

The gated community exhibits “modern capital man’s” commodification and compartmentalisation of time, space and architecture – contrasting the “frightening ephemerality” (Pallasmaa 1999:79) of materiality expressed by neighbouring informal settlements (Landman 2006; OMM Design Workshop 2007). Architecture’s turbulent relationship with time is reflected in its relationship with scarcity (Harries 1982:59, Till 1996, OMM Design Workshop 2007). While this manifestation of architecture is toxic to the greater urban context, it is rooted in

a universal need for security when shaping one’s domicile in space (Pallasmaa 199, Harries 1982, Calame & Charlesworth 2012:209).

Therefore, it would be ineffective to simply oppose man’s current self-preserving need for enclosure. Rather, we should focus on how architecture can be constructed to fulfil this need without imposing and preserving potentially harmful ideas of the present on the future. There is opportunity to question how existing infrastructures of division can be modified to be easily appropriated by their inhabitants in the present and future city.

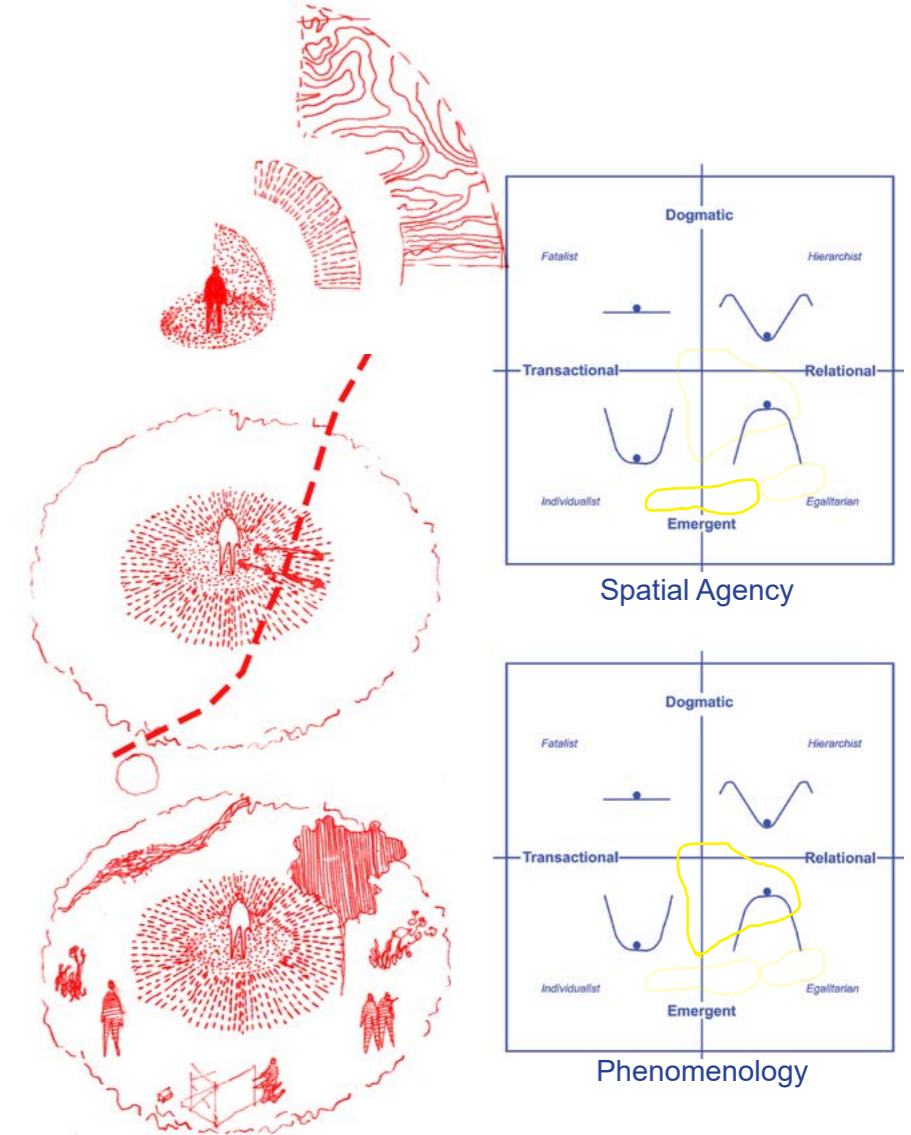


Figure 1.4.3: (left) *The tower of Babel* (Breugel the Elder 1564).

Figure 1.4.3: (right and below) *Architecture as domicile in space, and boundary condition* (Adapted from author 2020).

Figure 1.4.4a: (far right) *Locating spatial agency discourse* (Author 2021 after Wildavsky 1957).

Figure 1.4.4b: (far right) *Locating phenomenology in architecture discourse* (Author 2021 after Wildavsky 1957).

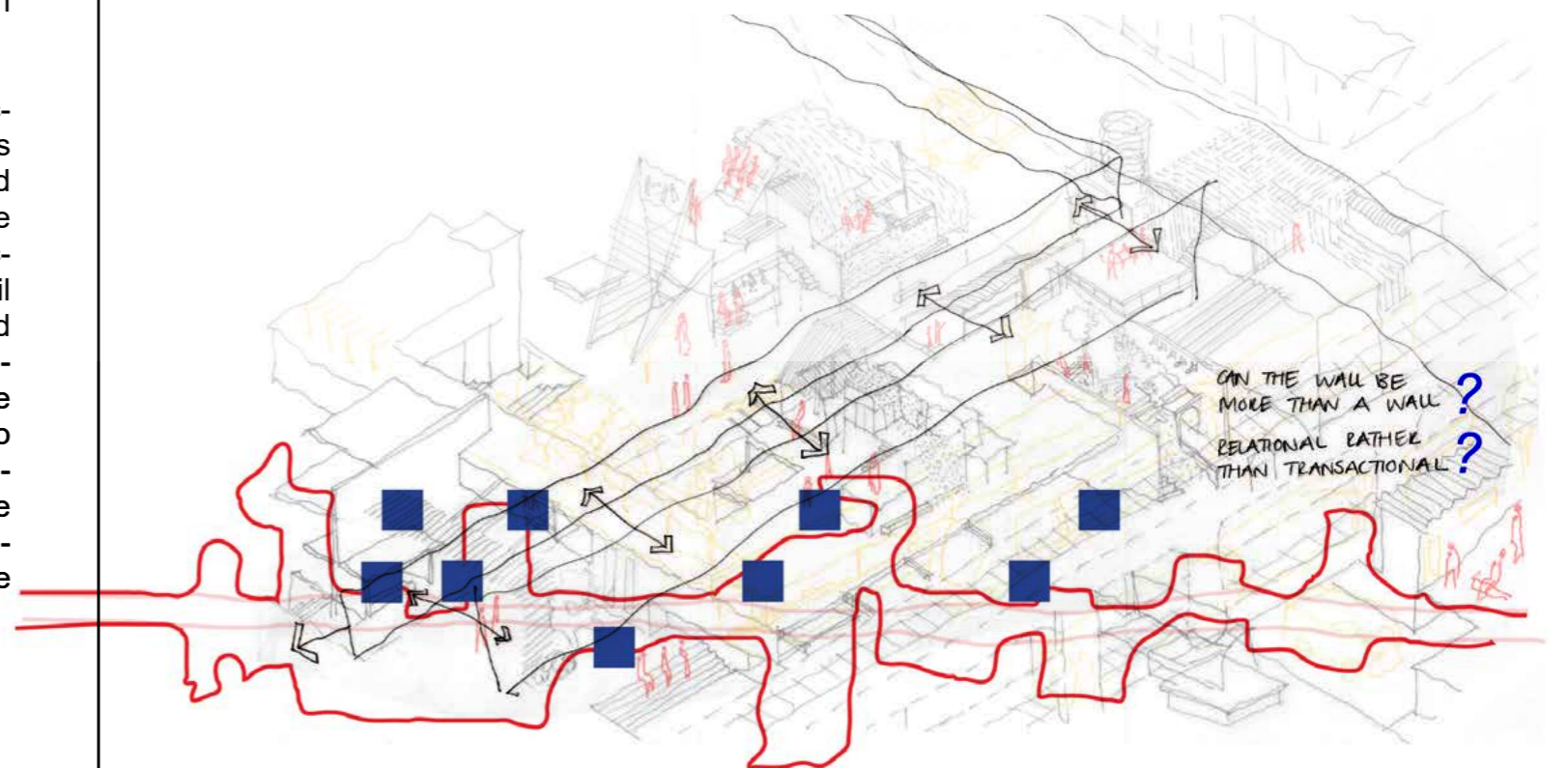


Figure 1.4.4c: (below) *Locating the ecological paradigm* (Author 2021 after Wildavsky 1957).

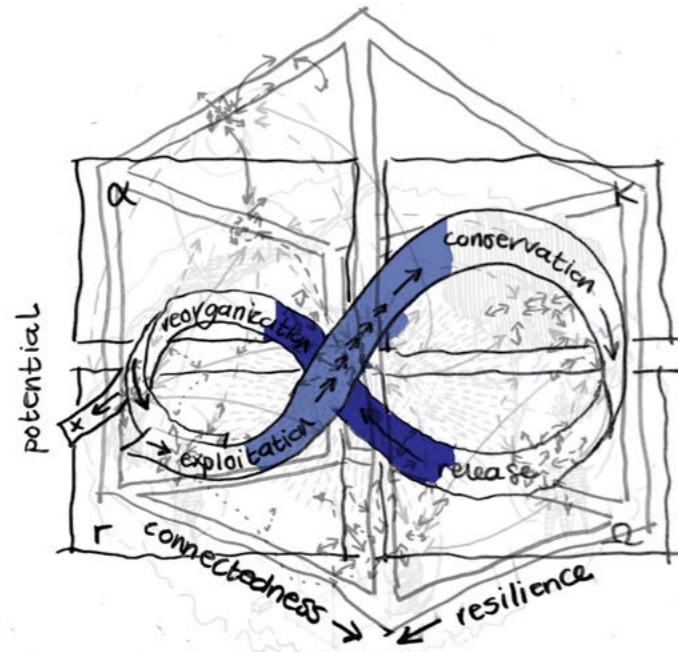
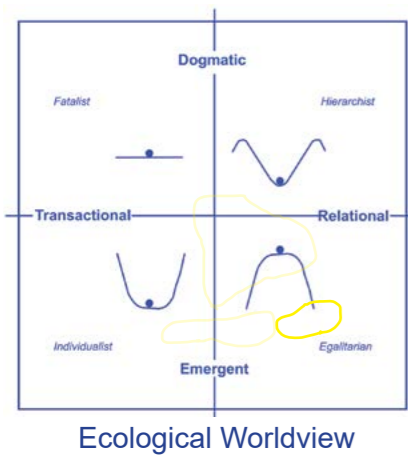
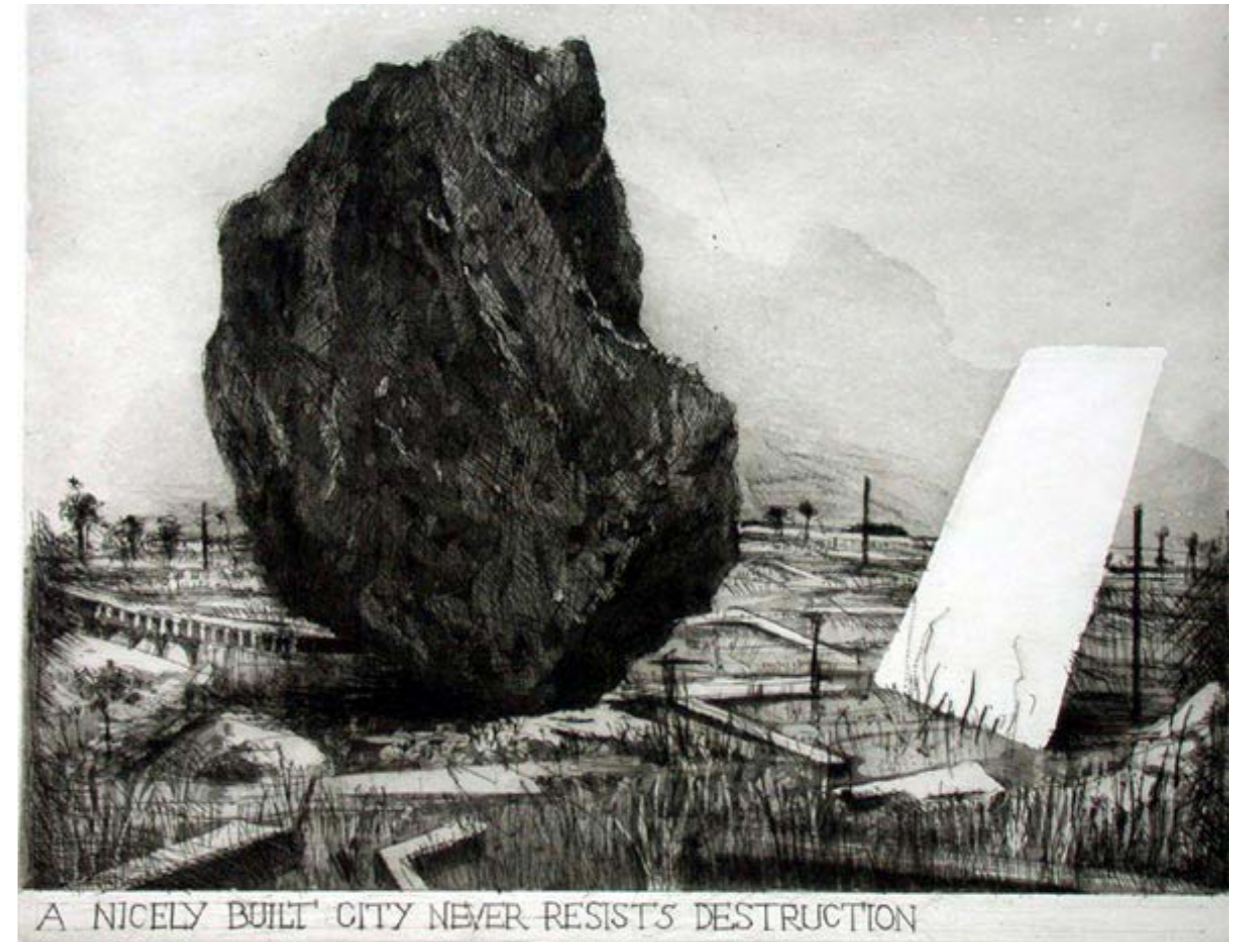


Figure 1.4.5: (right) *The Adaptive Cycle* (Author 2020 after Holling 2001).

Figure 1.4.6: (far right) *A Nicely Built City Never Resists Destruction* (Kentrige 1995).



1.4.3. The question of scarcity and architecture

The ecological worldview posits that change begins with critically assessing how one sees the world and understanding one's role in relation to its systems (Mang et al. 2016). Accordingly, phenomena are understood in terms of their complex relationships, rather than as static outcomes or objects (Hes & Du Plessis 2016). We as actors should thus shift to a relational, rather than a transactional, connection with the world (Mang et al. 2016) to depart from the "us vs them" rhetoric that shapes our fear of time and scarcity. Panarchy follows this conceptualisation of change, and con-

siders the dynamic, relational organisation of systems, across various nested scales of space and time (Holling 2001). This can be visualised as the adaptive cycle, which anticipates change, and the nature thereof, by virtue of the system's connectedness, resilience, and potential at any given time. These properties shape the perpetual trajectory of systems as they move between four events (Exploitation, Conservation, Release, and Reorganisation). Holling (2001) explains that the adaptive cycle embraces the juxtaposition between "growth and stability" and "change and variety".

While change may be inevitable, under more resilient conditions, violent change does not have to be. This further contests boundary as a mono-functional defensive tool, because the pursuit of protecting oneself from scarcity and ephemerality, without reconsidering the toxicity of these constructs to begin with, inadvertently effects the doom believed to be so imminent.

The remaining spatial inequality present in South African cities is evidence of the failure of architecture, to provide closure against ephemerality and scarcity. Ultimately, time promises that these seemingly permanent and artificial structures will eventually meet the obsolescence they anticipate – if not through graceful approach

or decay, then through violent demolition of contested space. One may argue, that architecture conspires, just as any other thing which is subject to time, to participate with natural cycles of decay and growth – and this should be considered from the beginning of the design process, as opposed to being merely a factor that requires prevention or remedy. By shifting the role of architecture from "answer" to "question", the opportunity for heightened agency and dialogue is promoted between all actors on a systemic level. The individual agency of those living in our cities, and awareness of this agency, is key in translating South Africa's altruistic institutional values into practice.

This raises the following questions:

- (1) How does the social construct of scarcity manifest itself in the architecture of informal settlements and gated communities in Moreleta Park?
- (2) How can the co-making of architecture transform the relationship between scarcity and architecture to promote spatial healing in the polarising context of Moreleta Park?

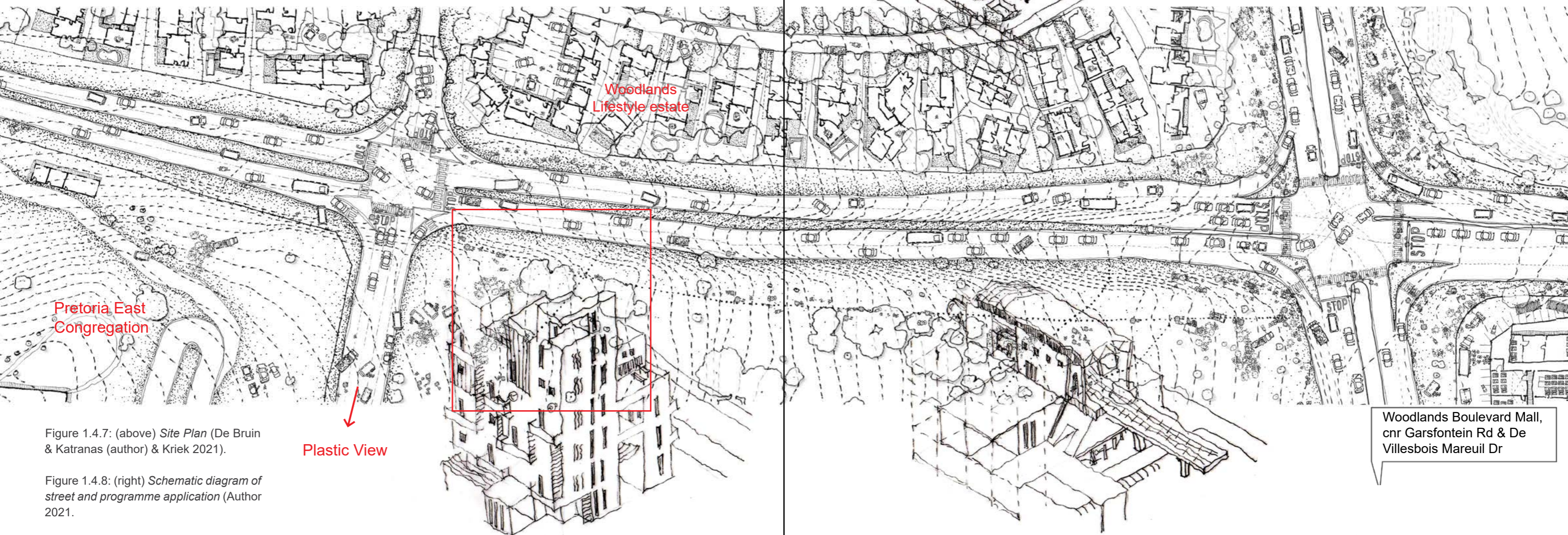


Figure 1.4.7: (above) Site Plan (De Bruin & Katranas (author) & Kriek 2021).

Figure 1.4.8: (right) Schematic diagram of street and programme application (Author 2021).

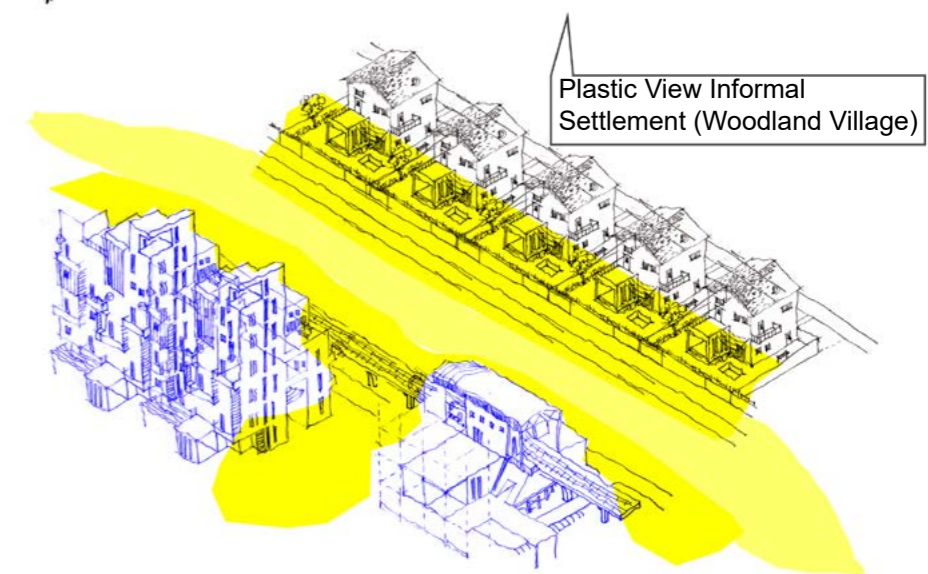
1.4.4. Domicile, livelihood, mobility

A persuasive argument for better achieving the “right to the city”, as described by Lefebvre (1968) and Simone (2006), can be made for the programmatic activation of private-public boundaries with recreation and livelihood opportunities – as these spaces have the capacity to enhance capabilities or agency. This is a departure from the current object-driven fixation on providing social housing or “domicile” infrastructure alone.

The site chosen for this investigation is situated on a street with a gated community on the northern side (existing domicile), and open land on the southern side. There is immense value and necessity in reimagining the existing boundary condition of the gated community – alongside the opportunity to design a new, reconceptualised boundary condition that respects the current need for enclosure while affording its users the possibility of “dissolving” it when enclosure is no longer needed. By accommodating various

forms of livelihood at the spatial boundary, socio-economic boundaries can be addressed, which can enable upward economic mobility – whether the beneficiaries are residents of gated communities or informal settlements. By introducing more diverse residential conditions, such as low-income housing, residents of informal settlements can transition more easily to better living conditions. As necessitated by a surge in urban migrancy, the introduction of temporary live-work accommodation alongside transportation infrastruc-

ture provides an alternative that supports social, economic, and spatial mobility – particularly for those not accommodated by the UISP (2009), such as foreign nationals. This programmatic approach could establish the future social conditions in which community clusters no longer feel the need for such physical boundaries, thus promoting socio-spatial integration and enhancing capabilities on an urban, local and architectural level.



Plastic View Informal Settlement (Woodland Village)

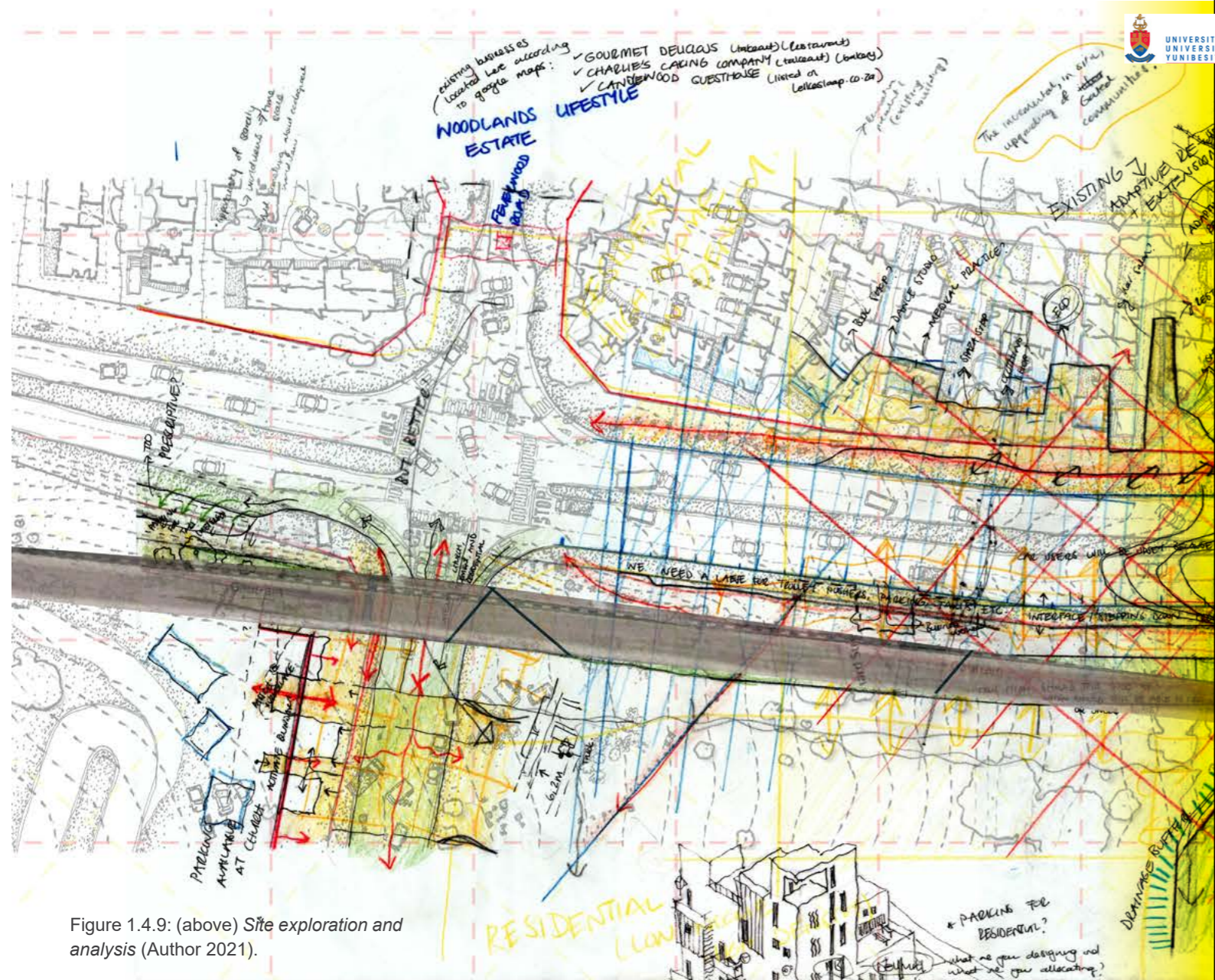
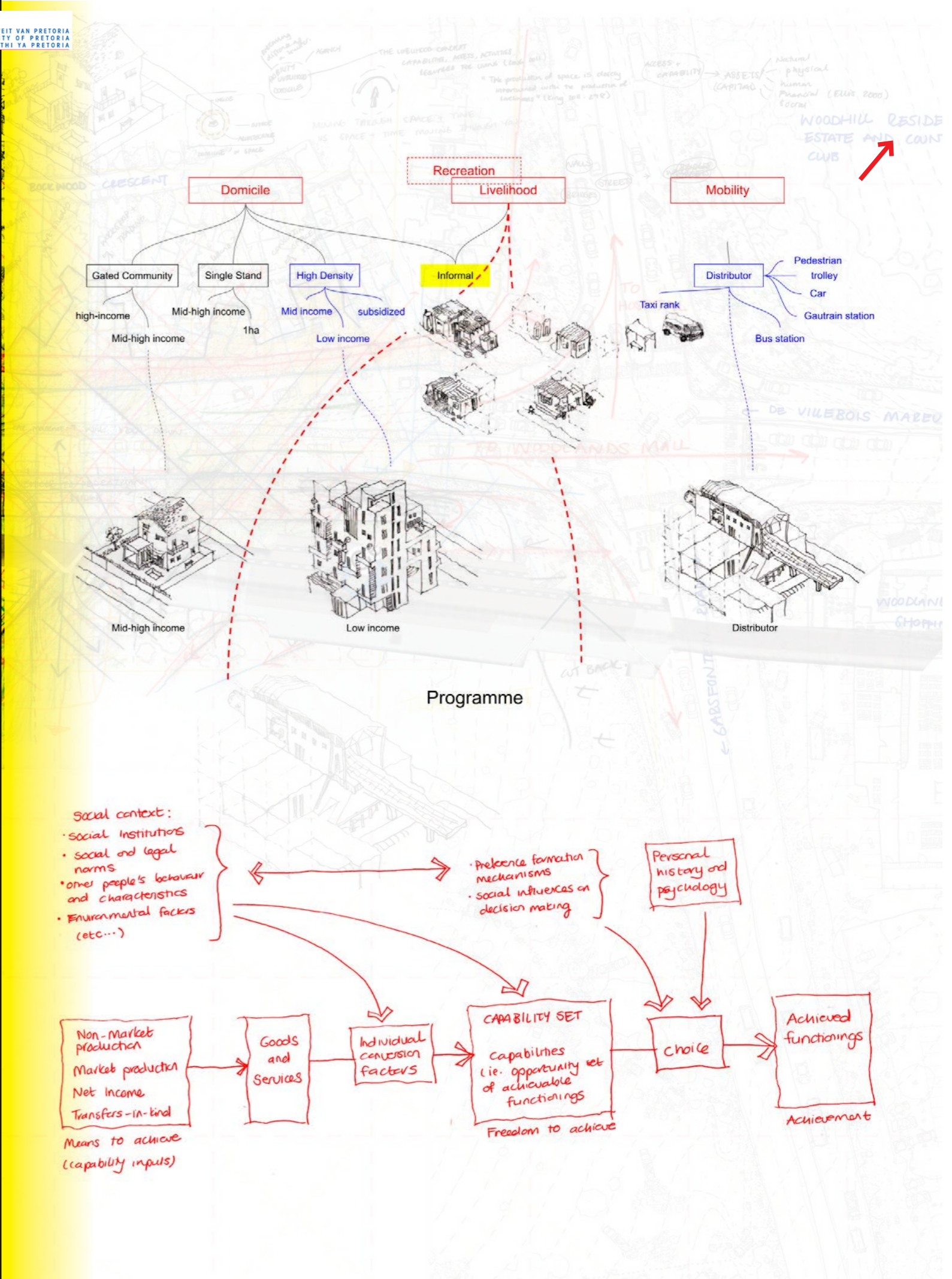
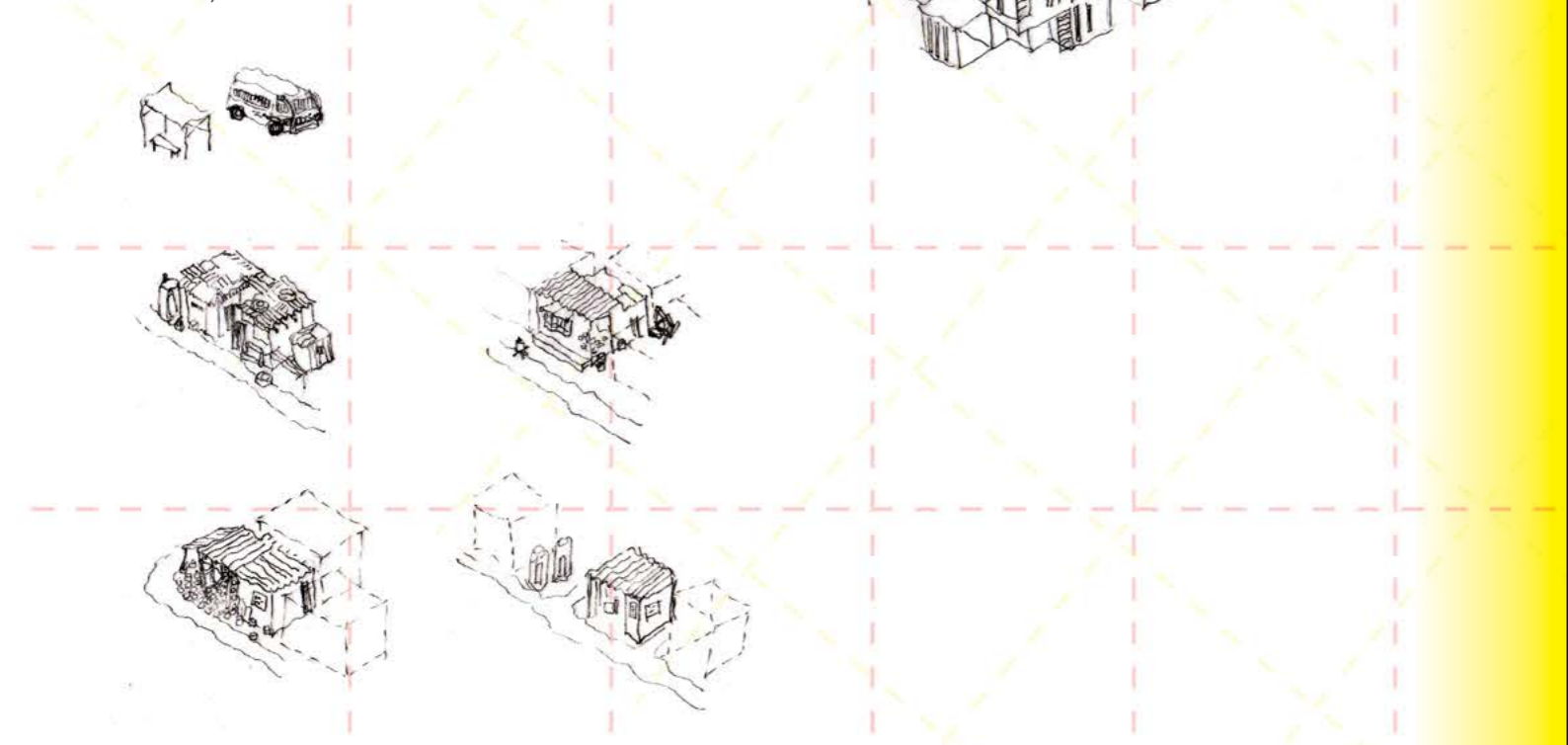
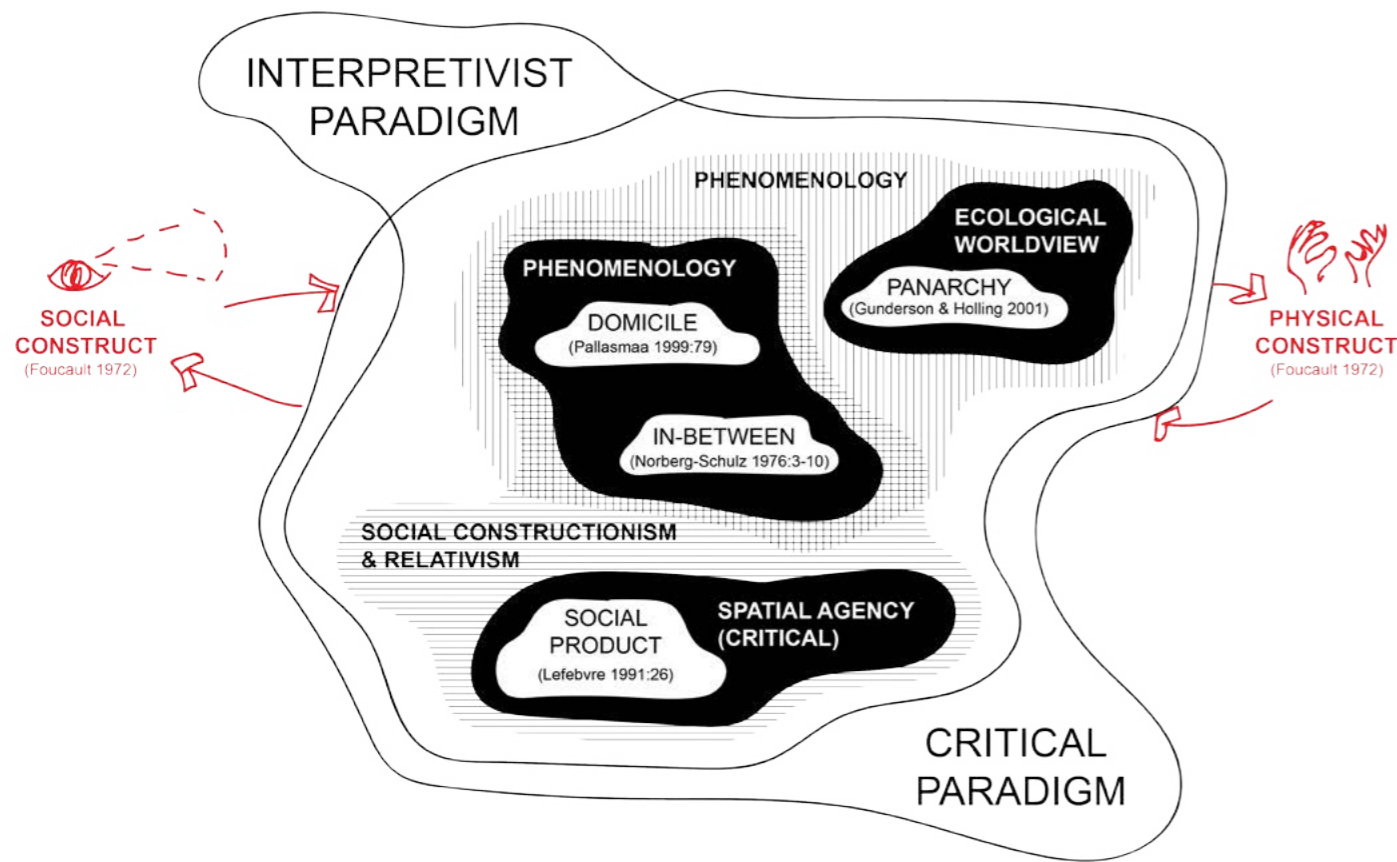


Figure 1.4.9: (above) Site exploration and analysis (Author 2021).

Figure 1.4.10: (below) Capabilities approach (CA) (Author 2021 after ASF 2012:104-5).





1.4.5. Locating the research

The ontological ideas presented in this research fall within an interpretivist research paradigm through the realms of phenomenology, social constructionism and relativism (Kivunja & Kuyini 2017). In addition, the research aligns with the critical paradigm, given its focus on agency, power relations and social justice (Guba & Lincoln 1988, Martens 2015; both as cited in Kiyunja & Kuyini 2017). Falling within the epistemic and ontological overlap of these two paradigms, the research approach combines intuitive (action/dialogic and experience), transactional (interviews) and authoritative (legislation) knowledge. Thus,

the research is broadly located within grounded theory, where action research forms a part of the empirical data gathering process (Lianto 2019). Finally, context-driven, collaborative design methodologies are considered through the theoretical lenses of spatial agency, phenomenology, and the ecological worldview. Participatory action research (Howard & Somerville 2014) will form the framework of the research and design. At the core of this process is the collaboration with master's and honours students from both the University of Pretoria and the Chalmers University of Technology. Thus, the distinction between deductive and inductive research, or rather, the continuous process of test-

ing and postulating, serves to guide the research through the site's inherent complexity. The analysis of empirical data will be based on regenerative principles (Mang et al. 2016), as well as phenomenologically grounded activities based on Jordaan's (2015) triad, to examine the various dimensions of place. Furthermore, due to the socio-spatial focus of this research, Saldana's (2013) codes-to-theory model will be necessary for developing grounded theory from on-site observations.

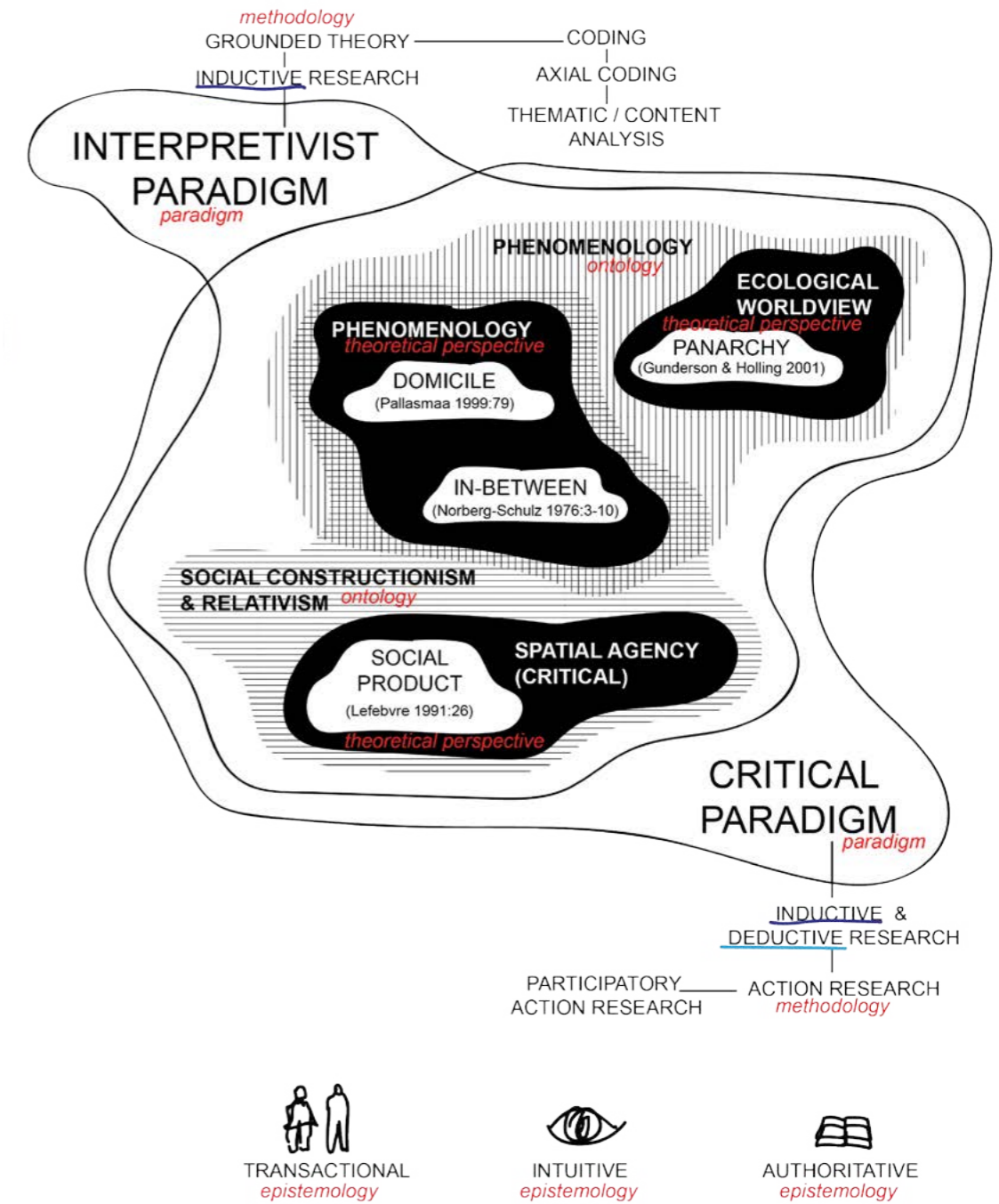


Figure 1.4.11: (left) *Locating the research paradigm* (Author 2021).

Figure 1.4.12: (right) *Locating the research methodology* (Author 2021).



1.4.6. An architectural methodology for the Scarce City

The architectural and research approach can be organised into the following milestone exercises and outcomes:

1. **Catalogue/lexicon:** Making use of coding for the purpose of uncovering patterns and relationships in empirical data (interviews, photographs, experiences) and within theory and legislation.

2. **Case-studies:** Considering either the “spirit of place” (historical, existing, and anticipated man-made or natural elements) of the site context (i.e., site analysis of Plastic View Informal Settlement), or places of thematic and programmatic relevance.

3. **Precedent studies:** Drawing insight from relevant existing spatial and technical interventions, and making use

of theoretically grounded socio-spatial heuristics as a criteria for unpacking these various architectural responses.

4. **Scenario testing:** Providing opportunity for spatial and programmatic exploration at various spatial and time scales, and user perspectives (i.e., urban frameworks).

5. **Prototyping:** Translating theory into action, testing spatial processes within real-life conditions, and setting up a feedback loop that promotes reflective practice.

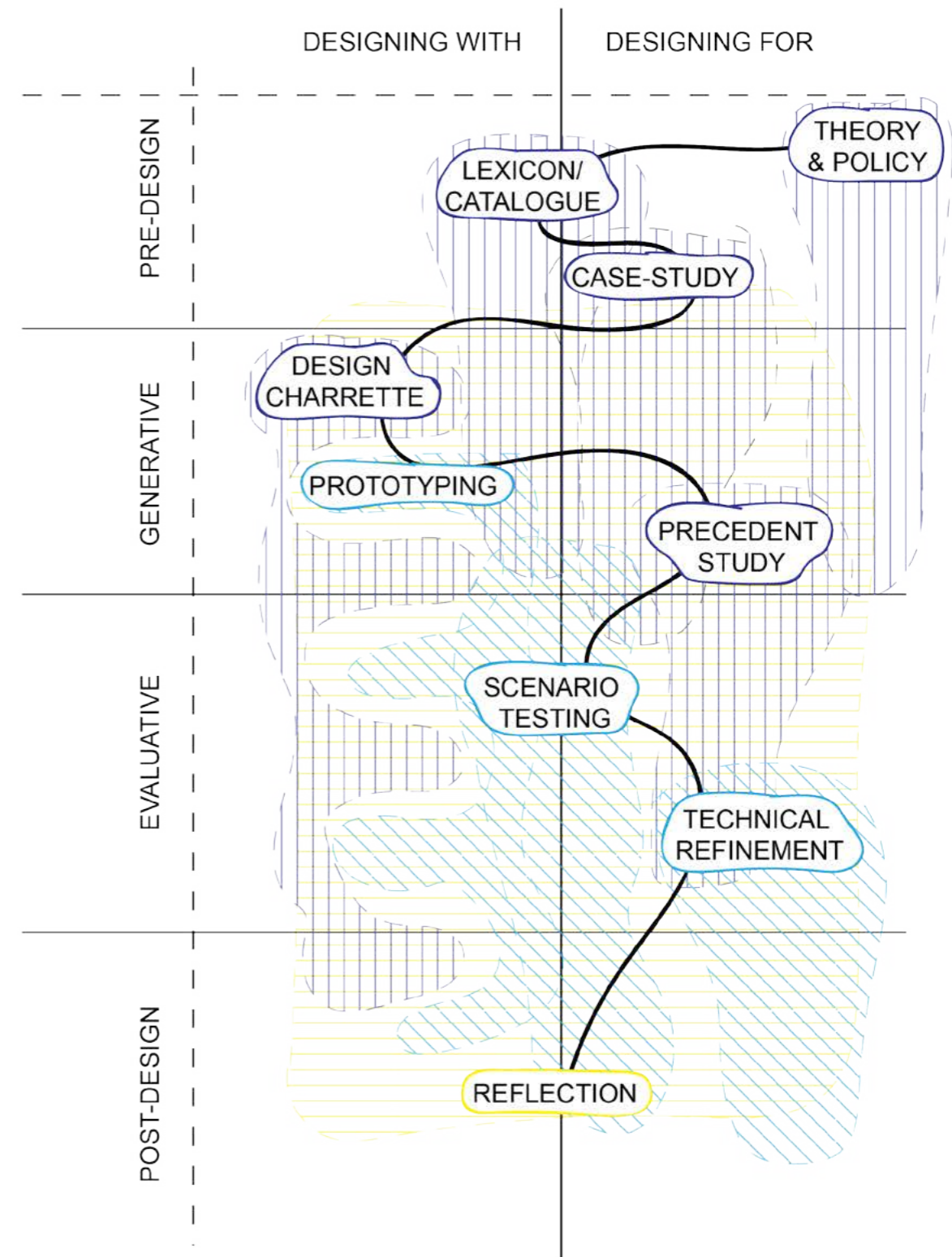
6. **Design Charrettes and site engagement:** Engaging the transfer of cross-disciplinary knowledge between various spatial agents, such as site stakeholders, engineers, and other architects.

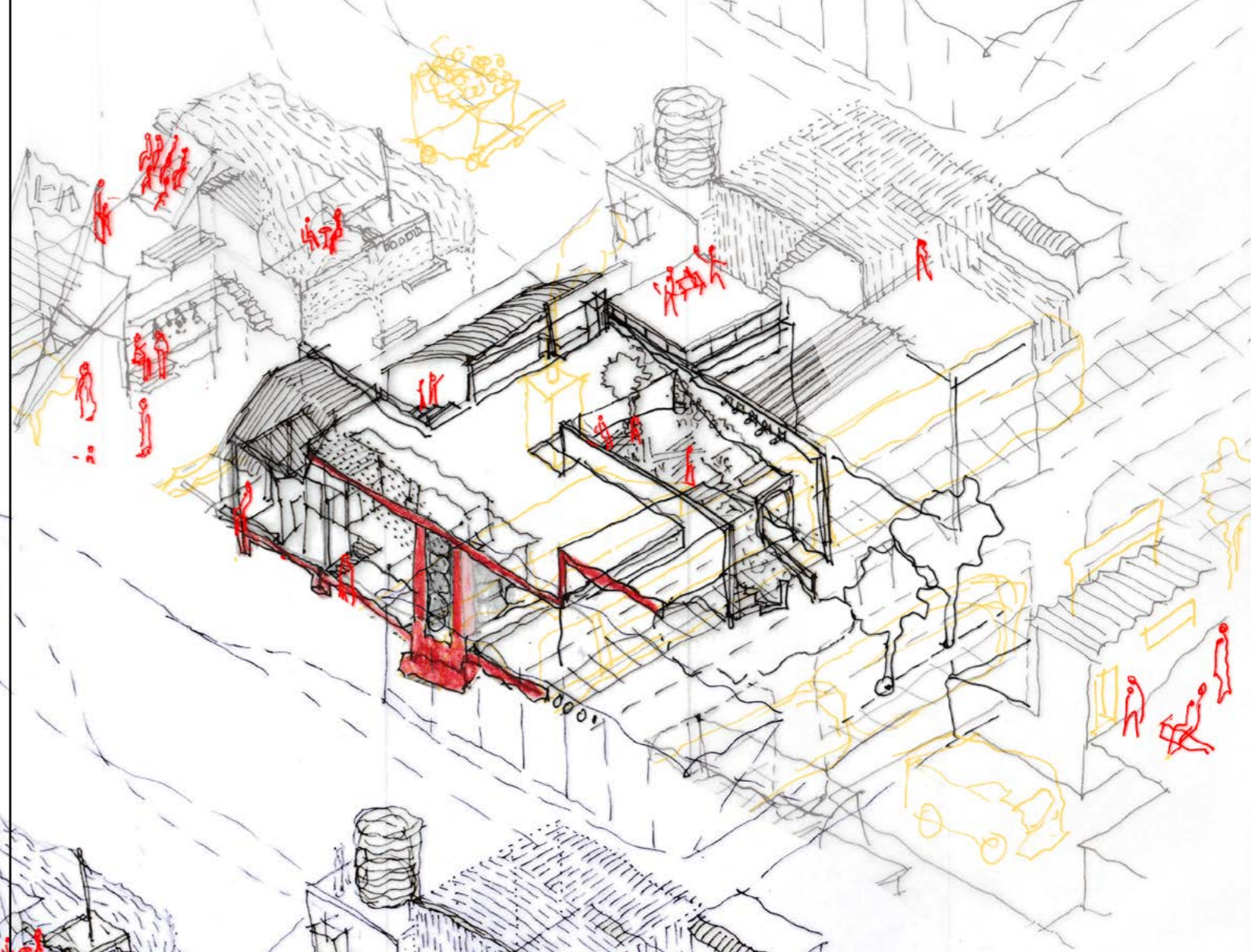
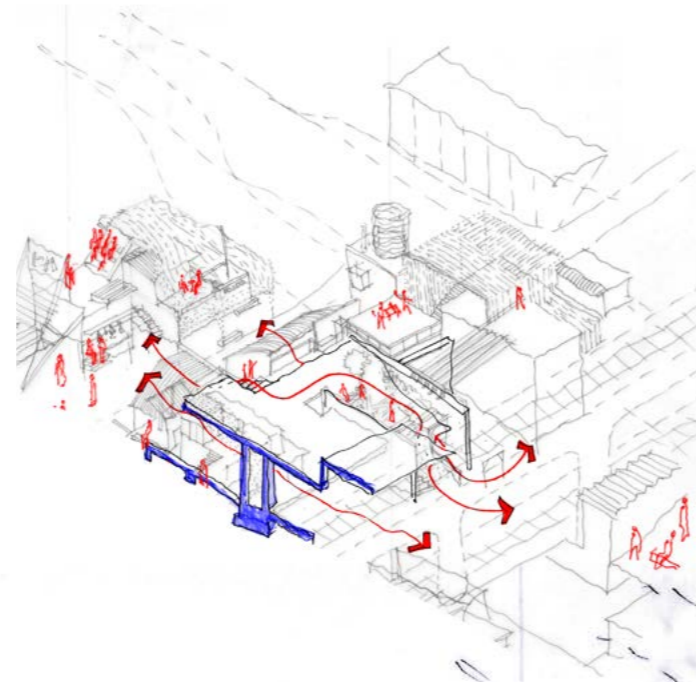
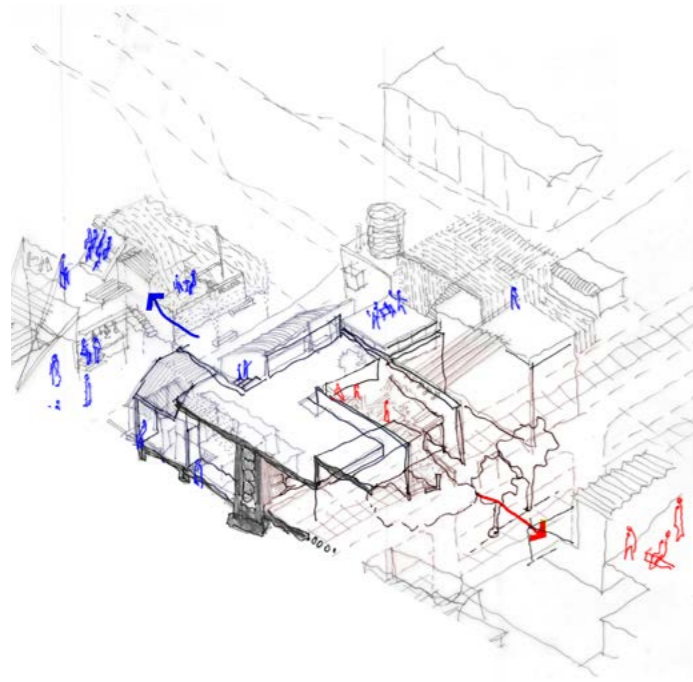
7. **Critical reflection:** partaking in an ongoing process of design and technical refinement.

Figure 1.4.13: (above) *Engagement during the prototyping phase* (Zorn 2021).

Figure 1.4.14: (right) *An architectural methodology for the Scarce City* (Author 2021 after Saldana 2013, Howard & Somerville 2014, Jordaan 2015, Mang et. al 2016).

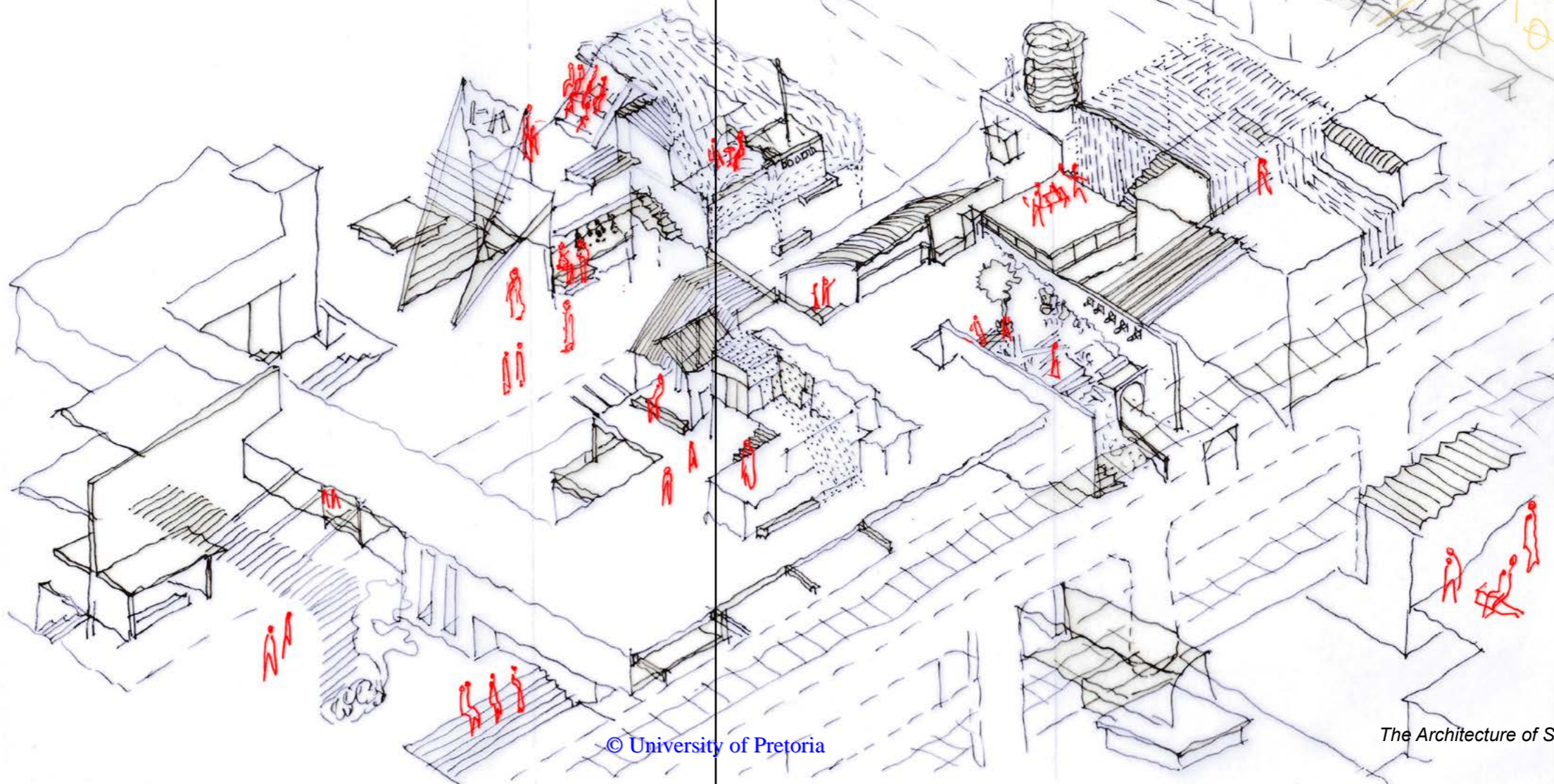
Figure 1.4.15: (pg 60-61) *The emancipation of the boundary* (Author 2021).





1.4.7. Statement of approach to architecture

Scarcity is seen to limit agency, but what if it could induce agency? Scarcity has already shown the potential to catalyse massive change, and to promote the subsequent ingenuity necessary for survival. By learning from the complex socio-spatial landscape of the past, present and “future” South African city, through a deeply collaborative, agency-kindling process that is grounded in a foundation of critical theory and phenomenology, this architect/facilitator/actor aims to reimagine an architecture of scarcity that embraces ephemerality and sensitively emancipates the potential of boundary beyond that of division. This project gestures towards an architecture that is not a solution-driven answer, but a dialogue-inducing question; scarcity that is not a problem, but an opportunity.



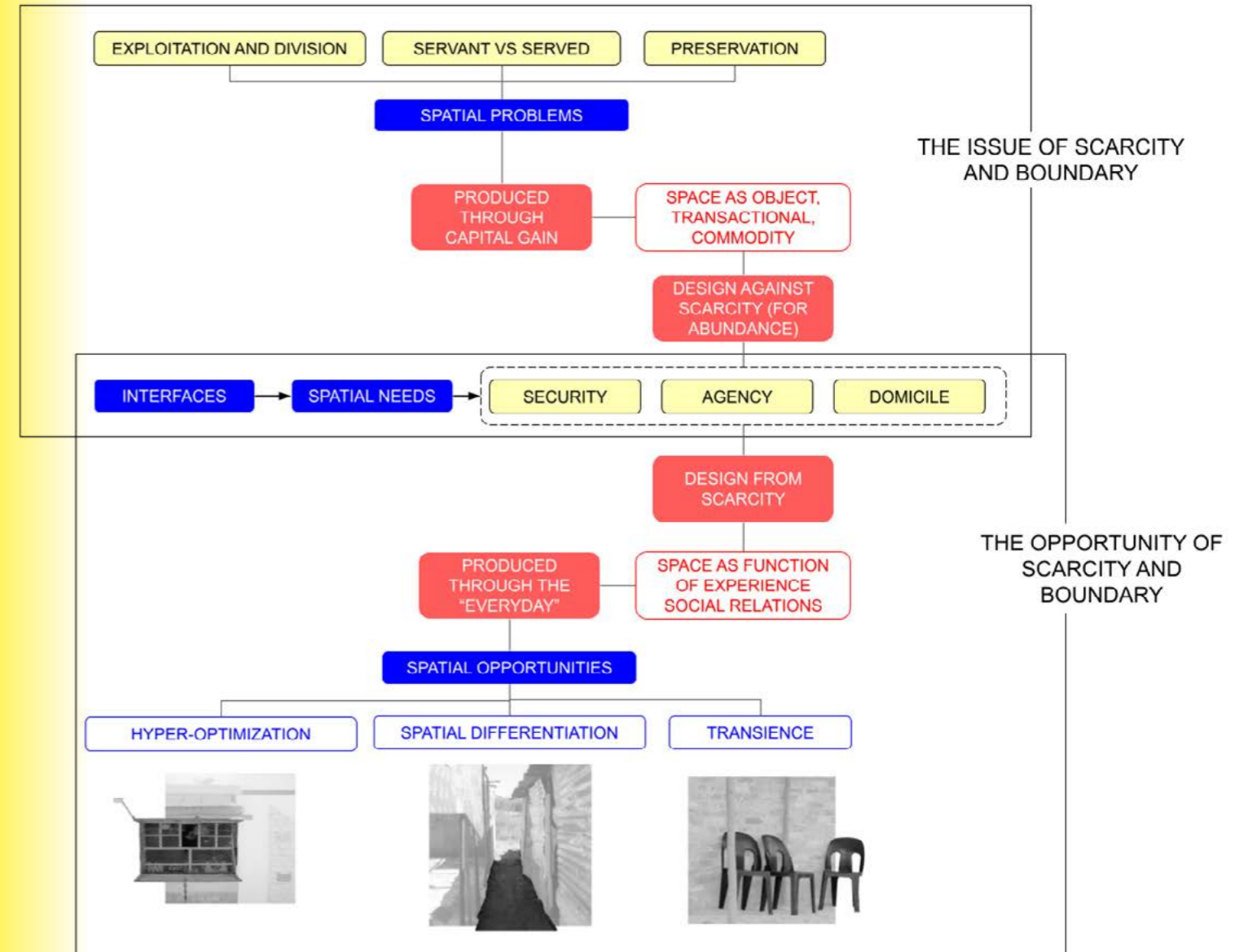


Figure 1.4.16: (left) *Plastic View Streetscape* (Ramsey 2020).

Figure 1.4.17: (above) *Summarized conceptual approach* (Author 2021).