VOLUME III:

FRAGRANCE FACTORY
essential oil extraction and soap-making facilities

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1. **INTRODUCTION: SYNOPIS OF DISSERTATION**

The methods for projecting information compiled from any chosen context, are fundamentally dependent on 'traditional media' as carriage vessel. Representation of conceptual form and compiled information lies at the heart of the architectural profession as a whole. Traditional media, within the current South African paradigm, is unable to truly represent the emerging public that shapes the urban environment.

As a result, representing space as embodiment of the zeitgeist becomes an incorrigible exercise. This dissertation aims to reconcile the representation of space as a co-dependent of time through researching social structures in relation to spatial ownership.
[7] maboneng precinct
- 2010 private urban renewal development -

[8] mai mai muti market

26.2042° S, 28.0728° E
jeppestown

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The body of research concerning social structures and spatial ownership will stem from a practical application of the ‘group and grid theory’ (M Douglas 1996) proposed by sociologist and anthropologist Mary Douglas. Focussing on the concept of transcendental experience - combined with motive modelling exercises - the aim is to inspire architectural form free of conventional hierarchy. This can be understood through the example of drawing a door-swing with the same importance/weight as a solid wall or structural element concerning spatial hierarchy.

This dissertation, in order to strengthen the theoretical premise, should be understood as an extension of the philosophical argument rather than a synopsis of the completed project. As such, the main body of text was intended to be read as a continuous script, unconstrained by rigid headings and chapters. Instead, the inserted subtext that appear throughout this document are intended as guide, highlighting the main themes and ideas relating to the argument at hand. The resulting intervention, stemming from this dissertation, aims to be representative of an architecture that is receptive to its context. Through being informed by relevant factors concerning the surrounds, the building acts as mediator for the simultaneous amplification of positional social constructs (based on the ‘group and grid’ theory) within Jeppestown.

The end product embodies these ideals through the creation of variable- and receptive space, allowing public engagement at both a physical and metaphysical level.
Benjamin stated that architecture is the most important testimony to the latent “mythology” of a society and questioned the validity of the image as a representational medium, declaring that it could only function as an analogy (Heynen, 1999). This was in turn taken up by the post-structuralist project, where the dualities of form and function were collapsed in favour of what Tschumi has called Event. Asserting that the image has resulted in the conception of architecture as a static object of contemplation, he argues that space without event or architecture without program seemed to coincide with the revival of historicism or, alternatively, of formalism in almost every architectural circle (Bernhard Tschumi, B. Architecture and Disjunction: Spaces and Events). From this understanding, where place confronts space and action, the material role of architecture itself should then be questioned, where Latour and Yaneva argue that it is not only “. . . de Certeau’s pedestrians or Benjamin’s flaneurs that do not live in Euclidean space; but buildings themselves.” (Latour&Yaneva) Latour explains that the problem is rooted in our production of architecture in Cartesian realms, arguing that it does not acknowledge the interactions between humans and objects in the material world. He points to the fact that buildings have always been drawn in Euclidean space, but that this is not the environment in which they are constructed and lived, and that contrary to their real nature, buildings are perceived as static, at least in conception, production and representation (Latour&Yaneva). It follows that a building is not a static object but a moving project, and that even once it has been built, it morphs as it ages, is altered by human agents, by programme and use, internally and externally, and therefore cannot be represented without the conception of time and interaction, particularly in a fluid urban spatial context. Thus, with architectural representation as a key knowledge centred medium for the conception of space, Latour proposes a new device, which he describes as the exact opposite of Etienne-Jules Marey’s “photographic gun”, through which he investigated the physiology of movement by freezing the successive frames of a gull in flight. Here Latour argues that it should represent its “symbolic,” “human,” “subjective,” or “iconic” dimensions of a building through its lifespan (Latour&Yaneva). This ultimately results in a re-framing and questioning of contextual understanding and representation, and shifts to the questions about African Spatial conceptions, signifiers and production. Situated in this particular discourse, the project is framed as an investigation into a methodology which allows for a new system of knowledge which transcends the formalist – functionalist dialectic to access the relational understanding of context. If the success of urban life depends on the relationships established between peoples, ideas, and objects, an actor relational understanding would be imagined through environmental knowledge that is generated through rhetorical action, counter design, and subversive analysis. It aims to embrace and enhance the heterogeneous and incompatible combination of spaces, events, and movements without any hierarchy or precedence among these concepts. For the sake of simplification, the aim is to unearth only the present forces in order to amplify the existing narrative, only to be imagined through time in a fluid shifting landscape (Latour&Yaneva), and serving solely as a departure point for future investigations. Here the Author accepts the inability to provide conclusive answers in exchange for a broader understanding. By engaging with existing subversive and ritualistic practices the project takes on a constructive, but fluid role, and embraces the cosmology of lives and deaths, or the fluctuating nature of territories in the context as alluded to in the Urban Vision, and initiates an imaginary dialogue with the context.
iii. **BACKGROUND: THE IMPACT OF THE PHOTOGRAPHIC GUN**
TIME - SPACE
THE BODY AND SPACE
MATERIAL AND SPACE
EMPIRICAL DISSEMINATION OF TIME AND SPACE
SIMULTANEITY
THE PRODUCTION OF SPACE AS A PRODUCT OF LABOUR
NOT A PERFORMANCE - LIFE IS THE REAL SHOW
THE IMPORTANCE OF VOID
RE-PRESENTING THE PARTS TO CONSTRUCT THE WHOLE
iv. APPROACH
The aim of this investigation is to explore a multi-discipline approach to intervening in an existing urban landscape; this allows for a more integrated approach to the design, as well as a holistic understanding of the possible connections of urban spaces. The urban vision is a joint undertaking, followed by the landscape project, which forms the base on which the four architectural projects situate themselves.

Due to the nature of this urban landscape, the approach includes all realms of the built environment: sustainable design; urbanism and urban settlements; and heritage and cultural landscapes.
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Figure 1.1. (previous page) Old Shaft at Crown Gold Mine, Johannesburg
Figure 1.2. (this page) city grid of Jeppestown and surrounds by Author

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Chapter 1 serves as an appendix to the urban vision (volume I) and to give a sense of place. It frames the metanaratives of history, psychological space and academic urban thought, in order draw together the divergent views of the city. This is followed by a short site inventory in order to provide a background to the theoretical development in chapter 3.
JOHANNESBURG: a creation myth

Three billion years ago the sun lit the earth and the rivers that flowed from the highlands shimmered with gold. Here they met to form a bustling lake of life.

Upon a day a roaring thunder filled the sky and a mountain ascended from the heavens to pierce the earth. From the Vredeford dome it spew its molten blood to ripple across the earth and bury all traces of the valued mineral deep under hard layers of rock (Brodie, 2008).

Many years later men arrived roaming the earth, searching for life and spirit. They migrated with the wild heard and looked to the magnificent celestial bodies, unaware of what lay beneath their feet (Brodie, 2008).

More men came, bringing new knowledge. They build settlements and herded livestock, and occasionally toiled the earth, not just for food but sometimes for the rock itself. This rock they knew was magical. If you placed in fire it glowed red hot, and could be made into any shape. They made tools and items for trade, and they built large cities (Lloyd, 2003).

Turmoil ensued and the pale faced man came, and for a while dug vigorously. He was looking for riches, and for a while did not recognizes the outcrops of rock that whispered the secrets below. Soon enough, a fortunate stroll and chance encounter announced a new beginning.

Many came and a city of tents gave shelter from the sweltering sun and the roaring thunderstorms. They paced and measured, weaving an angular pattern that could be seen from the air. They brought strange big apparatus to eat and crush the ground sending poisonous clouds of dust hurtling up.

More came and some moved to the ridge where the rivers split to carry the message north and south. Others stayed held by a promise, like the holes held light. Their sweat watered the fertile ground and soon enough a jungle grew.
Figure 1.3. Morphosis of lenses
The face of a city was etched on the landscape and dust marked its streets like wrinkles on a sun aged face. Shade was scarce and the porch was heaven. The blasting and building shook the earth for all it was worth.

Replaced by the sound of guns, when it was done and the cannons were silenced, there was a ‘Your Highness’.

Through its rustic lungs the city breathed a sigh of relief, and called once more to the rural boys’ dream, nostalgia for the future, the answer held in the golden seam (Transvaal labour crisis).
The twinkling of the lights, a prism marvellously fit to amuse the eyes, a lie.

A city built as much from sweat as gold, the young boy had been to hell.

Surviving somehow, he brought hell back to the surface, where he is submerged in the seamiest depths of modern city life to toil once more.
Looking at the usual urban indicators Johannesburg resembles Berlin: It has a similar density, population size and footprint; yet it feels and acts nothing like it (Burdette, 2010).

Referred to as the New York of Africa, it was built on wealth (Brodie, 2008) This, simultaneously etched grids, using different systems of measurement and different orientations, onto the land and left the many leftover spaces found in this landscape today (Fig. 1).

If New York was the systemic creation of opportunity (Koolhaas, 1995), Johannesburg was the radical reaction to it (Brodie, 2008).

The prospect of prosperity has to this day been retained in a profound nostalgia for the future. The mines are dead, but out of them grew the financial industry.
Business fled to the Northern Suburbs, leaving a mass of built fabric behind and a new industry developed: Connectivity, access and subsequently housing.

Proximity to opportunity has resulted in a new appropriation of space and the built fabric (Bruyns, 2012). The leftover lands become the places of collision, negotiation and opportunity. This is where Africa meets the West.

The city is harsh, with no shelter from the summer afternoon storms, no shady trees providing shelter from the sun.

Johannesburg, which unsympathetically to sentiment or nostalgia responds only to those who exert forces on her, is forgetful. She does not care for you. That which does not continually render itself useful is cannibalized for the sake of survival. It is a city in flux.
THE TALE OF TWO CITIES
Situating the African city in familiar conceptual territory

It might be argued that the general consensus in current discourse is that there is a disjuncture between the designed/planned city, and that of the spatial use in the contemporary post-colonial African city.

“The city has bypassed, redefined or smashed the (neo)colonial logics that were stamped onto its surface. It has done so spatially … as well as in terms of its sociocultural and economic imprint. Today … the city is undergoing a large scale process of informal villagization, in which a new type of agrarian urbanity … is generated.” (Bruyns, 2012)

This illustrates only a narrow band of the disjuncture between the two conceptions of the city. The intrinsically western practice in which academia and practice are situated and the fluid nature of our cities: urban farming as an ecologically and sustainably strategic consideration vs. a need based and ritually rooted response, bureaucratic clustering vs. identity based association, culture, ritual, negotiated territories.

At this point an overview of theoretical/academic understandings of the city shall be broadly discussed in order to ground the North-South dialogue and draw correlations between Western planning and African action as mechanisms of place making and their physical manifestations.

From there on, it is hoped that the interplay between the strata, particularly with regard to class and access, and their modes of spatial production can then be investigated to aid in the scripting of a spatial strategy as described in subsequent chapters.
Figure 1.8. (above) the act of living in the city is intrinsically political. Photograph of the estranged by Rudi Jeggle, Johannesburg, 12 March 2009

Figure 1.9. (below) image of Koolhaas’ Generic City
Koolhaas explains that the result of Globalization is an inherently homogeneous city in which character is replaced by ‘identity’ through Branding. This lack of real identity he argues allows for a medley of conflicting typologies: Parking lots vs. Parks, shopping centres vs. informal trade, privatized security and gated community vs. informal habitation which characterize the ‘open city’ (Hajer, 1995).
Current urban design aims essentially to satisfy technical and economic efficiencies, but the relevance of master plans becomes questionable due to their disregard for social realities of the diverse human cultures and their impact on spatial quality. Isolated from these interactions the urban vision thus mutates into a bland and universal understanding of city culture (Lloyd, 2003).

In this vision of the city streets become mere channels for the isolated viewing capsule that characterize the car, from which the city is a high speed Blur with no physical interaction (Koolhaas, 2001). It relies on a system of signification that does not represent the true nature of place, but rather, according to Lefebvre (1974) relies solely on an ocular systems of communication derived from the reductionist medium of Euclidian space, to serve as a prescriptive social and political tool.
However, it is at this point that one can then integrate Koolhaas’ conception of ‘cities within a city’ (Hajer, 1995) to shift the understanding of identity from the all-encompassing/singular identity to a plurality of identities. This intellectual ‘judo flip’ draws on his notions of friction and dynamism in the residual liminal zones to develop a working methodology. Theory becomes a tool to manipulate the plurality that characterizes the post-industrial/post-modern/post-colonial city in flux. It frees it from the stifling and paralysing use of theory that so often constrains rather than aids us, and prevents the regression to purely pragmatic problem solving which negates the mechanistic interplay between actors.
An urban methodology which advocates both people and structures as urban actors in a dynamic relationship that exists through space and time simultaneously; would look at the constant negotiations that lay claim to space. To this point Harvey (Gebhardt, 2006) suggests that space should be understood as neither absolute, relative or relational in itself, but that it can be either one or all simultaneously depending on the circumstances and should therefore be conceptualized through human practice with respect to it.

Figure 1.14. (left) Residual Space: the insurgent public, living in half built structures, the cracks and leftovers
Figure 1.15. (opposite) for the sake of survival, a new type of civil structure emerges, space is negotiated and temporal, with shifting territories
With controlled and commodified space comes residual space characterised as abandoned or restricted (Koolhaas, 1995). This leaves the unprivileged to set up their own informal infrastructural systems between the unbending and authoritarian restrictions which draw up impermeable walls between the realms of the public and private and formal and informal territories.

Thereby giving rise to the creative re-appropriation of structures through negotiation and Lefebvre’s social production of space (Van Rensburg, 2008, Space as ritual: contesting the fixed interpretation of space in the African city).
This unregulated systems often create a false perception of the city that is characterised by chance, crime and consumption, and bring to attention the social, cultural, political and economic contrasts which define the spatial dichotomies of the South African city (Van Rensburg, 2008, Space as ritual: contesting the fixed interpretation of space in the African city).

Per example, the predominant vision of traveling, one seeks to maximize smoothness of the journey with an emphasis on general avoidance of conscious experiences (Hajer, 1995), but it is between the cracks and leftovers that are forgotten by the modern city that the new subversive narratives are written.
Recyclers skate the black tarred roads between the insular capsules that carry the wealthy from the far flung suburbs. Black smoke deposits soot on bridges, like graffiti echoing the revolutionary mantra. It is a celebration of dynamism, and longs for the promised dream of emancipation, a nostalgia for the future. Like Manhattanism, it celebrates the 'cities within cities' and forms an architecture of programming (Hajer, 1995), but weaves them together in an interconnected web of symbiotic and parasitic relations, where that which does not exert itself is cannibalized. In this subversive underbelly it is a dog eat dog world: proximity and connectivity characterize the negotiation of territory, and movement takes on symbolic power through experience in itself.

Figure 1.16. (opposite page, top left) Boy living under a bridge staring into the camera through a Nyaope haze.
Figure 1.17. (opposite) Waste picker, resting on his merchandise.
Figure 1.18. Waste picker, passing the MABONEG precinct: the "other city", a city not for him.
Rather than trying to hide the apparent loss of time that characterizes the twin fantasies of order and omnipotence, Koolhaas suggests a celebration of interaction, where the ‘new urbanism’ is no longer concerned with the arrangement of permanent objects, but with the irrigation of territories with potential and the staging of uncertainty (Hajer, 1995).

In this reading of the city, it is devoid of historical reference. The city does not take on a stable configuration, but creates enabling fields that accommodate processes which refuse to be crystallized into definitive form.
Buildings act as both actors in their own write and as mechanisms to be manipulated by other actors. It will no longer be preoccupied with the material entity that is the city, but with the manipulation of infrastructure and organization or relations for endless amplifications, diversifications and redistributions (Koolhaas in Hajer, 1995).

Form becomes irrelevant, and the relation of agents to the material world is purely utilitarian, with meaning derived through ritual and the relational origins thereof. With this shift to what Koolhaas has called psychological space (Hajer, 1995), the modernist organizational city structure dissolves leaving physical space, such as Jeppestown, to hybridize.

Organized by fields, forces, flows, territories, collisions and events they become relatively self-sufficient and autonomous, driving the re-programming of space that has resulted in the spatial dichotomies which appropriate industrial buildings for habitation.
SITE INVENTORY

- STATION
- WC
- BUS STOP
- TAXI STOP
- BARBER
- TAILORING
- SHOE MAKER
- MOSQUE
- RESIDUAL SPACE
- LUFT PAUSE (see volume I)
- SHABEEN
- REPACKAGED PRODUCE generally food as well as utilitarian goods
- FRESH PRODUCE
- COOKED FOOD
- CLOTHING RETAIL

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On occasion music thumps from loudspeakers, taxis hoot and conductors shout for passengers. The squealing breaks of a train entering the station announce a flood of commutes to trample the sidewalks.

The pungent smell of urine hangs like a cloud around the toilets, disguised by the relieving smell of shisa nyama, with fat firing the flames, and smoke billowing into the air to signal the passer. Here! Here! You can feast, and travel back in memory to that blissful rural childhood. Back to safety. Confirmed in a sense of belonging.
Figure 1.21. (opposite) temporary structure, for promotional purposes, blasting music

Figure 1.22. (top) “South African Smiley”

Figure 1.23. (second from the top) “walkie talkie”

Figure 1.24. (second from the bottom) “walkie talkie”

Figure 1.25. (bottom) “shisa nyama” – literally meaning burnt meat in isiZulu
Formalism is the result of image production and is often associated with ‘style’. To illustrate the argument, we need only to look at Venturi’s (2002) understanding of the Italian facade as forming spatial containers that define streets and squares. Here Western spatial conceptions are defined by a material notion of signification which are generally grounded in a specific aesthetic system of notation or ascribed meaning.

Relying on subjective qualitative experience within a particular understanding of the world or greater system, Benjamin argues, symbols become interchangeable. He elaborates that the meaningless appropriation of symbol, resulting in and ‘style’, is rooted in the attempt to create a finite or whole world view. In response, he proposes a re-conceptualization of the image as an analogy rather than as symbol, foreseeing the breakdown of a representational totality, and allowing for a new utilitarian methodology within plurality (Heynen, 1999).

To situate the argument, that a system of signification understood as symbolic, is singular, imposed and deterministic, within the spatial context of Johannesburg, we need only to look at the foregoing analysis of Johannesburg in which the implementation of the figure-ground produces the by-products of “control space” and “residual space” (Hajer, 1995). These cause three-dimensional urban spatialities which cannot be represented in two-dimensional and graphic representations as they transcend the visible (composition, material and form) to manifest in immaterial actions rooted in attitudes, perceptions and transactions (Van Rensburg, 2008, Space as ritual: rethinking spatial strategies in the African city).

To illustrate the workings of this argument requires an analysis of the use of image in the traditional modes of architectural conception to which Lefabvre (1974) recognizes three “formants” of Cartesian space. These denote and mask one another to create an illusion, which are in turn strengthened by the empirical portrayals of space as a constant (Smith, 1991).
The geometric formant functions in the two dimensional representational space of Euclidean space. A consistent homogeneity serves as a reference which diminishes three-dimensional space to an “absolute” two dimensional realm and therefore promises its social and political utility (Lefebvre, 1974).
Figure 2.1. (opposite page) geometric formant by Author

Figure 2.2. (above) Rome Gianbattista Nolli, ca. 1692-1756
Here the part is taken for the whole, as the material object becomes the reference and therefore the whole (see Ventui’s conception of space above). Through the transcendence of the image, the whole is created, but Lefabvre (1974) warns that in order to escape the influence of the image the product becomes self-referential: a brutal political symbol of power imposing itself on space. He claims that by conferring a special status on the perpendicular and proclaiming its spatial orientation, the phallic formant becomes simultaneously “metaphoric” and “metonymic” (Lefebvre, 1974).
Figure 2.4. (top) Column of Trajan at the Forum of Rome, AD 113, commemorates Roman emperor Trajan's victory in the Dacian Wars.
Underpinned by visual logic, the visual formant takes on the form of models, perspectives and focal points and employs complementary systems of logic such as language as metaphor to demonstrate time and transition.

However, the use of line, colour and light become the focus of this cinematic spectacularization, thus leaning towards an ocular bias, in which detail and fragments are lost to the reductionist totality that characterizes the gaze. If therefore the “object felt by the hand only serves as an analogon”, the social and phenomenological existence of space cannot be accounted for (Lefebvre, 1974).
Figure 2.5. (opposite page)
optical formant by Author

Figure 2.6. (top)
investigations in the
optical formant by
Bernard Tschumi in the
Manhattan Transcripts
A serious and critical consideration of form however cannot be avoided as we are subject to a mode of architectural production that is rooted in it (Latour & Yaneva). All architecture should be understood to be formalist to an extent, in that it is subject to a limited range of representational techniques translated into physical space, and therefore embodies a certain collective paradigm to which all western trained architects are subject. Here Scully (in Venturi, 2002) illustrates that both Venturi and Le Corbusier operate in the plastic arts, calling for the material recognition of architecture.

However, architectural images, often turned architecture into a passive object of contemplation instead of the place that confronts spaces and actions (Tschumi, Architecture and Disjunction: Spaces and Events). If employed as “readings” of the architectural project, we aggravate the estrangement of architecture and urban design from the bodily and lived experience (van Rensburg, 2008).

This Tschumi, referring back to Benjamin, argues is rooted in the reproducibility of images, resulting in “the loss of their exchange value”: their “aura”. In the age of information, he therefore states, image could only be employed on an emotive level or to “shock” (Concepts of Architecture and Disjunction: Six Concepts).
This therefore frames the disjuncture between the material and conception that characterizes the profession: It is the only discipline with this distinctive condition, simultaneously combining image and utility, image and structure, concept and experience (Tschumi, B. Concepts of Architecture and Disjuncture: Six Concept).

Here architectonic figures are exponents of the dream that holds the collective in a trance. Through form, all that we are left with is a fascination for the other, and image functions to create a dream-scape (Heynen, 1999).

Thus, in identifying the fallibility of the image in a condition of simultaneity, ambiguity and plurality, it is proposed that the medium of image should be used solely as analogy.

In recognizing the material and experiential nature of the human relation to the world, a broader notion of image, as emotive ‘imaginary image’ is therefore argued for. This recognizes form and materiality as functioning on the same plane, which through imagination reconstitute all senses, but can by no means function as representation.

With an awareness of the underlying dangers of the image in conjunction with other media, as discussed in the optical formant, such a methodology however could serve as an access point to the transcendental narratives which function similarly to the phallic formant (to be discussed in subsequent chapters).
The famous mirror scene in Duck Soup, by the Marx Brothers, ca 1933, illustrates the tenuous existence of identities constructed on visual indicators, and to what lengths we are willing to ignore the realities of the material world in order to maintain the constructed image that signifies the transcendental world.

NOTE: the choice of the subject if identity with regard to the mirror is deliberate as it remains situated in time

see appendix for excerpt
demise of the signs of identity

Figure 2.7. (opposite page) Excerpts from 'Duck in Soup' (Marx brothers 1933)

Figure 2.8. (left) Excerpts from 'Duck in Soup' (Marx brothers 1933)
The narrow understanding of functionalism has a deterministic nature as principles are understood as set points of reference from which the system is constructed. Scientific models and eco-systemic design serve as examples of this methodology, but it can also be found in examples which make use of data, tables and diagrams.

However, blind adherence to one particular system could lead to the aestheticism and generalization, due to the loss of the underlying principles, and results in a subjective product devoid of culture as illustrated in the commodification of “green” or “sustainable” design.
aesthetic experience

Modernism is cited by Scully as an example of superficial conformity and arbitrary packaging (Venturi 2002), but Lloyd (2003) argues that this is rooted in the western tradition of ‘ordering devices’, and confirmations of aesthetic experience through material, rather than cultural validations through personal and humanist values.
Scully’s object centred premise is further debunked by Lefebvre’s (1974) genealogy of the production of space. Here he traces the cognizance of the production of space to the momentous role of the Bauhaus which he argues developed a new conception, of space (The impact of the photographic gun for image as precursor - Chapter 1).

It opened up to perception and conceptualization, as well as to practical action. This he argues prompted the shift from the conception of objects in space to the conception of space itself, thus placing them in relation, and allowing all aspects of an object to be considered simultaneously in a temporal sequence (Lefebvre, 1974).
The articulation of function would be just as much a “reading” that is projected and reductionist. If form is to function what signifier is to signified, an ocular bias relying on the articulation of vertical and horizontal lines or transparency and opacity is reiterated, and translates simply to the experience of intensity in the real world (Lefebvre, 1974).

Figure 2.10. (Opposite page) Diagrams illustrating the spatial planning of the Seattle Library (OMA 2004)
Figure 2.11. Designation of internal space of the Seattle public library (OMA 2004)
Therefore a wider understanding than the modernist use of ‘form follows function’ is proposed in which function is understood as measurement of event and action. If abstract space has the goal to reduce the “real” to the flatness of a mirror (an image of pure spectacle) we can collapse the idea of function or action with that of image (Tschumi, B. Concepts of Architecture and Disjuncture: Six Concept).
This notion goes beyond the post-structuralist investigation and anticipates the role of agency, because while acknowledged to be useful, linguistics and the investigation into form through signifiers, become saturated (Lefebvre, 1974). Here Lefebvre (1974) suggests that the dialectic interaction between signifiers and signified elements would become grey, with some signified elements becoming signifiers and visa versa, and resulting in an interchangeable combinatorial system (Lefebvre, 1974).
Figure 2.14. Graph depicting positional placing between form and meaning (Author)
In viewing architecture as dynamic, and the subsequent problems of representation and production that arise, the synthesis of the project aims to mediate the relation between image and function (action) in architecture. To achieve this, a graph is proposed to investigate the relations between form giving and the philosophical understanding of the world through which meaning is ascribed to architecture. The form giving of architecture is understood to be grounded in one of two approaches: Formalism and Functionalism, which are both seen to have resulted in ‘style’ and are therefore interrogated on the intersecting axis of empirical and experiential modes of signification. By collapsing the form-function dialectic, and therefore undermining the empirical system of signification, the experiential/phenomenological medium of production and analogy take on equal validity in signification to that of the empirical modes.
This not only lead to a set of methodologies, but allowed for space to be analyzed accordingly. Space is here conceived simultaneously in different ways, and signs therefore occupy the same space.
Figure 2.16.
Photographic renders of site (Author)
Figure 2.17. Photographic renders of site (Author)
Figure 2.18.
Photographic renders of site (Author)
Figure 2.19. Photographic renders of site (Author)
conceiving SPACE
A recurring pattern of a thesis, antithesis to reach a synthesis which becomes a thesis again characterizes western dialectic thought. If this is the root of architectural theory, a departure point from which to critique the current paradigm can be established. The collapse of the polarization between form and function and empirical and experiential systems of knowledge is a logical progression towards a new antithesis.

Thus the argument abides by the underlying logic of discourse, but undermines it, and therefore frees it to re-evaluate the foundational thinking. Here function is form and form is function, and neither takes preference. The interaction becomes relational, and experience takes on a signified nature, whilst signification is subject to experience.
The implication is that a building cannot be reduced to what it is and what it means, as architectural theory has traditionally done, and a ‘cohesive whole’ can never be formulated. Theory becomes the discourse of relations and contested territories, shifting from knowledge of form to a form of knowledge, and concerns itself with programme rather than form or ‘style’ (Tschumi, B. Architecture and Disjunction: Spaces and Events).

The investigation should therefore concern itself with the production of space; the environment in which buildings are lived (Latour&Yaneva), and an understanding of the urban context becomes rooted in the nature of space (Lloyd, 2003).

Here Lefebvre (1974) points to Sigfried Gidion, in arguing that Space is the central relational signifier, which describes context. Placing Space above paradigm, Lefebvre (1974) suggests spatial conception and production as the most important description of history and therefore context.

Here Lefebvre submits a genealogy of three spatial periods: The Greek and Egyptian, the Roman Pantheon, and our own, but based on the reliance or rejection of Euclidean Space suggests two opposing readings of each (Smith, 1991).
From a Euclidean understanding Greek and Egyptian temples are meant to be seen from without, placing attention the exterior, the landscape and their relations, but this object centred understanding is inverted by Heidegger who argues that phenomenologically the Greek temple encloses the sanctified or sacred space, and restricts the deity as the political centre of the city (Smith, 1991).
the roman pantheon

In this case, the interior space becomes paramount if viewed from a Euclidean understanding of object and void, but Lefebvre once again explains that from a relational understanding, the Pantheon signifies the exterior, the cosmos through the image of the hemisphere in the form of the interior of the dome and an opening to the light (Smith, 1991).

Figure 3.3. Interior of the Roman Pantheon, oil on canvas by Panini, 1734
the modern conception of space

The modern conception of Space seeks to engender a harmony between internal and the external Space. Relying on Euclidean Space, this would conceive space to be pre-existing, and human emotions and expectations to make themselves tangible, but Lefebvre argues that space is produced by them, thus ascribing meaning to space and placing emphasis on the body and time, and making it intrinsically political (Smith, 1991).
Figure 3.4. (above)
watercolor, Farnsworth House, built 1945 – 1951, Mies van der Rohe

Figure 3.5. (opposite page)
sketch, Farnsworth House, built 1945 – 1951, Mies van der Rohe
If Cartesian thinking is discredited in post-modern theory and programme, event and action become central to spatial understanding; it becomes important to analyses the negotiated territories, rituals and phenomena (experience) that characterize the African City in order to generate a methodology for imagining an architecture in accordance with African spatial production.

Koolhaas (2000) describes the negotiated territories of the street, private and public spaces, as mutable and temporary. Thus public space in the African city is characterized as self-organizing through constant occupation by an insurgent public. A stream of awareness just below the level of day-to-day self-consciousness monitors the field of relations, and the built environment is constantly claimed by assimilation through the human mimetic faculty (Lloyd, 2003). This means that in the African spatial conception all space is inherently public, where the insurgent public negotiates shifting territories. Lloyd (2003) explains that the radical departure from western spatial concepts, where space is understood to be inherently private, unless specifically defined as public through design and regulation, lies in the understanding of private space as rooted in ritual (Lloyd, 2003).

Here Berry (1992) advocates the term ‘field dependent’ to explain the Western ideals of spatial planning, which defines space through strict urban edges such as buildings, walls and fences, while ‘field independent’ describes the ritually defined African spatial concept and spatial “ownership”.
Figure 3.6. (above) diagram of a field dependent spatial conception rooted in an empirical system of Euclidean spatial conceptions.

Figure 3.7. (bottom) diagram of a field independent spatial conception as a product of culturally rooted experiential spatial signification.
Spatial complexity is often suppressed in the highly structured and deterministic urban world (Lloyd, 2003). Van Rensburg (2008, Space as ritual: contesting the fixed interpretation of space in the African city) elaborates that nomadic cultures have a highly developed spatial imagination. He implies that ‘field independent’ ritual spatial conceptions result in flux, and that the territorial drift could explain the duality and villagization (Bruyns, 2012) embodying Johannesburg as described in The tale of two cities (Chapter 1).

Contesting the notion of fixed boundaries he explains introverted spaces are externalised through the collective conscience, and the distinction between the prohibited and the permitted is erased to manifest in a hyper democratic ritually negotiated field of adjustable and variable public and private spaces with flexible and elastic edges. His argument therefore culminates in the conclusion that African space is inherently social, and that the social landscape is therefore the Urban landscape, thus stating that the human behaviour and social practices are spatial organizational forces acting in conjunction with, and often dominating spatial order. (Van Rensburg, 2008, Space as ritual: rethinking spatial strategies in the African city).
The understanding of African space as relational, where cultures emphasize human relationship, rather than objects and technology (Lloyd, 2003), therefore aligns with Lefebvre’s concept of space as a social construct. The spatial project should consequently place emphasis on the urban experience of socio-spatial relationships, articulated through temporal patterns, rhythms and interruptions of the spatialities, narratives and surface conditions continuously carved into the urban slate (Van Rensburg, 2008, Space as ritual: contesting the fixed interpretation of space in the African city).

The defining public and relational character of ritual acts out in the in-between (the open and connecting spaces between buildings) and draws on the transcendental power of experience to signify space, placing significance on the non-visual senses. In this conception of space, a building serves only as an interface which connects people to the open system that is the city. Its relevance grows from the people who use it, and the programme becomes interchangeable, depending on conditions. It is the materialisation of a condition, where programme, concepts and strategies signify it.
Therefore, in iteration of the form-function collapse, the image produced, or the form that takes hold, is the manifestation of relations, and not the materialization of form (Van Rensburg, 2008, Space as ritual: rethinking spatial strategies in the African city).

By supporting the insurgent public, the negotiation of territory and ritual through utilitarian and experiential media, material becomes signified as part of the social narrative, and material and space become ‘inter-dependent’. This therefore introduces one key distinction between the ‘field independent’ and the proposed ‘field interdependent’ understanding of space.

Although ‘field independent’ space can exist independent of the real world, as per example in the virtual world of social media, where it can negotiate territories and produce meaning (although not fully as it negates embodiment), architectural practice, apart from the speculative realm of ‘paper architecture’ as per example the work of Lebbeus Woods, is generally concerned with buildings in the ‘real world’. Here it serves not only to support the social realm, but exits in its own right. It weathers and ages, erodes and decays, and could potentially even grow, thus acting independently from human action.

Here Latour (undated) states that buildings or conceivably ‘projects’ resemble a complex ecology more than they resemble static objects in Euclidian space, and by acting, partake in the production of space.
RITUAL AS KEY TO FIELD INTERDEPENDENCE

Following the argument that spatial production is the result of interrelations instituted through the social exchanges of daily life, “conceived” by thought and “lived” as a “bodily experience” (Van Rensburg, 2008, Space as ritual: contesting the fixed interpretation of space in the African city), in field interdependent relations, where space is neither complete in itself nor simply neutral structure or vessel (Lefebvre, 1974), ritual is identified as a key system of signification in service of the spatial imagination acted out in a material world (Lloyd, 2003).

Van Rensburg (2008, Space as ritual: contesting the fixed interpretation of space in the African city) explains that a world-view that encourages cohesion, community, tradition and participation typifies African knowledge systems. Here the emphasis is on community and inclusion, rather than the individual, and meaning is situated in a continuation of past narratives. By sharing and continuing the collective, place is re-affirmed in a shared harmony within an immaterial realm rather than through individual emancipation, progress and material gain (Van Rensburg, 2008, Space as ritual: contesting the fixed interpretation of space in the African city).
To this point Mary Douglas (2007) an anthropologist explains that secularism is not the product of the city or science, but is an age old cosmological type, a product of definable social experience of the breakdown of social form. She explains that ritual, often viewed as credulous or primitive from a secular view, because it regards tradition as superstitions, rather functions per-eminently as a form of communication (Douglas, 2007).

Here the image of the body is used in different ways to reflect and enhance each person’s experience of social systems (Douglas, 2007), thus becoming a medium for the signification of what Lloyd (2003) has called the spatial imagination. This implies that the urban dweller has evolved into a new type of “urbanising agent” which creates new social and human landscapes (Van Rensburg, 2008, Space as ritual: rethinking spatial strategies in the African city).

In conceiving of the body as a key space making medium through embodiment and ritual, giving expression to a society’s collective mind and space as a function of culture, distinct from epistemological space (the “absolute” space of philosophy and mathematics) and physical space (as defined by purely practical activities or the perception of “nature”) (Lefebvre, 1974), it becomes central to the mediation between architecture, broadly conceived, and social practice.
Here Tschumi (Concepts of Architecture and Disjuncture: Six Concept) writes that strategy has become key to architecture of a heterotopia. He advocates that architects must intensify the rich collision of events and spaces. If space is produced by ritual and embodiment, the material manifestation must aid in the imagination by engaging the ritual experience of users and depart from the conception of buildings as enclosures and physical objects through the abstraction of space, to discover the alternative of an all-encompassing space (Van Rensburg, 2008, Space as ritual: contesting the fixed interpretation of space in the African city).
Van Rensburg (2008, Space as ritual: rethinking spatial strategies in the African city) writes that the estrangement between body and space originates in the Enlightenment and gave rise to the “physical determinism of post-human Modernism.” In reintroducing the body to space, he iterates strategies which assimilate form, temporality and event. Referencing Lefebvre, he argues that this is subject to the reinstatement of the sensory, sensual and the non-visual experience of architecture, and points to Pallasmaa’s “life-enhancing architecture” to which the body indistinguishably belongs and confronts space.

This concept is supported by Benjamin (Heynen, 1999) when he states that the individual and his surrounding adjust to each other and should therefore be understood as an active process of dealing with reality. Heynen (1999) comments that this can be conceptualized in the grammatical association between ‘habit’ and “inhabit” in which dwelling is the constant augmentation of the container.

Here Tschumi (Architecture and Disjunction: Spaces and Events) adds that architecture cannot be detached from the events that “happen” in it, and strains the conception of architecture as a verb. In his conception of the body in space, he supports a field interdependent understanding within the realm of conception and experience by placing invention, insurgence or agency at the centre of what he calls “events of thought” (Tschumi, B. Concepts of Architecture and Disjuncture: Six Concept). Thus event becomes not simply a logical sequence of words or actions, but rather what he calls “the moment of erosion” where the insurgent public induce the chance or possibility of another, different emergent setting by collapsing the very moulds of the setting within which a production takes place throughout recurring lives and deaths in action and time.
Smith (1991) explains that Lefebvre, being a Historical Materialist (see appendix), moves beyond the consideration of actively intertwined goods to include space and time as measure of the production of space, as social relations of production have their existence projected and therefore inscribed in space to produce it.

This denotes a shift in the production of space towards an understanding of space as a temporal condition in which territory is not established in isolation and separation but rather, through time and defined by events occurring within space, despite remaining geographically static (Van Rensburg, 2008, Space as ritual: rethinking spatial strategies in the African city).

Here van Rensburg (2008) argues that time and place can be positioned as interdependent realities bearing evidence of each other’s existence in a symbiotic affirmation of the other. In erasing the dialectic oppositional relation that time and space is described by, suggest that space and time should not be considered to be identical but rather that they are co-dependent, and that if this is not the case, space is reduced to a static state where it is of lesser importance than time (Van Rensburg, 2008, Space as ritual: rethinking spatial strategies in the African city).

If as van Rensburg (2008) argues current patterns of thought consider the material as more significant and convincing than the abstract, and Historical Materialism is concerned with the material interactions, it is suggested that space is considered as material, yet fluid, thus allowing us to draw on and reconciling it with contemporary theory.
Time etches marks of age on the material surface, and is responsible for the accumulation of history, both natural and cultural, while place bears physical witness to and situates events passed with the inscribed evidence. This frees place from the static notion of the memory continuum and advocates a commemoration through the celebration of the everyday, the mundane and the use, as acted out through ritual, and allows space to mediate the inherent contradictions of meaning in the African city.

Here Latour and Yaneva (undated) posit that if buildings are situated within space and time, the problem of architectural conception becomes a question of methodology, repositioning representation, but Lefebvre’s argument hinges on the concept of moments, points of rupture, where the revolutionary possibilities in everyday life lies in differences acted out in the ephemeral, euphoric and sometimes radical (Smith, 1991).
The conceptual diagram of the DNA of the city illustrates how historic turning points, charted along the developmental line of the city are linked and allude to spatiality through a Cartesian spatial construct. Through perspective, as the links intersect they create unforeseen effects and clashes. These are indicated as thinner or thicker lines depending on their perceived magnitude and grow either towards or away from the place-time continuum depending on their perceived spatial impact.

Here Tschumi (Concepts of Architecture and Disjuncture: Six Concept) replies through Derrida’s concept, suggesting the formation of an “architecture of the event” that could “eventualize,” or exposed that which, in Western history or practice, is conceived as fixed, critical and monumental. He suggests that sharing a root, the word “event” and “invention” become interchangeable, implying that insurgent action and agency are key notions of construction or creation of space through time, and therefore become the signifying medium.
“The hallmark of modernity is the decay of the subject’s mimetic faculty and, with it, of the influence of tradition and of the significance of the experience.” –Walter Benjamin (Heynen, 1999: p99)

HISTORY AND NARRATIVE
IN ‘FIELD INTERDEPENDENT’ SPACE

This notion of time cements history in an imagined narrative, inscribed in collective experience of space. The depraved form of history; of “reading” layers of interpretation and reducing space to a system of signs, cannot take account of the reciprocal, indifferent and conflicting relationship of spaces produced by event. (Tschumi, B. Architecture and Disjunction: Spaces and Events). In order to understand the shifting narratives therefore, we can borrow Benjamin’s a re-evaluation of time through what he calls Erfahrung, where history is subject to subversive forces and manifested in tradition (Heynen, 1999).

Benjamin distinguishes between Erlebnis and Erfahrung, where Erlebnis (Belewenis) is understood to be a cognitive awareness reacted too immediately, and an impression is in conscious memory (Erinnerung - Geheue), but leaves no trace in the unconscious material of remembrance (Gedachtnis - Herinnering), which makes up Erfahrung (Ondervinding / Ervaring).
Here Erfahrung is understood to be rooted in a tradition or ritual, which forms part of accumulated experience. It is a convergent network of accumulated memory, sensory experience and impressions, nestled in the unconscious, rather than an archive of neatly ordered facts firmly fixed in memory (Heynen, 1999).

If Erfahrung therefore is based on repetition and continuity, it not only explains the estrangement experienced in the city, where a rapid tempo and abundance of stimuli produces continually changing stimuli as inputs into Erlebnis (Heynen, 1999), but it also explains the underlying principles that govern the African Space where by sharing and continuing the collective, place is re-affirmed in a shared harmony within an immaterial realm of community and inclusion.

There is no need for the interpretation of history as a story of the progress of humanity against the backdrop of an empty, homogeneous time (Heynen, 1999), but the relational understanding reaffirms place and position through ritual and repetition.

“… each specific moment contains everything both the entire past and the virtual realization of the utopian final goal… it is the continuation of demise and rebirth, then a celebration of the current … it is the task of the historical materialist to … fight for the oppressed past. He takes cognizance of it in order to blast a specific era out of the homogeneous course of history.” - Heynen (1999)
THESIS AND WARNINGS
IN ‘FIELD INTERDEPENDENT’ SPACE

Therefore it only becomes plausible to formulate a methodology by looking at the methodologies employed by the Deconstruction project and to a certain degree the ‘Phenomenologists’ to develop a system which recognizes time or event in conjunction with space as constructed through the collective experience of ritual.

However, it is at this point that a critical warning is to be laid down. If in ‘field interdependence’ recognition is given to the material world as an independent actor, Latour wrights that while phenomenology succeeded in resisting the lure to reduce humans to objects, it should be firmly criticized for not resisting the “much stronger and … damning temptation to reduce materiality to objectivity.”

Secondly, in employing phenomenology as a medium in the production of space, it is important to remember that it is rooted in the relational understanding of the collective with ritual experience acting as signifier, implying that it cannot be employed in individual experience, but only in reciprocation or negotiation between actors.
Apart from the time of a particular space, place is the interweaving of narratives that exist relationally. For this reason train journeys were plotted along a time line of arrival and departure from Jeppe Station, but included end destinations and travel time. The theoretical purpose of this was that although remaining in the reductionist realm of representation, it served to imagine the collision of narratives.

The emerging pattern would thus act in the same way indentations on a sound drum in a music box would carry the coding of a melody, singing a unique song for Jeppestown, or the binary coding embedded in punch cards of a Jacquard loom which weaves together the narratives to produce a coded image of place.
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Figure 3.9: pick algorithm of Jeppe Station over time

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THE ‘IMAGINED IMAGE’
CRITERIA FOR EVALUATING SPATIAL INTERVENTIONS

Drawing on the described workings of space, the success of spatial intervention should be measured against “differential space” which embodies diversity and heterogeneity, through difference (Lefebvre, 1974). Here it accommodates not only spatial ability and a field independent ritual social system, but allows it to manipulate and interact with the material world in a field interdependent relationship in order to accommodate the fluid spatial conception of African space.

The aim therefore becomes to reconcile a physical/geographic context originally conceived in the western tradition with the relational social construct of space that characterizes the spatial imagination of agents. This implies a dynamic approach to making space in the African city and suggests the amplification of an active practice of everyday ritual towards the subversion of abstract space and the formation of lived space.

Here the strategy celebrates critical difference in culturally divergent societies to the end that it re-conceptualizes place, both physically and metaphysically, as ritually enacted and experienced in the relationship between the body and the built environment through everyday life. Van Rensburg (2008), quoting Morojele (2002), here proposes an underpinning strategy of “sanctioned impermanence” for a methodology which accommodates the fluid development of spatial identities in the transitional environment.
A plurality of interpretations and spatial experiences through action would therefore accommodate a cultural continuum, weaving together spatial experience and communal ownership, and allow for a self-organising system which Koolhaas (2000) argues recognises the citizen’s right to inhabit a flexible and mutable city, governed by territorial temporality as streets, public and private spaces are continuously occupied in different ways. As a result the city offers its citizens a wider variety of opportunities and choices, and allows the underlying collective ambition to direct its future and continually live out its identity.

From this understanding of the context, the generally unfavourable position is to be admitted, where architecture is limited in its support of the complexity of the urban context. Here Koolhaas (2000) was right in his thesis: Architecture understood as an urban agent in a field interdependent contextual understanding can only mediate once a full understanding of the relational social landscapes is constructed. This is supported by Van Rensburg (2008, Space as ritual: rethinking spatial strategies in the African city) who states that all that is left for architecture is to “provoke situations” and “create atmospheres” which can be manipulated by society to produce an expression of itself: an image of society.
The preceding analysis of space positioned place and the accompanying ritual signifiers at the centre of the investigation. This not only serves as a methodological investigation and academic critique, but according to Lloyd (2003) shall provide a framework for the engagement with the social and physical ‘pathologies’ resultant from rapid urbanization in the future. Thus, in developing a methodology which draws on Erfahrung, to access the highly developed spatial imagination of the contemporary African city, the role and workings of ritual become seminal, and need not only to be investigated, but internalized.

If as van Rensburg (2008, Space as ritual: contesting the fixed interpretation of space in the African city) argues life is only made possible and meaningful as rooted in a specific community with a particular system of beliefs, practices, and systems of meaning situated in culture, they should be granted equal status, warranting a thorough investigation into ritual.

It naturally follows that as an outsider the designer can never truly transcend to access the ritual that produces space and partake in its production through participation, as different cultures will perceive reality differently. This is articulated by van Rensburg (2008, Space as ritual: contesting the fixed interpretation of space in the African city) in his description of culture as the product of people’s particular histories and social circumstances, and subsequently expectations, beliefs, emotions and perceptions. To this point however, it is believed that an analysis of ritual in the broad anthropological sense shall serve to construct an academic understanding of relations, while the analysis of particular rituals that constitute the African system of thought shall serve to foster sensitivity on the part of the external viewer.
In viewing ritual Douglas (2007) explains that two opposing understandings exist. The first would be a view that describes ritual as signifying empty conformity, where actions are simply external gestures of communication, but do not carry symbolic meaning. This negative view of ritual would typically be held by what she would describe as an 'open' society, where individual identity is free from group association and meaning is found in the active experience of progress, and therefore generally characterizes the secular view in which architectural theory is generally rooted. From an individualistic, weak group associated world view, rituals and ritualism as a whole is often denounced in favour of the intuitive and instant forms of knowledge of the inner experience, and could simultaneously explain the shift towards Phenomenology as a system of verification in the plural post-modern age and serve as a critique as it does not recognize the collective ritualistic system in which the African spatial conception is rooted.

The second understanding of ritual, in which the African spatial imagination manifests, blurs the distinction between personal and public meaning and is understood from a world view that is rooted in a strong group association (Douglas, 2007). This ritualistic system functions in the negotiated territories of a small scale society, where rituals are not fixed but carry meaning, and no distinction is made between law and morality (Douglas, 2007). Ritualism thrives to reaffirm the totality, and symbolic action is regarded as highly effective, leading to a systemic collapse or miss-fortune if rituals are broken. Douglas (2007) explains that ritual should therefore not be understood as superstition, but as a social/cultural function, where social groups with strong communal bonds are usually ritualistic in their religious practices as generated by experiences in the same dimension which serve to reaffirm place.
In turning to our own context Lloyd (2003) states that, although with many different manifestations in practice, a uniquely African world view can be observed empirically in nearly all African populations, a view reflected in the proposition of a Black Urbanism as a means for understanding one common denominator in urban analysis by Abdul Malique Simone (in Bruyns & Graafland, 2012). Van Rensburg (2008, Space as ritual: rethinking spatial strategies in the African city) references Lloyd in stating that the spirit of African culture manifests as the Munthu, a distinctive ‘life force’ conferred on each individual, and the collective Bunthu, which he argues manifests in a strong group association in which the ritualistic relation reaffirms place, but concedes that this may be restricted to sections of the diverse South African population. Here it is important therefore to point out that the majority of the residents of Jeppestown share not only a common cultural framework but a common geographic heritage (66% from KZN page 62 group book) to which they often return.

Douglas (2007) elaborates that within such a society two sets of ritual symbols exist. The first is what she calls diffuse symbols, where one perception becomes the directing component of the system of values and results in a standard emotive response, but detailed meanings in the concept become difficult to articulate. This is understood to be a weaker form of the symbol as it carries less meaning in itself, and serves rather to signify the system as a whole. An example of a Christian relic, where the symbol in itself serves to verify the continuity of the story, but carries less significance to the ritualistic system than would the action of
taking communion, or the function of the symbolic meaning carried in the abstinence from pork as the global ‘law of the Jews’, where Douglas (2007) explains that although it signifies the system it carries less emotional connotations. The second and more significant set of symbols in the lived experience of culture and place through ritual is described as condensed symbols (Douglas, 2007). These symbols have multiple references in relation to other symbols to form universally combined systems and representations. They carry a lot of lived meaning in an omnipresent self-governing society (Douglas, 2007). Lloyd (2003) discusses the naturalization of death in African societies as one example of a condensed symbol in just such a relational understanding of meanings. The material nature of death is not recognized, thereby socially defining it as another form of current, social relationship, where life and death become a continuous social entity. He explains that in initiation rituals the aim is neither to conjure death away nor to ‘overcome’ it, but that initiates simultaneously die and become re-born symbolically, where life is attained in belonging to the collective, the tribe or family, and to be excluded is indistinguishable from a living death (Lloyd, 2003).

“...they are consumed by their ancestors, then the earth gives birth to them, as their mothers gave birth to them... The initiates are left in the hands of their ‘cultural parents.”

Such rituals are intended to reinforce the group, as Douglas (2007) refers to it, thereby augmenting and amplifying personal recognition of the individual. These social positions are reinforced by the disseminating experience of storytelling and the continuation of the collective narrative as Lloyd
(2003) argues they function as a continuation of knowledge. Here he points to the important mimetic, cultural and linguistic connections to space and environment as elements of teaching and learning, and argues that because the complexity of a spatial imagination is epigenetic, it is the product of culture and transferred knowledge. Tied to the development of intellect, language and social abilities, space as a social product therefore serves to reaffirm metaphysical position in the collectivist ritual world view (Lloyd, 2003), and taking on the central position of spatial conception and knowledge systems to which architects are to appeal.

Here Lloyd (2003) then references Arendt, who explained that the origin of law, conceived to regard people as uniformly equal, was not rooted in human equality and reciprocity, but rather functioned as a logical reaction to protect the meek in an individualistic society, in order to conserve civil life.

“outside the walls of the polis... the strong did what they could and the weak suffered what they must...”

This not only confirms Douglas’ thesis that in ritual society jurisprudence sees no gap between law and morality, but gives prominence to spatial agency and ritual ownership in the African context. In Douglas’ (2007) discussion of the three phases towards secularization we can therefore identify the agency and concepts of spatial ownership held by the respective spatial agents. Here rituals are first identified and classified from the most ritualistic to the most secular, although it is admittedly superficial due to the lack of anthropological skill and experience, and the lack of the time that would be necessary to conduct a well grounded study.
The main ritualistic practices and spatial signifiers on site were identified, observed and classed according to symbolic weight, from the most ritualistic to secular.

Here the practice of traditional medicine by Sangomas at the Mai Mai market were understood to draw most heavily on condensed symbols, but due to the lack of real ritualistic understanding through meaning and the reluctance and distrust towards those who do not belong to this particular group it would be unethical for the architect (the author) to make conclusive statements about this system apart from the broad general understandings provided by anthropology, to be discussed in following chapters on program.

The consumption of Mtomboti (home brew beer) and smoking of cannabis are understood to have a range of symbolic meaning. While Mtomboti is drunk during ritual initiation where it carries deep cultural weight as a condensed symbol, it functions as a signifier of the identity of hostel residents making it a diffuse symbol in identifying the social hierarchies of hostel residents. The same applies to cannabis which is used to heighten experiences making it a condensed symbol intertwined with other ritualistic acts. Although understood to be present in other ritual acts of the area, this argument is mostly put forward by a small minority of the population of the area (Rastafarians, herbal healers etc.), and is general perceived as a diffuse symbol, functioning as a symbol of identity, territories and behavioural negotiation of space, particularly around the hostels.

Gambling and card playing on street corners and sidewalks further aids these territorial demarcations and are riddled with diffuse symbols. These are based on orientation, particular actions and relations between people within a spatial understanding, and a vast array of what would be viewed as ‘superstitions’ from the secular point of view.
Religious denominations signify space in Jepestown in a similar way. Here ritual practices can hold a condensed symbolic meaning within the group and serve to elevate public space to the sanctified, but the actions of prayer and worship along with the denominational attire (badges, robes etc.) function as diffuse symbols, signifying the architectural program and spatial negotiation to those who do not belong to the group and shall respect it and wait their turn (to play soccer etc.). To this point the Muslim presence around the Mosque acts out rituals to a lesser extent, where spatial occupation is mostly in the formal domain (shops etc.), and the only spatial negotiation is the physical presence of religious followers on surrounding sidewalks and the audible call to prayer.

Although the Halal slaughter was not observed, its juxtaposition with the public slaughter and butchering of cows (described as ‘culturally Zulu’) signifies social and territorial negotiation where indigenous culture takes preference to that of Islam. Here the symbolic meaning of the slaughter could not be established, but in conjunction with food preparation and the accompanying particularities of Chesanyama / Shisa Nyama indicate the emergence of an Urban African culture.

Although taxis cannot be described as carrying particular transcendental meaning, there is an identifiable ‘taxi culture’ which draws on African spatial conceptions and the new urban needs. Although subject to a set of legislation, an elaborate system of communication and spatial appropriation has been observed. This network of movement is not only held together by spatial negotiation between taxis with regard to roots and a time based system which allocates the right to collect passengers on a first come first collect bases, which
results in a queuing system, but relies on a set of hoots, verbal shouts and hand signals to communicate with potential clients. Destinations are communicated by either parking facing in a Southern or Eastern direction, which translates to the MTN or Bree and Noord Taxi ranks respectively, while other destinations would conform to the general routes and be communicated verbally.

To disseminate and analyse the emergent Urban African spatial actions, one can look to Douglas (2007), who explains that it is necessary to understand the process of ritual estrangement and proposes a grid group theory for the understanding of social negotiations. She describes three social phases away from ritual experienced towards secularization. The first is contempt with ritual as a gesture, an external form of social conduct and communication devoid of meaning, serving to allow the individual to partake in the group, but only with the goal to retain social bonds, but not to find transcendental meaning. Taboos vanish, and ‘sin’ is understood to be a specific formal act of wrongdoing. This leads to the second phase which is the separation from the group and the individualization of transcendental or religious experience, where the subject becomes subjective and personal. Here group affiliation dwindles, and interactions become rationally and empirically negotiated. The last phase then sets in where in recognizing the individual, the legitimacy of one’s own individualism is legitimized by recognizing the individualism of others, but mystical experience is renounced and only the current existence is recognised. Here humanist philanthropy becomes the mode of reaffirming one’s own humanity and ethical existence, and one is free to act on one’s own accord: The ultimate form of “openness” (Douglas, 2007).
“Openness” is the term Douglas (2007) employs to describe weak group association. She asserts that it limits the growth of the public, as low level of control and social norms are necessary components to creating a secular society. Strong group association on the other hand result in high levels of conformity, control and group allegiance and therefore exert pressure on individuals to act within the social norms of the particular group territory (Douglas, 2007).

Translated to spatial design this notion is then compared to the common principle in architecture where passive surveillance and ownership are key to the success of public space, and without the conception of belonging, this becomes impossible, thus substantiating the premise of ritual agency as a primary design consideration, particularly in the transitional zone that is a transport interchange.

It follows that group association is critical in the making of public space, but Douglas (2007) points to a second factor. Placing group association on one axis of a graph she proposes an intersecting axis which she calls the grid axis. Arguing for ritual as a restricted code, she explains that any group in which the people know each other very well has a form of restricted code: A strong network of assumptions and implicit rules that guide behaviour of individuals through shared social expectations (Douglas, 2007). In a weak grid association estrangement and insecurity set in. Loss of orientation and a sense of ‘place’ result in a liminal existence and social interaction rely on universal signifiers for communication (Douglas, 2007). This loss of negotiation results in banal and confrontational interaction, and explains the experience of the harsh city (Chapter 2).
GRID
strong network of assumptions and rules that guide behaviour of individuals through shared social expectations

PRIVATE INDIVIDUAL
self-centred, competitive relationship-making relationships, materialist symbols of status e.g. pedestrians, commuters and private shop owners

RELATIONAL ACTORS
balanced hierarchical society with a strong sense of identities and a stable sense of relationships e.g. informal traders and vendors

GROUP
weak group relations result in “openness” has a low level of control of individuals and thus allows for secularism public space cannot function in a condition of “openness”

secularist horizon
isolated individualistic structure, support or fixed roles, with transitory relations e.g. passengers in the train or cars

dissenting enclave
majoritarian collective with an authoritarian character, fundamentalism and a strict segregation between insider and outsider e.g. Touts, hostel residences

GROUP
strong groups result in high levels of conformity, control and group allegiance, but exert pressure on individuals

GRID
with a weak grid a sense of liminality sets in, and a sense of “place” is lost and orientation is lost, social interactions function poorly through universal signifiers
She elaborates that the restricted code is most easily identified through analyses of hierarchy, where a strong social hierarchy is indicative of social code (Douglas, 2007) whether in the form of legislation, economic exchange and labour, spatial ownership or cultural place. This allows the observer to place actors and their constituent spatial understanding in one of four quadrants: The private individual, the secularist horizon, relational actors (ritualistic society), or the dissenting enclave, all acting simultaneously on the slate within time and space and resulting in overlapping and shifting fields.

The Private Individual

The private individual is the term ascribed mostly to occupants who work, but do not live in Jeppestown, and subscribe to the secular world view. It characterized by an individualist understanding of the world, where the self is at the centre and identity is separated from that of other individuals, often to manifest in material signs of wealth and status. This system relies heavily on the law to protect ‘rights’, where the competitive individualism translates all social action into a market-exchange relationship. This quadrant is generally represented by the formal economy such as private shop owners, and is taken up by pedestrians and commuters when entering into the monetary and goods exchange, with little regard for ritual (although it is found that when interacting with other quadrants ritual is respected, making it conditional and specific to the exchange).

The Secularist Horizon

The secularist horizon is distinctive of the liminal and transitional spatial action, where apart from adding ‘energy’ which support the ritualistically grounded spatial drivers, actors do not contribute to the ritually produced spatial imagination. It does not conform to either group or grid,
and is therefore the most open and individualistic spatial experience, which denies structure, support or affirmation of relations. The denial of fixed social roles in favour of transition provides the frictions which pluralize heterotopian relations and characterize the generic city. Often the product of modern planning (as discussed previously), the singular car and the arrival and departure of trains and other transport media cause the greatest disjuncture between experience and place due to the physical separation of body and space and the subsequent ocular signifiers, but become useful in providing an empirical measure of pulsing energy through fields, where the rhythm is felt in the opposing quadrants as people move towards and away from these energies.

Rooted most strongly in both grid and group, relational actors rely heavily on ritual to formulate a balanced hierarchical society with a strong stable order and a stable sense of relationships. In the African context, hierarchy is established through seniority, either by age or by years of spatial occupation, and is venerated through ancestry and the cyclical conceptions of time (as previously discussed). As described in the workings of ritual and the African conceptions of space, belonging is reaffirmed through community and equality as a whole, where vendors and informal trades do not have a strong notion of competition. The free market principles of competition do not apply; spatial rights are a product of time and repetition, while prices of goods remain the same throughout to avoid conflict and placing emphasis on social relations with providers of goods and services.
The dissenting enclave functions on an extreme, almost neurotic, group affiliation, but has very little hierarchy and social norms. Characterized by a sectarian collectivity, it has a fundamentalist nature, with a strict separation between insider and outsider, and constantly feels threatened by external pressures. This constant threat of social upheaval results in rigorous rules of equality so as not to have leaders with a lot of power which disseminates the group, and the resultant flat hierarchy constantly suppresses individual freedom and security with the threat of excommunication. This enhances ambiguity through the constant shifting of rules, which result in an unstable existence where insecurity and authoritarian power exertion are constantly looming. Here the hostels and their spatial influence are the most prominent spatial influence on Jeppestown. Serving as housing for migrant workers, it does not have a constant population, and lacks a strong cultural structure due to the absence of woman, children and the elderly. The ambiguity and insecurity of social relations and cultural ‘place’ result in subversive behaviour as defence mechanisms. They are most strongly felt in territorial hostility and the compensation for the loss of meaning in substance abuse. To this extent taxis also show little regard for local concerns, and act only to prevent internal conflict between taxis, although it is further argued that they have become so common place and necessary for the survival of the urban dweller, that relational actors who depend on them have integrated into their spatial conception.
The programme was developed as a combined consideration for the existing station and market as well as the theoretical argument. Whilst aiming to amplify the existing conditions and strengthen the urban vision.

Program as a key driver for conditional amplification and spatial strategy
Figure 5.1. Jeppe station as interchange point (Author 2014).
GEOGRAPHIC SIGNIFICANCE OF JEPPESTOWN

With the collapse of the centralized city, where the city does not have a distinguishable central core or order, but operates through a network of interlinking but autonomous fields. Jeppestown becomes a viable area of investigation.

Natural features support east-west development on the periphery of the CBD as high density already exists in Hillbrow and Yoeville to the north-east, while the city is bound by institutions (Wits etc.) to the north and the mining belt to the south. Here, one of the most prominent components within Johannesburg CBD is the railway system, a central spine connecting the fields, which on a planning level allows the proposed macro framework for Jeppestown to connect to existing frameworks and form part of a larger framework and vision for Johannesburg.

With the station as the first entry point into the city, when traveling from the southern townships, it becomes the gateway to the southern and eastern parts of the CBD. Considering the 800,000 commuters who pass through the inner city every day, and the fact that the majority of these visitors who use the city as a regional shopping centre come from the southern suburbs, Jeppe Station becomes a strategic point of interchange within this network.

All major arterial roads originate from the inner city and spread out into other parts of the city. Here Commissioner is one of the most prominent East-West arteries, passing directly past Jeppe Station, while the BRT routes passing by the northern portion of Jeppestown and can easily connect to Jeppe Station via a newly implemented bus stop to existing development north of the station.
Figure 5.2. Urban Hybrid Culture at Jeppe Station (Dawjee et al. 2014).
From the preceding theoretical discourse the design criteria needs to take account of several conditions. The generic city points out the overwhelming significance of infrastructure for urban life, where connectivity and adaptability/flexibility take precedence to proximity and linear history, while historical materialism pointed to the key components of the production of space as the relation between labour, Erfahrung and space.

Here the station functions as a vibrant point of convergence between the African and Western spatial understandings to result in a new Urban Hybrid Culture, a heterotopia weaving together time and space in a continuum. Event can be seen as a turning point, rather than as an origin or end. In much the same way lives and deaths reaffirm ritual being, it confirms place through habitation, occupation or agency. Not only does this space mediate contradictions of typology and program, where industry, residential, commercial and the public space become interchangeable, but agency or class, where developers, artists, industrialist, residents, informal traders and commuters, falling within the different quadrants of spatial ownership as described by the grid-group theory, share the same physical space with overlapping fields and territories.

This places emphasis on place making which not only accommodates all these experiences, but allows each to draw value from it in order to allow all a particular ownership, differently but specifically. Through place making, the station and surrounding public space can become the centre of the community, and should seek to absorb citizens who do not consider themselves as stakeholders, such as those in the secularist horizon, the private individual and the dissenting enclave quadrants.

It becomes both theoretical and applied concept, where the station becomes as well-connected, multi-use destinations, which takes account of and articulates the needs and ownership of the of less privileged and less empowered agents, by providing not only amenities but dignity through experience.
In order to empower inhabitants, full use of the transport networks is important. This requires the enhancement of the existing system, such as the improvement of bus stops and taxi drop-off areas by considering safety, visibility and accessibility, supported by shelter and amenities, while the supporting public space should be accommodating to the everyday. This serves to stimulate existing rituals and provide identity to public space by amplifying the existing market and provide more space for the public.

By dissolving the edges of a harsh and unforgiving landscape one allows for the manifestation of an all-inclusive, well-grounded public realm to emerge, where the focus is placed on the elasticity and the evolution of thresholds between the public and private realms.

In order to foster a culturally productive society, a healthy urban interface with a sustainable infrastructure is required. Here the urban vision employs a productive landscape, which does not only refer to ideas associated with permaculture and urban agriculture, but also to the inherent potential of systems and processes housed within the landscape. It softens edges, and through production becomes a driver of space, programmatically, economically and in terms of ownership as discussed previously.
It is important to point out that these concerns are rooted in the methodologies of Historical Materialism, to which Latour, Lefebvre and Benjamin subscribe, where social relations are most fundamentally defined by “production relations”. While in the case of Jeppstown the investigation is predominantly concerned with the production of space through agency and experience (Erfahrung) which signify space, Historical Materialism is generally concerned with material conditions around which society and economy is organized. It expresses the fundamentals in human society through which it produces the necessities of life and drives development and change. Here, production is understood not to be a product of abstract thought, but the material result of the collective human labour, thus articulating class relations through economic activity and becoming a measure of equity.

In developing a programmatic response to the station and market, in relation to the preceding understandings of space, socio-political and economic spatial drivers of the varying paradigms where compared in order to advance an equitable social, economic and experiential program. Here four conditions are identified, and extrapolated in terms of programmatic response. The purpose of this was to compare programs and identify possible conflict and overlaps, where the site would be developed by institutional finance, for civic purposes, but needs to take account of the conflicting stakeholders that are the ‘Capital’, a neo-liberal influence (developers, MABONENG etc.), the marginalized insurgent public, and the ritualistically governed collectivist agents who produce space through consistent physical occupation (vendors, hawkers and taxis).
In the table, they are laid out according to scale (from greatest to smallest) of legislative power and influence. However, this does not only apply to physical size or influence, but also inversely represent the scale to which underlying or implicit ritual and negotiation influence conduct as described in the grid-group theory.

In architectural terms this would then result in specific building scales, architectural programs and notions of public space, whilst allowing the strategist to imagine a social life and the accompanied political actions based on collective motivations and drivers. By taking account of these variable forces, it becomes possible to implement a more resilient urban vision through conditional amplification and a strategic addition of program. Such a vision can tie into existing conditions and allow for a speculative understanding of future development, acting both constructively, through the addition of a new program, and responsively, through the amplification of existing activities taking place on site, and seeks to create place through the rituals of the everyday.

Next the roles of the categories were analysed with regard to products and services. These were placed on a graph according to a hierarchy ranging from the most basic to the least necessary human needs. Here a cursor dividing the necessary and the optional products would shift to the left as more basic needs are not met and to the right as they are met (indicating social development), while the horizontal columns indicate which social relations would operate within this sector, either providing the service or relying heavily on it.
<table>
<thead>
<tr>
<th>Program</th>
<th>Civic</th>
<th>Neo-Liberal</th>
<th>Ritualistic Materialism</th>
<th>Insturgent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public and Civil Space</td>
<td>squares, parks, town hall, playground</td>
<td>church hall, school hall, sports club, social club meeting place</td>
<td>squares, courtyards, parks, arcade</td>
<td>sidewalk, streets</td>
</tr>
<tr>
<td>Retail &amp; Services</td>
<td>water, electricity, transport services (buses)</td>
<td>malls, apartment &amp; convenience stores, chain store franchise, 24hr shop</td>
<td>cafe, family business, butchers, bakeries, clothing store, tabi, shoemakers, hot dog, bakery, hardware, book shop</td>
<td>hawkers, space shop, costumers</td>
</tr>
<tr>
<td>Housing</td>
<td>IJA, RIP &amp; social housing, mental hospital</td>
<td>suburbia, gated community, security estate, large apartments</td>
<td>apartments, communal living, hotel, social housing</td>
<td>squatting, mining hostel, hijacked buildings, mass housing</td>
</tr>
<tr>
<td>Art &amp; Political Institutions</td>
<td>museums, legal system, community, art development programs, political rally campaign</td>
<td>galleries &amp; public galleries, publishing houses, art reproduction, news paper, tracts, charities &amp; funds, market indicators etc.</td>
<td>studies, public policy, performance art, community arts, local and international festivals</td>
<td>graffiti, violent demonstrations, vandalism, gang tattoos</td>
</tr>
<tr>
<td>Research &amp; Educational Institutions</td>
<td>Universities and Governmental Research institutes e.g., GCGG (Gauteng City Regional Observatory), WITS, U</td>
<td>private schools, funds &amp; bursaries, private colleges</td>
<td>daycare centers, schools, religious institutions, social initiatives, exceptional training</td>
<td>homework center, right class &amp; skills training, NGOs</td>
</tr>
<tr>
<td>Transport</td>
<td>Metro, Rail, Gautrain, bus services &amp; BRT</td>
<td>private car, walking, cycling, car, taxi</td>
<td>walking, taxi, train</td>
<td>walking, taxi, train</td>
</tr>
<tr>
<td>Healthcare</td>
<td>clinics, hospitals</td>
<td>family doctor &amp; specialist, private hospital</td>
<td>‘sangoma’ traditional healer &amp; medicine clinic, state doctors &amp; hospitals</td>
<td>‘sangoma’ traditional healer &amp; medicine clinic, state doctors &amp; hospitals</td>
</tr>
<tr>
<td>Amenities: Drinking &amp; Cleaning Facilities</td>
<td>public swimming pool, bathhouse, public WC's &amp; bathrooms, drinking fountain</td>
<td>gym, bottled water, public swimming pool, bathroom, drinking fountain</td>
<td>public WC's &amp; bathrooms, taps, drinking fountains</td>
<td>public WC's &amp; bathrooms, taps, drinking fountains</td>
</tr>
<tr>
<td>Food</td>
<td>Supplemental Nutrition Assistance Program: food programs at schools, food culture during economic downturn</td>
<td>apartment stores, restaurant, deli, bistro, corner cafe &amp; take away, family owned restaurant and small businesses, butcher, deli, bistro</td>
<td>markets, licensed merchants &amp; street vending</td>
<td>street food, cold snacks, ice cream, bakeries, chicken, eggs, rice etc., soup kitchens</td>
</tr>
<tr>
<td>Production</td>
<td>Department of Public Works, Eskom, JDA</td>
<td>micro-industry, workshops, craftsmen, community gardening</td>
<td>closed long-term communities, holistic, community living</td>
<td>migrant workers, car guards, car washing, informal mechanics, recycling &amp; reuse</td>
</tr>
<tr>
<td>Entertainment</td>
<td>dance &amp; theatre cultural programs, state theater, silver grounds</td>
<td>intersport sporting events, team ball, SABC</td>
<td>film and music &amp; DVD, stores, independent cinema, micro-industry, workshops, craftsmen, community gardening</td>
<td>umgenibt ‘sports’ television, street gambling, bottle store, prostitution</td>
</tr>
<tr>
<td>Safety &amp; Security</td>
<td>police, fire brigade, healthcare programs, military</td>
<td>insurance, private security, camera surveillance</td>
<td>stobed, passive surveillance, negotiated territory</td>
<td>physical security measures</td>
</tr>
</tbody>
</table>

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The site inventory had revealed that many of the necessary programs were already present, and that safety and security, cleaning facilities and production were the least developed, and needed to be addressed. It is at this point that a production program, ranking highest on the graph and overlapping with the neo-liberal, ritualistic materialist and insurgent columns was identified as a primary program. It needed to incorporate the cleaning facilities as well as address the safety and security issues, whilst amplify the other programs and stimulating economic activity.
With the failure of industry in Jeppestown, it was decided that in order to stimulate economic activity the program would have to be directly relational to the market, trade and street food. Ownership could not adhere to traditional capitalist notions, as this would cause conflicts of space (see grid-group theory) and the product would therefore need to be small enough to be equitably divided amongst stakeholders.

Here the economic analysis of site not only revealed that goods held fixed prices, regardless of supply and demand or wholesale (per example, a loose draw cigarette cost R2.00 regardless of whether you buy one or twenty), meaning that there was no concept of competition (a crucial component of capitalist market drivers) and was ascribed to the social mechanism of equality which prevents conflict in a group strong society.

This concept would further have to apply to equality and accessibility based on skill, and the bulk of the program could therefore not require a skills level that would exceed a basic education, but would have to yield a product valuable enough to justify production.
The proposed framework included a water purification system and vegetation to meet social and environmental needs, and urban agriculture was at this point considered. Anticipating urban food production as a viable program, hawkers were then questioned about the origin of their fresh produce, and it was established that a significant number of respondents collectively bought food in bulk, which was then subdivided and repackaged into smaller units for sale, a fact reflected by the statistics for various retailers and wholesalers who make 64% of their sales to grocery stokvels (www.africanresponse.co.za). This not only meant that the production of food would produce to general a product and would therefore not be able to compete, but on closer investigation would not be able to produce large enough volumes to meet demand.

Next research about stokvels was used to analyse the collective economic habits of South Africans as it is a system of collective or group saving where individuals jointly invest money with the aim of creating wealth and security for its members, and allows access to goods or services otherwise economically unattainable. Not only are Stokvels used by 40% (811 830 stokvels and 11.4 million stokvel members) of the South African population, at an estimated value of R44 billion per year, more than the agriculture or electricity sectors (www.africanresponse.co.za), but they have been in use for more than a hundred years (www.redinkpublishing.co.za) and can therefore be considered a reliable indicator of financial drivers in the informal sector.
It revealed that nationally saving stokvels are mostly comprised of urban members (80% urban) with Gauteng showing an extremely high incidence of investment stokvels (56%), followed by savings (22%), but that savings stokvels nationally make up a far larger portion at 47% compared to grocery stokvels at 20% (www.africanresponse.co.za).

Although not taken to be persuasive, it indicates a tendency towards higher value goods and longer term investment thinking as drivers of collective investment.

In conjunction with the analysis of goods sold it was therefore decided that the productive landscape could be used for the growing of herbs and other plants which could yield high levels of fragrant oils.

Here it could serve to augment traditional medicine practices and cuisine based on availability of produce, while the extraction of essential oils could serve as the bases of a soap-making facility which would then serve not only the adjacent market, but would enrich the experiential qualities of the proposed bathhouse, as stipulated in the volume I.
The following chapter is a discussion of design thoughts and actions in response to spatiality in a material sense, whilst the text shall serve in aiding the response of thought in terms of the proceeding theoretical understanding of space and spatial production. This shall not only be the direct design decision, but also in terms of the process of design, and the emotive drivers of space which where considered.

The first spatial response was to increase residual space by removing the existing open parking lot, and demolishing the existing boundary walls, thus freeing up space for the public to exit.
It was decided that this would have to be replaced, and that the design would have to consider a scenario where it would be appropriated as a taxi-rank.

The second need would be connect the station to the new public space and free up space in front of the station entrance. Thus it was decided that John Page dive would closed off at this section, to accommodate a new larger parking lot underground, pulling the sidewalk out over the road to create a new continuous public space in front of the entrance, and providing a dedicated taxi and bus drop-off at the far end.
Figure 6.2. (bottom left) study of urban space, street edges at Sithandatu Avenue Public Space by Piet Louw
Next the public space was articulated in the traditional manner, where strong edges housing shops and amenities where placed around a square, to create a strong civic space in front of the station entrance, to serve as a lobby to the city.

Figure 6.3. (bottom) study of urban space, areal photograph, Sithandatu Avenue Public Space by Piet Louw

Figure 6.4. (right) study of urban space, plan, Sithandatu Avenue Public Space by Piet Louw
Minimizing exposure to the western sun the plan of shops was narrowed on the upper level (fig. 1.7 opposite page), while creating an overhang to the lower level (labelled 2, this page). Planter boxes framed an arcade with stairs to accommodate the level changes. This served to create pockets of space in front of shops that would allow for the appropriation of space by street vendors, while retaining a sense of ownership and security as provided by the shop owners.
Figure 6.5: the permeability and variability of spatial control along the edge (labeled 1 on the opposite page).

Figure 6.6: narrowing shops on upper level.
This strong hierarchy was broken in order to accommodate the street edge for the new taxi and bus stop, and prompted an investigation into edge conditions with level changes as indicated by the following photographs.

Rhythm and repetition became important design elements. The patterns of moving shadows would signify diurnal time cycles, while the repetition of rhythms while moving along an edge, by train, bus, taxi, car or foot would serve the experiential measure of movement (event) and time, and create familiarity of place.

Figure 6.7. (opposite page)
edge conditions, journal sketches
This strong hierarchy was broken in order to accommodate the street edge for the new taxi and bus stop, and prompted an investigation into edge conditions with level changes as indicated by the proceeding photographs.
This prompted an investigation into the rift caused in the urban fabric caused by the tracks cutting diagonally through blocks.

The response was to draw the building across the divide linking the two sites. Not only would this link the two market areas, but it was hoped that the north western orientation would allow for a large surface area to accommodate passive systems.

Next, the pedestrian movement along John Page Drive prompted the creating of a gateway linking the square to Fox Street and Commissioner Street, respectively, while a row of trees was proposed along the western edge of the station. These would then repeat the rhythm along the movement axis and provide a more comfortable micro-climate in front of the station.

To this point the building provided large canopies where it was hoped the insurgent public would enlarge the market and pull it across the tracks and providing a more vibrant space.

To avoid a conflict of hierarchy between the new intervention and existing station, the design started pulling away from the station. Culminating in a design which aligned with the grid the building becoming a bridge from Fox street, while articulating the entrance more sharply by funnelling pedestrians from the taxi rank across the trench left by the tracks.
Here an extensive investigation through model building was followed as the main design concern became a system of roofs to accommodate a fluid market without barriers to movement. This was to be able to change as the demands changed, but was ultimately abandoned as a design as it did not provide an eloquent divide between the public and the production, either placing it directly in the public sphere or by lifting it, completely removing it from the public.

The spatial strategy thus moved to a new spatial strategy, where the productive spaces could be controlled without complete reliance on group and grid strong systems of ownership as the diversity of users was to large. This was done by placing a structure between the production and market space, the orientation of which was adjusted to face north. With the predominant wind directions in Johannesburg being north east and north west this was not only ideal for passive systems reliant on solar radiation, but allowed wind to be utilized in a meaningful manner.
The systems towers thus doubled up as structure for the drying process of plants and was conveniently situated next to the landscape.

The WC’s were now moved into the secure space making way for a link to be re-established with the taxi and bus stop.

Now the productive spaces were placed adjacent to the tracks as the spatial requirements needed the transport access of a small truck, while the centralization of buildings allowed waste heat to be more easily recirculated, and organic waste could more easily be reused.

Pulling back the systems and drying block allowed for the re-establishment of the movement axis along John Page drive, while the production facilities provided an edge to this corridor and allowed the public direct engagement with the process, fragrances and other experiences.

The production space was now pulled apart to enhance this experience by letting the passer by pass through the space where the sorting and pressing is co-ordinated and affording a view down into the spaces below.

The edge to the essential oil extraction process is dissolved as the Mentis grating facade needs to be lifted to allow the production process to commend, thus not only giving the passer by direct access, but affording him the comfort of shade.
for standing seam roofing to fall >7°:
- 430mm length without roll-top
- lapped 225mm at header joints
- provided with terminoted closure
0.8mm rains roof gutter, on
continuous bent plywood bases;
300mm tapered and bolted
movement joints at 10m intervals
450mm 0.25mm polyethylene
membrane, SANS 10156 type
- E-mech-bonding to be
- lapped over 6mm gusset
- gutter and additional layer
to be continued underneath

50mm 80kg/m³ density mineral wool insulation to comply with
SANS 1361-1

FFL 100900

© University of Pretoria
50mm 80 kg/m³ density mineral wool insulation to comply with SANS 10161-1 to be placed between 70 x 40 x 2mm gms channel

2440 x 1220 x 12mm plywood to form continuous sub-surface for the application of waterproofing, fire-proofing and roofing material.

Fixed to 70 x 40 x 2mm gms channel at 300mm centres

Reflective foil to comply with SANS 10161-4 under roof covering, with an airspace of <25 mm between foil and solid surfaces and with reflective surface facing down

A crosstie flashing to be nailed to plywood substructure with nails of same material as flashing.

100 x 125 x 12mm sheet metal with steel flange material at 1220 x 12mm.minus-20°C or using Koolon® aluminum with 55mm rolled flashings at 1220mm centres

40 x 120 x 300mm reinforced concrete sections, seated through expansion joint with Permaflex 065 to suit thermal movements (0.6% to 0.7% of C/E). Glue applied for thermal movement (0.75% to 0.8% of C/E). Glue applied for thermal movement (0.8% to 0.9% of C/E)

Fixed to 70 x 40 x 2mm gms channel with 25 x 3.5 mm nail seating along at 300mm

Micro-sieve louvre systems

Reinforced concrete paving slabs with 100 mm deep joints layed to fall 2% from building towards drainage channel

Ciena 3001 set bedding

MC Multiflex V-100 polymer concrete channel with Drainlock® Armour drain grating, saddle groove and locking slits to fall at no less than 2.5% with 0.5m spacing

ACU DRAIN® DN 100 Surlyn unit for inspection at 10m intervals before passing to main water storage facility via trap
This establishes three distinct zones of spatial ownership and control. The first (numbered 1) is the distinctly fluid ritually governed zone, that categorizes the market and taxi rank. Here space is largely governed by field independent notions, and negotiated territories are governed mostly by ritual.

The second field (numbered 2) is that of the terraced productive landscape, where although not physically guarded, urban agents are fully aware of a presence. Like in the panopticon one is at any time subject to a gaze, and although not physically prescriptive, this space becomes governed by the production space.

The last territory (numbered 3) is the public component of the production space. Here one is free to move throughout, but the tilting gate augments space through it’s binary position. If open, production can commence and the public gains access, if closed neither can exist. This sets up a direct relationship between the public, production and consequently space.
ground level
Access to the lower levels via a ramp is governed by a similar notion as the second condition, but a physical gate is also provided.
cool air falls down cooling tower assisted by coolth in radiators from absorption chiller

cool air falls down cooling tower through evaporation

fan pulling air from drying tower

extractor fan

--> AIR PUSH --> fan coil units --> AIR SUPPLY

absorption chiller

--> AIR PULL

passive pull by stack effect

assisted stack with heat radiators from LiBr storage

high humidity

low humidity

cold day

hot day
ASSISTED STACK

When there is no ongoing production, wind energy is unavailable, heat from long term heat storage Lithium Bromide system may be sent to ventilation stacks to assist air circulation within the drying towers. Here heat is pumped through a system of radiators which will rise through convection, creating a negative pressure and thus sucking air from the drying tower, thus producing a draft.

Whilst the absorption chillers are running latent heat from the system is transferred to the drying towers, assisting the same process.
This system is the reverse process of the assisted stack ventilation. Cooled water is circulated through radiators, from the absorption chiller. Here air falls to the base of the cooling towers as it cools, from where it creates a push effect to assist with the ventilation of the space.

It cannot enter into the adjacent drying tower as this movement is regulated by a series of vents which act like one way valves, and is thus forced to enter the ventilation system below the drying tower.
Soil water from the building bathrooms combined with organic waste produced on-site are sent to the bio-digester. The gas produced from this system drives gas burners which produce heat to control the distillation temperatures.
In case of a shortage of electricity to run processes on site, including the scenario where the battery bank is depleted, stored bio-gas is used to run a back-up generator. Excess heat produced by this system remains within the Lithium Bromide heat storage through use of a heat pump.

The generated energy may then be used to run extractor fans necessary during the spapofication process.
As inside air heats up from the latent heat produced by the process of soap curing, extractor fans placed at the top of the building assists the rising hot air out of the building, ventilating the space.

This is also the case during the exothermic sapofication process, and works on the same principle.
The extraction of essential oils produces water as a by-product, when skimming oil from the surface of the water creates a wet environment, and is thus suitably placed by the planters which allows for a single drainage system.

This wet area makes use of planter boxes as a vertical facade element, and is exposed to the elements and may gather rain water.
The working benches are specifically designed with the constant presence of water in mind. The form of the table is not only ergonomic, but also forms a drip-list to deal with water penetrating the facade or from processes happening in the interior.
Flowcrete Mondéco PC Chemical Resistance epoxy resin floor finish, applied at 10mm, ground down to 7mm, applied on Flowseal EPW clear Primer and sealed with Flowcem natural SC with slip resistance of TRLR Pendulum Slip test Dry 80 to be installed by Flowcrete approved contractor.

- 375 Micron DPM lapped and sealed as per manufacturers specification. Min. overlap of 150mm
- 300mm course gravel layer
- 150mm diameter HDPE Geopipe laid to fall to sump
- Flo-drain® geotextile
- reinforced concrete retaining wall as per engineer
- 110mm masonry wall, Corobrick® Imperial in Class 1 mortar
- 94.5 polyester DPM sheet to comply with BS5252 against interior wall
- Soil fill compacted in max. 150mm horizons with increasing courtesness to 90% ModAAHSTO

Mentis grating plain gms bearer bars
BASEMENT CONSTRUCTION

Water is further taken into account in the semi-basement design of a cavity system, where 400 x 400 precast concrete dryangle floor tiles are placed on a sreed at a fall of minimum 1:60, allowing water penetrating the structure to run to a sump from where it is then pumped to the water storage facilities with a submercible pump.
600 x 400mm slate paving stones with sand swept joints laid to fall min. 1.70 away from building towards drainage channel

40mm sand set bedding

ACO DRAIN® Multiline® V 100 polymer concrete channel with Drainlock® 4mm Galvanized steel grating, safety groove and locking slots to fall at no less than 0.5 degrees towards ACO DRAIN® DN 100 Sump unit for inspection at 10m intervals before passing to main water storage facilities via oil trap.

0.45 polyethylene DPM (black) to comply with SANS 1526 against interior wall

Soil fill compacted in max. 150mm horizons with increasing coursness to 90% ModAASHTO

110mm masonry wall. Corobrick® Imperial in Class 1 mortar reinforced concrete retaining wall as per engineer

150mm diameter HDPE Geopipe laid to fall to sump

300mm course gravel layer

375 Micron DPM lapped and sealed as per manufacturers specification Min. overlap of 450mm

400 x 400 precast concrete dryangle floor tile
for standing seam roofing to fall >7\(^\circ\): 430 mm girth without roll-top, lapped 225 mm at heading joints and provided with serrated closers

0.6mm gms rolled gutter, on continuous bent plywood base. 300mm lapped and folded movement joints at 10 m intervals

450mm 0.25 mm polyolefin membrane, SANS 952 type E mark-bearing to be lapped over 6mm gms gutter and additional layer to be continued underneath

tilt up gate wit 37 x 37mm pressure forged Mentis grating plain gms bearer bars to detail
50mm 80 kg/m³ density mineral wool insulation to comply with SANS 1381-1 to be placed between 70 x 40 x 2mm gms channel.

2440 x 1220 x 12mm plywood to form continuous sub-surface for the application of waterproofing, fire proofing and roofing material. Fixed to 70 x 40 x 2mm gms channel at 300mm centers.

Reflective foil to comply with SANS 1381-4 under roof covering: with air space of >25 mm between foil and solid surfaces and with reflective surface facing down.

Zinc flashing to be nailed to plywood substructure with nails of same material as flashing.

102 x 133 x 13mm hot rolled mild steel T-section welded to 152.4 x 6.0mm circular hollow section with 8mm mild steel flange at 1500mm centers.

18 x 1220 x 2440mm resin impregnated plywood ceiling, sanded smooth and varnished with Pyrosafe WB in accordance with SABS 0177 part 3 Class 1 standards for zero flame spread. Fixed to 70 x 40 x 2mm gms channel with 25 x 3.5 mm selfflapping screw at 300mm.
NOTE: All structural steel to be protected against fire to comply with SANS 10400-T table 17, as specified.

Steel to be painted with Flame Control TemperKote® paint on universal primer, allowed to dry for min.16 hours or until hard, before coating, with surface preparation to comply with SANS 10064.

Concealed structural elements in ceiling cavity to be additionally treated with Mandoval Vermiculite Tekrok S vermiculite plaster: spray-applied, providing additional 120 minutes fire protection. To be supplied by PYROCOTE or alternative ISO 9001: 2008 certified manufacturer
80 x 80 x 6mm Hot rolled gms equal angle at 1m centers to comply with SANS 10400-T bolted to purpose made 6mm steel plate flange with M16 bolts

70 x 40 x 2mm cold rolled gms channels at 300mm centers to comply with SANS 10400-T. Rolled to ceiling profile and bolted to 70 x 40 x 2mm cold rolled gms channels with M8 bolt and angle bracket

Reflective foil under roof covering: with air space of >25 mm between foil and solid surfaces and with reflective surface facing down. SANS 1381-4

50mm 80 kg/m3 density mineral wool insulation to comply with SANS 1381-1 to be placed between 70 x 40 x 2mm gms channel

8mm laminated clear Solarview® to reduce solar heat gain by up to 70%

Required gutter size
(23 x 0.5 x 3.6) x 140mm² = 5796mm²
800 x 60 / 2 = 24000mm²

Purpose made prefabricated column capping, window and gutter to detail.
80 x 80 x 6mm Hot rolled gms equal angle at 1m centers to comply with SANS 10400-T bolted to purpose made 6mm steel plate flange with M16 bolts

70 x 40 x 2mm cold rolled gms channels at 300mm centers to comply with SANS 10400-T bolted to 80 x 80mm Hot rolled gms equal angle with M8 bolt and angle bracket

40mm expanded polystyrene [EPS] insulation to comply with SANS 1508, to be placed between 70 x 40 x 2mm gms channel purposemade prefabricated column capping, window and gutter to detail.

reflective foil under roof covering: with air space of >25 mm between foil and solid surfaces and with reflective surface facing down. SANS 1381-4

3mm pre-rolled steel gutter to fall to downpipe prewelded to 6mm flange plates and 150 x 75 x 10mm mild steel unequal angle
8mm laminated clear Solarview® to reduce solar heat gain by up to 70%  
- Reduce glare up to 65%  
- Reject up to 98% of all infrared radiation - the main cause of heat  
- Block more than 99.9% of UV light rays - the main cause of fading

one part high modulus fungus proof silicone rubber sealant: SANS 1305, type 2 for glazing and sanitary ware

68 X 160 X 1200 OSRAM® NEPTUNE T8 POLY Damp-proof luminair in Ceiling mounting with clips with Warm White OSRAM® ST8-HA2 11 W/830 SubstiTUBE Advanced Tubular LED lamps (Nominal luminous flux 1080 lm and Nominal lamp life time 50000 h) to be covered with Polycarbonate casing with polyurethane seal and fixed to cold rolled steel sections with self-tapping screw through 3-pin screw terminal at 300mm centers
Flowcrete Almond Mondéco PC Hygienic epoxy resin terrazzo floor finish, with flint and granite aggregates applied at 10mm, ground down to 7mm, applied on Flowseal EPW clear Primer and sealed with Flowcem naturals SC with slip resistance of TRRL Pendulum Slip test. Dry 80 to be installed by Flowcrete approved contractor.

622 x 546 x 759 GT 2700
15 Endura Grease Trap, flow rate 189L, with sampling box to check pH levels before channeling grey water to wetland system.
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<td>Figure 6.4</td>
<td>the permeability and variability of spatial control along the edge (labeled 1 on the opposite page)</td>
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<td>Figure 6.5</td>
<td>narrowing shops on upper level</td>
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<td>Figure 6.6</td>
<td>(opposite page) edge conditions, journal sketches</td>
<td>132</td>
</tr>
</tbody>
</table>

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DECLARATION
In accordance with Regulation 4(e) of the General Regulations (G.57) for dissertations and theses, I declare that this thesis, which I hereby submit for the degree of Master of Architecture (Professional), at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of my thesis has already been, or is currently being, submitted for any such degree, diploma or other qualification.

I further declare that this thesis is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.

Kristen Fay Steynberg
MARCH(Prof)

October 2014