Towards an architecture of explorative divergence

An autoethnographic interrogation of explorative-divergence as a mode of design and practice underpinning the oeuvre of Mathews and Associates Architects.



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PhD with specialisation in design | BC490114

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I want to hand over the responsibility for experiencing the artwork to the participant

– Olafur Eliansson (in Dadich 2019)

Stories stir resonance, frameworks … 'structures that allow for contributions' … encourage engagement

– Frank Chimero (2012)

Submitted in fulfilment of the requirements in respect of the PhD with specialisation in Design for the Department of Architecture in the Faculty of Natural and Agricultural Sciences at the University of the Free State.

BC 490114
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I, Pieter J Mathews, declare that the PhD with specialisation in Design research dissertation or interrelated, publishable manuscript/published articles, or coursework that I herewith submit for the PhD qualification PhD with specialisation in Design BC490114 at the University of the Free State is my independent work, and that I have not previously submitted it for a qualification at another institution of higher education.



Dedication

I specifically want to thank my study leader and mentor, Dr Hendrik Auret, for his enthusiasm, his intellectual contribution, his academic rigour, our long telephone conversations, and his prompt responses to cries of assistance and care in general. Dankie Hendrik dat jy my divergerende brein kon laat fokus maar terselfdertyd nuwe hekke bly oopmaak het.

I am extremely grateful to my two Mathews and Associates colleagues who did more than expected. My research assistant Jana Kruger edited the text, and was also a soundboard, critic and mentor in loco. Eunese Booyens assisted me with the graphic layout and excellent visuals. She introduced me to a world of technological possibilities, whilst simultaneously providing an additional perspective throughout the process. During our office PhD discussions, which I call 'collective brain', significant discoveries were made by the three of us around a cup of coffee. I am sure these discussions impacted the entire practice.

To my language editor, Karlien van Niekerk, who was as meticulous as always, thank you.

To Dr Heinrich Kammeyer, my third-year studio master, who assisted me with the initial study proposal and reminded me of the purpose of my study in particular, encouraging me to take a lowbrow approach which anyone would be able to relate to, very much in line with my architectural philosophy: "Jy kyk nooit neer op die algemene publiek nie, jy trek hulle in."

Thanks to Professor Jonathan Noble who made this valuable course of practice-based research a reality.

I would like to dedicate this thesis to my colleagues at Mathews and Associates Architects and all our alumni since 2000. Without them this study, and specifically the construction of the oeuvre, the subject matter of this thesis, would not have been possible.

I also dedicate my PhD to all my teachers, masters and guides throughout my schooling, study and career. In particular, I would like to thank the late Professor Pattabi Raman, whom I met at the University of the Free State Department of Architecture. He made me promise to complete a doctorate by intellectualising construction based on my published books, *Architexture* and *Detail Housed* – a difficult promise that kept me fretting. Hopefully this practice-based study succeeds in fulfilling that promise. धन्यवाद

Ami, Gian en Kyle.

Abstract

A recurring theme in architectural theory is the question of "meaning". To what purpose do we create architecture? My own personal credo can be defined as an intention to foster a bias for good architecture amongst the public by creating buildings which offer a holistic, embodied experience to which the dweller can relate. Expressed more simply, I care about the quality of the relationship between the public and architecture.

I postulate that good architecture can be achieved on the basis of the symbiosis of two core ingredients, namely propositional density and narrative depth.

"Propositional density" is a term borrowed from graphic design theory and can be defined as "the relationship between elements of a design and the meaning they convey" (Lidwell, Holden & Butler 2003:190). The theory states that a design is more intriguing and memorable when its elements have layered meanings; when one simple element conveys multiple meanings. In this study the term is used to refer to the complexity (density) of the meanings (propositions) of an architectural element or elements. Propositions can be further distinguished as being surface propositions – the multifunctionality of architectural elements – or deep propositions – the underlying sculptural and cinematic propositions of these elements.

"Narrative depth" refers to the attempt to reveal the narratives of sites and cultures by conveying stories through architectural elements, thereby making buildings contextual. One can differentiate between visible and unseen narratives. Visible, or seen narratives, are direct references or representations of the narratives associated with the site. Unseen narratives refer to those representations that can only be understood if the viewer has specific insight. The reading of underlying, unseen narratives depends in part on the personal history and knowledge of the person interacting with the built environment.

Perhaps more important than arguing the definition of good architecture is the following: understanding how architects can set about achieving or creating architecture with sufficient propositional density and narrative depth, in order to establish meaningful relationships between dweller and building (i.e. so that people can relate to buildings in such a way that a bias for this kind of architecture is established). The above represents the intention with this practice-based study: to unearth the 'how' so that we can reflect on and improve our methods of design and praxis.

In the study, I define our design and practice methods (the 'how') as "explorative divergence" (E-D). Explorative divergence can be described as an open-ended, interdisciplinary working method which goes hand in hand with a receptive mindset. Simultaneously, I argue that architecture practices would benefit from dabbling in a wide range of projects (from publishing and running a think tank, to curating art exhibitions and initiating guerrilla projects), as this would enrich the toolset of the practice.

To unearth the characteristics of E-D, as it pertains to the practice of Mathews and Associates Architects, I will focus on three dominant divergencies or core competencies as lenses through which E-D can be understood:

- Curation (including composition, judgement and intuition)
- Sculpture (referring to aspects like making, form and materiality, texture, material and construction, innovation, and designing for semi-skilled labour)
- Cinematic architectural choreography (including investigations into sequence, routes, movement, framing and temporal experience)

These core competencies (which are areas of study in their own right) will be approached 'as an architect', and even more specifically, as 'this architect' has experienced them through architectural practice. Consequently, the method of inquiry is grounded in an auto-ethnographic exploration of the origins of E-D practice in my upbringing, education, travels and career. An exegesis of early student travel journals will reveal influential buildings and architects that inspired my E-D thinking. The places I experienced, and the discussion of like-minded creatives, will establish the thesis within the discipline of architecture. The style of the thesis is anecdotal, recounting stories to illustrate principles which are supported by academic references.

In this manner the characteristics of E-D, as it pertains to the praxis of Mathews and Associates Architects, are defined; thus, a case can be made for the E-D method to produce architecture with high propositional density and narrative depth. Ultimately, I believe this kind of architecture has the greatest potential to allow people to relate to the work, and thereby find meaning in it.

Keywords

Explorative divergence, praxis, design method, open-ended, interdisciplinary, anecdotal, autoethnography, divergencies, sculpture, adhocism, innovation, curation, cinematic architectural choreography, propositional density, narrative depth, embodied experience, public reading, relationship between man and building, dualism, meaning

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1

INTRODUCTION: A CASE FOR EXPLORATIVE DIVERGENCE

1.1. Aims and objectives of the study

Explorative divergence[1] (E-D), in the context of this study, can be described as an open-ended, interdisciplinary working method for design and practice, which is coupled with a receptive mindset. It is explorative in the sense that it favours an investigative approach, during which outcomes are discovered, over a strictly planned process. It is divergent in the way that it draws inspiration from a variety of sources. The aim with this study is to uncover, investigate and articulate explorative divergence as a mode of architectural practice, not only to understand the mindset, oeuvre, and working and design methods of Mathews and Associates Architects (MAAA)[2] , but also to make the insights gained accessible to other practitioners and to achieve more compelling outcomes in our own work in the future.

The general aim of the study can be further distinguished as follows:

1.1.1. To provide the public with a rich, stimulating and open-ended experience through E-D

My architectural credo could be expressed as a personal desire to create a public bias for good architecture through embodied experience of place, and public reading and post-rationalisation of our oeuvre, in order to foster meaningful relationships between people and edifices. In the study I will investigate how the above is made possible and enhanced through E-D practices.

1.1.2. To advance propositional density and narrative depth through E-D tactics

I will argue that propositional density and narrative depth in architecture deepen the user's embodied experience, stimulate a more open-ended public reading of the architecture, and encourage post-rationalisation.

Propositional density refers to "the relationship between elements of a design and the meaning they can convey" (Lidwell *et al.* 2003:190). A design is more interesting and memorable when its elements convey layered meanings. Narrative depth refers to the complexity of a story and its underlying themes. In our oeuvre, it refers specifically to architecture that attempts to reveal narratives by conveying stories about the context.

Obtaining high propositional density and narrative depth is made possible through E-D tactics. The underlying design decisions which engender propositional density and narrative depth will be investigated in this study.

1.1.3. To discover core competencies or divergencies which reveal aspects of E-D as a praxis method

Core divergent competencies inherent in my E-D approach will be identified in the study as lenses (methods) through which to appreciate the oeuvre of our practice. The competencies will be revealed through anecdotal reflection to lay bare the origins of my E-D thinking. The discussion of these core competencies seeks to deepen the conceptual understanding of E-D by recounting instances in which divergent interests and approaches have led to architectural solutions. The resultant nuanced definition of E-D will contribute to the reader's appreciation of the latent capacities of the E-D approach which have played a pivotal role in the work of MAAA.

[1] In this study the acronym E-D refers to explorative divergence.
[2] I also refer to our practice, Mathews and Associates Architects, as MAAA.

E-D is essentially about bringing latent possibilities to fruition by gathering together disparate sources/ resources in a creative way. Each 'putting together' captures particular nuances, sensibilities and instances that reveal design intelligence, whether making, curating, putting together teams and people, or having an experience in mind. This method of 'putting together' relies heavily on innovation, improvisation, knowledge of materials, ways learned from other disciplines (referred to as divergencies in this study), and an open-ended approach to overcome constraints in order to advance concerns.

Alternative design methods and an active exploration of other creative fields allow architects to view constraints in a positive light and use them as design drivers. The notion of explorative divergence will be clarified and promoted as a credo in which architecture is multivalent. E-D oscillates between many interpretations, influences and academic fields, in order to create places that provide opportunities for multifaceted relationships to emerge between buildings and the public. This multidisciplinary approach of many influences is intrinsic to E-D and its open-endedness.

1.1.4. To investigate & promote E-D as a mode of practice and design

As far as E-D pertains to architectural practice, I will argue that there is no single recipe for projects, design processes or methods of development. Other practitioners will have their own competencies. I intend to illustrate why influences beyond the traditional realm of the architectural discipline, when coupled with an E-D mindset, are beneficial to practices. Architects who master skills in other related disciplines, such as furniture and graphic design, curation, urban design, painting, publishing and sculpture, to name a few, have a wider frame of reference to work from when designing buildings. They strengthen their practices by diversifying their portfolios.

A creative autoethnographic study will assist me in appreciating E-D, not only as a mode of practice, but as a way of life. The underlying design decisions inherent in my design process will also be articulated in the study. These were always present in some form or another, and demonstrate how my design intelligence and sensibilities have grown since formally entering the architectural profession.

1.1.5. To investigate how my personal upbringing, education, travels and other turning points in my life influenced my version of E-D practice

In the study I will investigate, through the autoethnographic method, how the various layers of knowledge obtained during my upbringing, studies, travels, initiatives and career contributed to the development of my E-D approach and its resulting core competencies (refer to 1.2.5). These core competencies in my personal E-D practice will be used to illuminate and deepen the conceptual understanding of E-D. Simultaneously, I will seek latent narratives and dormancies which can be articulated to contribute to this study and to E-D outcomes in particular.

1.2. Limits, assumptions and demarcation

1.2.1. The paradoxical nature of E-D and academia

Limiting and demarcating a study of explorative divergence to comply with the academic rigour required for a PhD study seems paradoxical. In a PhD, knowledge has to be focused and converged, where on first appraisal it seems as if explorative divergence proposes exactly the opposite. Limits and demarcations do not seem to sit well within the E-D mindset, as it is often beyond these limits that E-D discoveries are made. However, there are incidences where E-D flourishes not in spite of, but thanks to strong limits. To conform to the creative academic canon, core divergent competencies will be selected to illustrate how E-D contributes to creating architecture with depth. The tension between academic rigour and E-D will be channelled as follows:

1. The first level of focus is on E-D as a demarcated field of architectural practice.
2. The second layer of delineation is the core competencies of E-D, which will be used to let E-D practice emerge within my particular autoethnographic experience.
3. This emergence of E-D practice from my particular autoethnographic experience – my take on E-D as a practicing professional architect – is the third layer of demarcation.

1.2.2. Autoethnographic interrogation

This study will not enter into the broader debate regarding the merit of the autoethnographic method. For the reader not familiar with the method it can be described as "an autobiographical genre of writing that displays multiple layers of consciousness, connecting the personal with the cultural" (Ellis and Bochner, 2000: 793). Thus autoethnography is about more than just writing about oneself, it is about critically reflecting on the broader significance of personal experiences in the development of the research being undertaken (McIlveen 2008:3). The conclusion contains a short reflection on the gifts, merits and shortcomings of this method as it pertains to this study.

1.2.3. E-D as a field of architectural practice

A wide range of typologies (with an E-D focus) will be included in the study to reveal or illustrate intuitive design sensibilities, intentional outcomes, or specific experiences. These projects will not be discussed in their totality, but will rather be conveyed as anecdotes of particular E-D aspects, and will be accompanied by images with layers of text, drawings and colour coding to reveal and clearly communicate the underlying design decisions, theoretical thinking and core divergencies as they pertain to the built work.

Projects that assist in exploring specific aspects of the chosen divergencies/core competencies will be grouped together to reveal and strengthen observed patterns and recurring themes. The study will give preference to anecdotes, vignettes and photos as an exegesis to illustrate how propositional density and narrative depth have been achieved.

1.2.4. A reverse touchstone

Merriam-Webster (2021) defines a touchstone as "a fundamental or quintessential part or feature" of an idea or object. In architectural education, a touchstone represents an intuitive attempt to give form to an initial idea for or response to a design brief. The reverse touchstone, in the context of this thesis, gives form to and physically illustrates the fundamentals of E-D praxis as discovered in this study. In the Stellenbosch Triennale Pavilion project, which was undertaken while my PhD research was well underway, I could consciously apply insights gained during the study. This 'litmus test' will illustrate the ways in which the study has already started to affect my practice and will validate and articulate what has been learned and discovered.

1.2.5. Personal Divergencies or core competencies

Three divergencies will be explored to reveal aspects of E-D as they relate to my practice. These competencies will be interrogated through anecdotal discussion to lay bare the origins of E-D thinking in my design process and practice.

The following categories broadly encompass the selected core competencies:
- Curation (including composition, judgement and intuitive decision-making)
- Sculpture (referring to making, form and materiality, texture, material and construction, innovation, and design for unskilled labour)
- Cinematic architectural choreography (including investigations into sequence, movement, framing and temporal experience)

It must be clearly stated that this is not a study about the fields of curation, sculpture, cinematography or choreography. It only touches on aspects of the ideas I have been exposed to and have learned a great deal from. It is for this reason that the divergencies chosen for this study are referred to as core competencies, as I do not claim any mastery of any of the disciplines mentioned.

1.2.6. Study of buildings and places visited

Further to the influence of my upbringing and education, exposure to buildings has also influenced my tacit knowledge of and approach to architecture. The buildings and cities that I have encountered and experienced had a much greater singular influence on me than any academic study. There are several examples of influential buildings that I have visited three or four times and at various stages in my life and career. The majority of these buildings, with which I formed a personal relationship, are located in Paris. In addition to revealing the origins of E-D in my practice, the discussions of these buildings also position this study within the broader discipline and history of architecture.

1.2.7. Family of like-minded thinkers

Like-minded thinkers will be included to further contextualise the study. Due to the autoethnographic nature of the study I have chosen to include only people whom I have met or had brief encounters with. Many other E-D practitioners were discovered during the study, but as the aim is to recall what I have physically experienced, third-person sources will not be included. While this study reflected on the impact that these practitioners had on my own way of approaching architecture, and while carefully considering their approaches have assisted in fleshing out the vocabulary used to write about E-D, this is not intended as comparative study. In addition, the like-minded thinkers included serve to illustrate the growing number of individuals engaging in E-D practice as an emergent activity.

1.2.8. Definitions of theoretical concepts

A. Propositional density

"Propositional density" holds that a design is more interesting and memorable when its elements have layered meanings. In this thesis it can be defined as the complexity (density) of the meanings (propositions) of an architectural element or elements. Propositions can be distinguished as being surface propositions – the multifunctionality of architectural elements – or deep propositions – the underlying sculptural and cinematic propositions of these elements (Lidwell *et al.* 2003:190).

Please refer to 3.5.1. for more information.

B. Narrative depth

"Narrative depth" refers to the complexity of a story and its themes. In this thesis, narrative depth refers to architecture that attempts to reveal the narratives of sites and cultures by conveying stories through architectural elements. One can differentiate between visible and unseen narratives. Visible, or seen narratives, are direct references or representations of the narratives associated with the site. Unseen narratives refer to those representations that can only be understood if the viewer has specific insight.

Please refer to 3.5.2. for more information.

1.2.9. Explorative Divergence

"Explorative divergence" is not a recognised term and the acronym "ed" should be indicated in small caps. However, in order to improve readability, I have decided to use E-D (all caps) throughout.

1.2.10. Demarcation of time

All the projects from the oeuvre of MAAA discussed in this thesis date from the year 1994 (post-apartheid) to March 2020 (when the COVID-19 pandemic and associated lockdowns hit the world). The pandemic tilted the scales 'towards an architecture of explorative divergence'.

1.2.11. Social media

Social media posts, such as Facebook and Instagram posts, are open public sources. These posts will be referenced in the appendix as proof of public engagement with our oeuvre. The updated 2020 Harvard referencing method will be used in this regard.

1.2.12. Document clarifications

The photographs included in the conclusion chapter were deliberately repeated from earlier in the document as a strategy to orientate the reader and visually reinforce the findings. Simultaneously, the reproduction of images ensures that the conclusion chapter can be read independently. This approach is specific to the conclusion chapter.

1.2.13. General assumptions and exclusions

Although I am aware of the fact that South Africa's political past will have had an influence on me, the context, and the autoethnographic study, this thesis will not address or enter into debate on the matter. In this study the focus will not be on the influence of any socio-political context on the architecture of Mathews and Associates Architects. Ideologies, socio-political contexts and historical narratives will only be referenced insofar as they had a direct impact on the architectural case studies and the creative methods employed by me or in the precedents discussed. This study is not about the ideology of apartheid (as applicable to me or any precedents studied) or any other political situation (as applicable to any of the precedents studied).

Excluded from this study will be the focus on political discourse, xenophobia, racism, identity politics, gender equality, language bias, LGBTQI+ rights, decolonisation and land redistribution.

As this study is not comparative in nature, the examination of the thought processes and business management strategies of an E-D practice and the selection of like-minded thinkers pertain to my personal practice and experiences.

Our practice strives to use as many passive design principles as possible, and we believe that a well-designed building will have a longer life cycle than a badly designed building. Sustainability as a theme in architectural discourse will, however, not be studied in this thesis. The study will focus predominantly on public buildings, as these are the buildings which can more readily be experienced by the greater public.

1.3. Research problem

In an industry focused on specialisation, it would seem as if explorative divergence would hinder efficiency. The question arises: "In which ways may a deeper appreciation of E-D challenge the assumptions ensconced in the drive towards specialisation?" Despite practicing as an architect, I have always tried to find inspiration beyond my profession. In this thesis I aim to show the latent role that E-D thinking has played in my practice. By clarifying the gifts of E-D in my own background (through immersion in an autoethnographic methodology) and in anecdotal moments within my architectural practice, I hope to shed light on the general nature of E-D as a particularly appropriate form of practice within the South African context – one that has the capacity to create an architecture with high propositional density and narrative depth. This architecture would allow for rich embodied experiences, stimulate a more open-ended public reading, and encourage ongoing associations to emerge between the dweller and the work through acts of post-rationalisation. E-D has been my latent way of living as a designer, but I have rarely reflected on its specific nature. It is a stance – a design intelligence – which is divergent, open-ended, multidisciplinary, receptive and reflective amid an increasingly specialised industry. Yet, the study will propose that this is a strength rather than a weakness.

1.4. Research questions

1.4.1. Main research question (for the architectural practitioner)

How can E-D, as an open-ended, receptive and multi-disciplinary form of design intelligence, contribute towards establishing high propositional density and narrative depth in architecture?

1.4.2. Theoretical question in aid of answering the main research question

What is the general nature, characteristics and gifts associated with E-D in architectural practice?

1.4.3. Contribution towards the general public's experience of architecture

How can E-D be used as a tool to create a bias towards good architecture in the public in terms of providing rich embodied experiences, stimulating a more open-ended public reading of architecture, and encouraging ongoing associations to emerge between the dweller and the work through acts of post-rationalisation? How can E-D contribute to meaningful relationships between people and buildings?

1.4.4. Autoethnographic question

How did my childhood, upbringing, years of study, travels and work experience influence my mode of practice and design?

1.4.5. Question on methodology

How can autoethnographic interrogation be used most effectively to reveal design and practice methods in architecture?

1.5. Research method

An anecdotal autoethnographic method will be followed in this research study.

Through anecdotes of my upbringing, studies and professional career, insight into the development of my design intelligence and core competencies will be revealed. Principles will be defined and referenced, but their application to my oeuvre and methods will be substantiated through stories.

An analysis of my experience of influential buildings will contextualize the origins of my E-D approach and provide further clarity on aspects of E-D. The family of thinkers, and specifically the similarities I share with them, will be discussed.

An exegesis of my work, journals, sketchbooks, photographs and final built outcomes will serve as a visual method for analysis and post-rationalisation, in order to discover and reveal traces of or latent clues as to the E-D core competencies involved.

Publications in the international and local architectural press, academic publications on our work, newspaper articles published about our initiatives, and television and radio interviews will be used as key reference material to illustrate the importance of the symbiosis between E-D practice and public engagement. These interviews will be scrutinized to determine the effects of propositional density and narrative depth on the experience of the dweller.

Social media will be investigated to analyse and gain an understanding of how users experience built works and the unique relationships they form with these buildings. Anecdotal feedback from the general public, end users and reviewers will serve as a feedback loop and confirmation that propositional density and narrative depth enables and encourages the public's reading of and engagement with buildings.

My oeuvre will be discussed in a post-rational form through the lenses of the core E-D competencies to determine the effects of latent design intelligence on my work.



Figure 1 Author looking at old slides on a light box (Kruger J. 2020)

1.6. Impact of the research

The broader impact of the work completed by my practice will be interrogated through personal interactions, interviews with experts in the field, publications of our work in architectural and popular press, peer-reviewed award citations, and an overview of social media engagement.

GENERAL IMPACT
The aim with this study is to show the ways in which E-D practice may increase public awareness of good architecture – defined in this context as works possessing high propositional density and narrative depth – by providing rich embodied experiences, stimulating a more open-ended public reading of buildings, and encouraging ongoing associations to emerge between the dweller and the work through acts of post-rationalisation.

IMPACT ON PRACTICE
My own practice is enriched by understanding the foundational and latent design intelligence which has been the real driver behind the successful oeuvre of MAAA. By appreciating this capacity, I hope to further enrich the work of my practice and to promote a more multidisciplinary approach towards design and practice.

IMPACT ON OTHERS
The study also aims to open up E-D as a method of design and practice to other like-minded architects and practitioners. This method of practice might be a logical survival approach in a time when our profession suffers globally under the continuing effects of the unpredictable COVID-19 pandemic.

1.7. Structure of the document

In Chapter 2 the origins of my architectural credo (1.4.3.) are uncovered by way of an anecdotal autoethnographic investigation. Furthermore, the development of my E-D approach and the three competencies are investigated by discussing key influences throughout my childhood, studies and early career (1.4.4.). The chapter includes a discussion of two owner-built houses, which illustrate the first tangible architectural outcomes of my E-D practice.

In Chapter 3, the themes identified in Chapter 2 are contextualised in the architectural discourse through a discussion of buildings and individuals that have inspired my practice (1.4.4). My theoretical stance will systematically be clarified in terms of the influences of the architects concerned, and work will be discussed to present explorative divergence as a coherent theoretical stance. An explanation will also be provided on how propositional density and narrative depth facilitate a relationship between architecture and dweller, and how the E-D practice brings this about (1.4.1. and 1.4.3.).

Chapter 4 builds on Chapter 3 by investigating how E-D manifests in the practice of Mathews and Associates Architects (1.4.2.). The specific gifts and culture associated with E-D practice are elucidated, and how E-D thrives as a method of design within an environment that is conducive to its use is demonstrated.

Chapter 5 illustrates how the competencies and interests introduced in Chapter 2 have been absorbed into the architectural E-D process and how they have manifested in the work of Mathews and Associates Architects. The integration of these competencies has enriched our work and allowed me to pursue my architectural credo (1.4.1.).

In Chapter 6, I discuss a singular project, the Braak Pavilion, as a summary of the fruits of E-D practice. The discussion illustrates how the insights obtained through the study have influenced the practice of MAAA.

In Chapter 7, the conceptualisation and planning of the PhD exhibition, as well the execution thereof, are outlined. The exhibition illustrates the competencies and theoretical underpinning of E-D, and showcases the author's ability to apply the E-D method to a unique project.

In Chapter 8, the findings of the study are concluded and summarised.

My architectural credo is defined in Chapter 2 as a wish to make architecture to which people can relate. For this reason an appendix has been included aiming to demonstrate the relationships people have with the buildings of MAAA through a presentation of artworks, photography, written works, nicknames for buildings, and comments from people who have interacted with the oeuvre (1.4.1.). The appendix differs from other chapters in the thesis in that it relies on atypical sources, and aims to present the views of the public rather than that of the author. For this reason, the author's interpretation of the sources will be limited.

1.8. Conclusion

In Chapter 1 the foundation for making the case for explorative divergence as a method of practice in architecture was established. This method was determined to be autoethnographic and anecdotal, and the main themes and aims of the study were introduced. The constraints of the study (the limits as assumptions) were defined, and the brief (the research problem and questions) was determined. The structure of the document illustrates how the research questions will be addressed in the remainder of the chapters.

In Chapter 2, I will define my architectural credo and set out to uncover the origins of my E-D practice.

2

AUTOETHNOGRAPHIC INVESTIGATION



2.1. The driver of an explorative-divergent practice

Motivational speaker Simon Sinek (2011) believes that one of the main reasons for people losing interest in their endeavours is that they do not understand the 'why' that drives their actions. They may know what they are busy with, and how to do it, but the underlying 'why' remains a mystery. In his book, *Twilight of the Idols*, the philosopher Friedrich Nietzsche (1844–1900) asserts that, "If we have our own why of life, we shall get along with almost any how" (Nietzsche 1889:12). The same applies to the practice of architecture.

In Chapter 2, I set out to uncover my 'why' in architecture by way of an anecdotal autoethnographic interrogation. My credo can be defined as an intention to foster a bias for good architecture amongst the public by creating architecture that allows people to engage meaningfully with their environment (place), i.e. to foster relationships between people and buildings through holistic, embodied experiences. In the diagram (Figure 2) I interpret Sinek's theory as it relates to this study and my architectural practice. A project brief falls in the 'what' category. In order to bring the brief in line with my 'why', it needs to be interpreted through the lens of the 'how'. In my case, 'how' is explorative divergence (E-D).
Once I understand the underlying 'why' associated with the brief for the project, it once again goes through the 'how' process (E-D) to create a new 'what' – the building that one can see and interact with. Understanding the 'how' is the ultimate aim of this study.

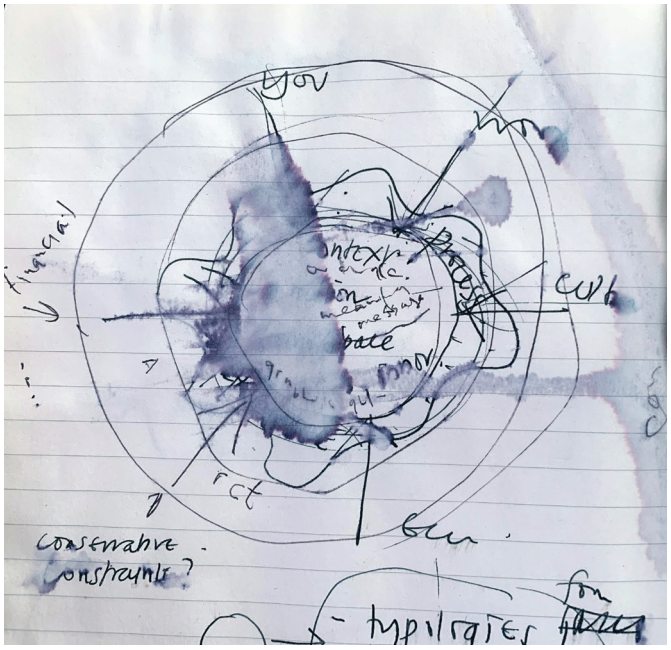


Figure 2 Why What How diagram adapted by the author from Simon Sinek (2011) (Author 2019)

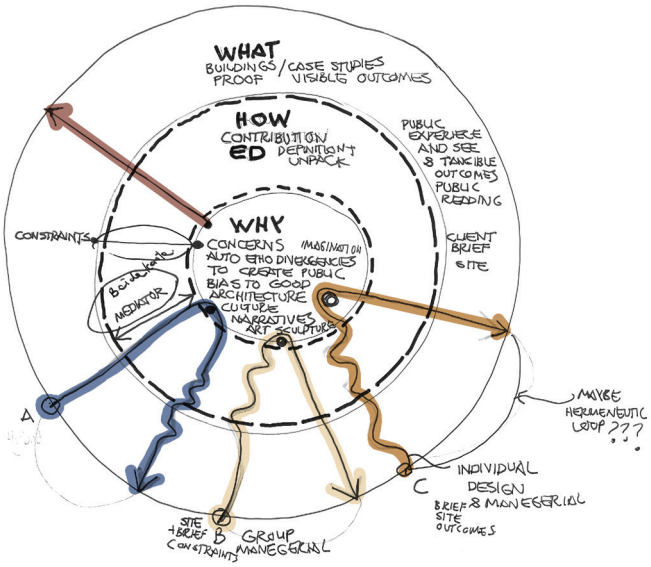


Figure 3 Initial diagram indicating the why, what and how of the study (Author 2022)

The origins of my main concern – the 'how' – are uncovered through anecdotes about my childhood, education and early career as an architect. The discussion reveals important influences which shaped me as an architect. Ultimately, this chapter serves as foundation for the principles which will be discussed later in the thesis. It considers my upbringing and family history, my architectural education and subsequent travels, and my early career as an architect. A discussion of my two owner-built houses, which were first attempts to express my architectural sensibilities in built form, follows. Finally, the chapter culminates in an investigation into the development of the chosen divergent competencies/interests.

2.2. The autoethnographic context

The characteristics of the two main backdrops to my life, Lichtenburg and Pretoria, are important factors which contributed to my spatial understanding of and approach to architecture. In addition, specific characters played an important role in my life and broadened my perspective on and understanding of the world. My family history illustrates a complex background and the diverse nature of my forebears. Both these factors had a profound impact on me and on my career. I will argue that the recurring themes of dualism and paradoxical outlooks encouraged an explorative-divergent mindset.

2.2.1. Lichtenburg: the scene of a family story

> "I still have a love/hate relationship with the North West province, where the rural landscape and context made a lasting impression. It was only later that I realised it was the breeding ground for my imagination and creativity"
>
> – Mathews in an interview with Wood (2014:18).

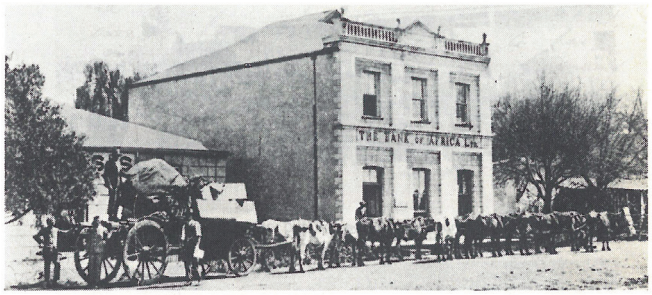
I was born the fourth of five children in February 1967 in the town of Lichtenburg, in the region previously named the Western Transvaal. According to the late historian Charles Bottomley, our family's history is closely linked to that of Lichtenburg: the Mathews family was one of the founding families, and my forebear Charles Wheatly Mathews was its second civil commissioner (Bottomley 2005:71). Historian JJ De Beer, who recorded the town's history, confirmed the founding year as 1873 (De Beer 1973).

Charles Wheatly Mathews was an English immigrant who co-founded the Bank of South Africa Ltd in Colesberg. The bank was later amalgamated with three other regional banks to form the present-day Standard Bank of South Africa (Amphlett 1914:12). In 1873 he followed his two sons to Lichtenburg to retrieve a loan of £1000. The fraudster was never caught. According to family researcher Maude Coubrough, "He was so impressed by the little village of Lichtenburg with its abundance of water furrows that he decided to establish himself in the area and purchased 40 erven" (Coubrough 2019:156).

The entrepreneurial spirit of founding father Charles Wheatly was ingrained in his son Edward Henry the first, who owned the first double-story commercial building in Lichtenburg. It housed the Bank of South Africa Ltd, and was leased to Standard Bank in 1912 (Bosman 1985:67) (Figure 5). He was also the founder of the NWK (Noordwes Kooperasie) (De Beer 1973), and a close friend of the Western Transvaal Boer General Koos de la Rey. The family assumed ZAR citizenship and fought on the side of the Boers during the Second Anglo-Boer War.



Figure 4 My sons at the gravestone of EH Mathews (Author 2014)



Die eerste dubbelverdiepinggebou in Lichtenburg. THE BANK OF SOUTH AFRICA LTD, wat kort na 1902 gebou is. Op 19 Julie 1912 het die STANDARD BANK die gebou wat die eiendom van E.H. Mathews was,betrek. Die ossewa met 'n span van twaalf osse was destyds 'n alledaagse gesig in die dorp.

Figure 5 The Bank of SA in Lichtenburg (Bosman 1986:67)

World-renowned poet and writer Rudyard Kipling edited a local newspaper during the Second Anglo-Boer War. In a poem about a soldier stationed at Lichtenburg he describes the area's trees, smells and sights, best articulated in this verse:

Lichtenberg

Smells are surer than sounds or sights
To make your heart-strings crack –
They start those awful voices o' nights
That whisper, "Old man, come back!"
That must be why the big things pass
And the little things remain,
Like the smell of the wattle by Lichtenberg,
Riding in, in the rain.
…

– *Rudyard Kipling, 1903*

De Beer (1973) and Bottomley (2005) are in agreement that Kipling must have confused the smell of the *Acacia mimosa* with that of the Australian acacia, better known as the wattle. Kipling alludes to an embodied experience of the landscape: "Smells are surer than sounds or sights" (Kipling 1903). I, too, can conjure an image of the environs with the specific smell of the acacia trees following a Western Transvaal rainstorm. A watercolour I painted in high school gives a visual impression of this promise of rain (Figure 6).



Figure 6 Watercolour by the author of the Western Transvaal landscape (Author n.d.)


The New York Times

A South African Town Lacks Water and Electricity. But Mayors? It Has Two.

Dysfunctional and collapsing rural towns may test voters' loyalty to the ruling African National Congress party in nationwide municipal elections on Monday.

Figure 7 Journalist Lynsey Chutel describes the decay of Lichtenburg in an article for the New York Times. The main photo depicts the Late Modernist post office building designed by our family's architect friends (Chutel 2021)

It is this landscape around Lichtenburg that formed the backdrop to my childhood and fuelled the development of my creativity. My forebears' enterprising spirit and commitment to the area left a legacy to follow.

During the course of writing this thesis, I revisited the town for a family funeral and had the opportunity to document some of the buildings that had influenced me. I was saddened at the state of the once beautiful and water-rich oasis. It was not the trip down memory lane that I had expected.

2.2.2. Growing up in a dualistic world

A. My parents: contrary outlooks



Figure 8 My parents on the Koeksister bench in front of the Voortrekker Monument (Mathews H. n.d.)

The pianist Byron Janis (Kluger 2007:259) maintains that playing the piano is about maintaining balance: "The left hand is the anchor hand, the one that grounds a performance. The right hand is something in flight. The right can do whatever it wants as long as the left essentially pays its rhythmic debt." Janis's analogy is an apt description for my parents. They held opposing worldviews, varying perspectives and different biases. We were grounded by my mother, but encouraged to fly by my father (Figure 8).

Most of my childhood friends had two 'grounding hands'. Their parents were cast in the same cultural and religious moulds, with very strong views inherited over generations. I believe it was the norm at the time and still is, to a large extent, in present-day Afrikaans households.

As a young child, the different perspectives of my parents instilled in me a curiosity about and a great interest in varying subjects. My parents (perhaps unintentionally) raised their children as critical thinkers. My dualist upbringing laid the foundation for an inquisitive creative outlook and would come to play an important role in the development of my explorative-divergent practices.

A.1. My mother: the grounding left hand

My mother, Wilhelmina Hendrika Kemp, was the parent who kept us grounded. She was the daughter of a Free State farmer, a hard-line Afrikaner, proud National Party supporter, and devout member of the Dutch Reformed Church who only banked at Volkskas Bank. My maternal grandmother's family immigrated to South Africa from Apeldoorn in the Netherlands, and settled between the towns of Memel and Harrismith in the then Orange Free State.

My upbringing, on the part of my mother, was grounded in the Calvinist values of honest hard work and taking responsibility for one's actions. On Sundays she would march the five of us to church and Sunday school. The Sunday-school classes for different age groups were scattered throughout the church building and hall. The original humble *klipkerk* [stone church] in Lichtenburg was constructed in 1891 and was transformed into its current splendour in 1928 by the renowned Gerard Moerdijk, architect of the Voortrekker Monument in Pretoria. Many years later I would arrange for this monument to be lit up in pink and for a contemporary koeksister bench to be placed at its feet.

Our family friends, architects Botha and Van Rouendal, were responsible for the restoration of the Moerdijk church in 1982 (Bosman 1986:25). The rotational Sunday-school classes presented the opportunity to study the architectural details of the church. I cannot remember a sermon or a class, but I do recall the atmosphere, smell, light and feeling of profoundness of the church interior. Errol Pieters, former head of the Department of Architecture at Tshwane University of Technology, captured some of this experience in his beautiful sketches of the details of this church (Bosman 1985:75) (Figures 9-10).

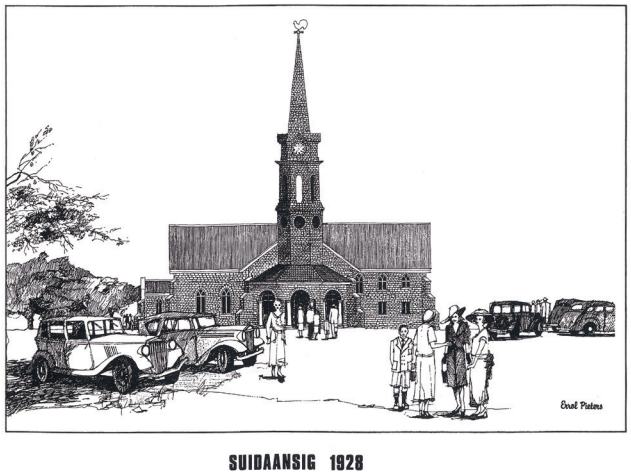


Figure 9 NG Klipkerk Lichtenburg by Errol Pieters (Bosman 1985:67)

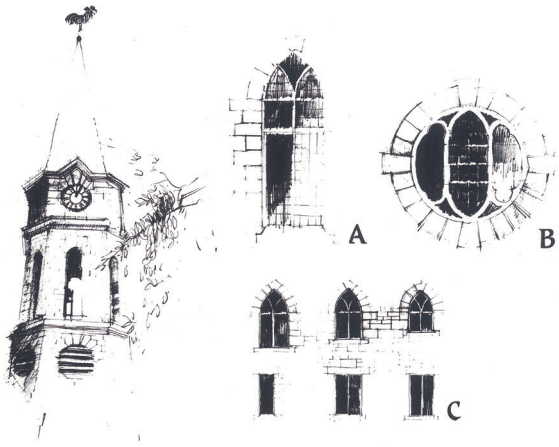


Figure 10 NG Klipkerk Lichtenburg by Errol Pieters (Bosman 1985:75)

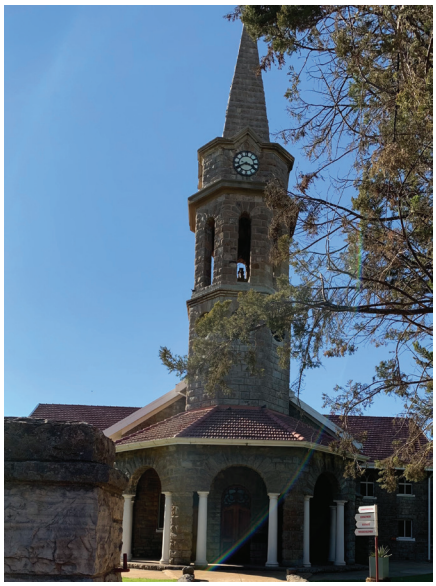


Figure 11 The Lichtenburg Klipkerk (Author 2021)



Figure 12 Cornerstone of the Lichtenburg Klipkerk, a national heritage site (Author 2021)

My younger sister took organ as a school subject, and I had to accompany her to the church on weekdays so that she could practise. These moments in the deserted building were magical. She always told me to choose the last song, and I would close all the windows so that she could pull out all the registers so we could listen to the immense sound filling the interior. The church had a profound effect on my love for architecture, and gave me first-hand experience and an understanding of acoustics and the power it has in the experience of place. This would prove valuable when I was later commissioned to do a project in which the centrepiece was a historic organ[1].

My mother managed a family of five children with care and prudence. She assumed her role of wife, mother and teacher with great dedication. Her dreams for us, her children, were shaped by her own worldview: she wanted each of us to get an education and then a safe job as a salaried employee. For her, security was paramount.

My mother conformed to the expectations of the time, participating in many activities to the benefit of the community. Her creativity came to the fore in the way she overcame the financial constraints associated with raising five children, and in cooking with flair, designing and sewing her and my sisters' clothes, and in her experimentation with gardening. My mother instilled in me the value of hard work and grit, without which all the talent in the world is in vain.

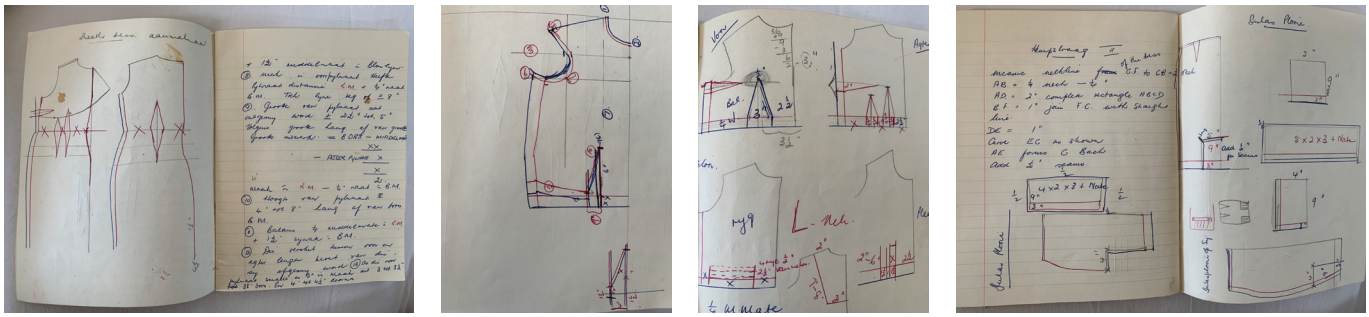


Figure 13 My mother's hand-drawn sewing patterns (Author 2021)

[1] Refer to the case study: AHMP school hall

A.2. My father: the right hand in flight

My father, Edward Henry the third, better known as Eddie, was also one of five children. In my mind, he can be likened to the right hand of the pianist – somewhere in flight. He taught us to think critically, to question what we had learnt or read, and to take risks – in essence, to explore and diverge.

As a scientist, geologist and analytical chemist, he would subtly counter my mother's creationist theory with scientific facts, thereby balancing our views and contributing to our dualist understanding of the world. Humour was his secret weapon, preventing any large-scale ruptures in the household.

The English-medium primary school in Lichtenburg was much smaller than the Afrikaans school, and was attended by students from various walks of life. My father befriended children from more liberal traditions and had many Jewish friends. Outliers in society and different cultures fascinated my father. His tailor was Hindu (Haries Tailors opened in 1955), and we all had clothing accounts with the Mahomeds, the Muslim traders in town (in business from 1926 until 1980 when the Group Areas Act [amended in 1979] forced them to move to the newly constructed Shukran outside town)(Retief 2006:40, 70). We commissioned furniture from a hermit who lived with his dogs in a rondavel adjacent to his huge timber workshop full of exquisitely crafted furniture pieces. The urban designer and academic Richard Sennett (2018:142) writes that "ease in the company of strangers has long been associated with living in a city" but that it is masked in civility. "Mixed communities work well as long as the consciousness of the Other is not foregrounded" (Sennett 2018:143). We existed comfortably in a mixed community (although apartheid law was enforced), because nobody, in my father's eyes, was ever the Other.

My father grew up fully bilingual and completed his high-school education at the Hoërskool Lichtenburg. I assume this was partly the reason why my siblings and I became the first Afrikaans-speaking generation of the Mathews family. On Sundays he would read the *Sunday Times*, and on weekdays *The Star*. My mother preferred the *Rapport*. My mother banked at Volkskas; my father at Trust Bank. The children's accounts were scattered between the two.

My father supported the opposition, the South African Party (SAP) of General Smuts. As a student he assisted Gladys Steyn (daughter of former president MT Steyn) who, at the time, was the only SAP senator in the Free State. In the Fifties, they were five SAP students in total at the then University of the Orange Free State who campaigned against apartheid policies under her leadership (Mathews 2017).

A story that hints at my father's explorative-divergent mindset is that of the 'August' at the University of the Orange Free State (UOFS, now UFS) (Figures 15). As a student he rallied his mates at Abraham Fischer residence to take a gamble and bet their funds at the local bookmaker's. They bet 12 to 1 on the horse Radlington (the favourite at the time at the Durban July). They then took their bets outside and bet at 16 to 1 against other students and even my father's chemistry professor! Needless to say, Radlington lost by a fraction and they lost all the savings of the residence. The money had to be recouped in some way or another. He came up with the idea of initiating the now long-standing tradition of the August (not July) handicap. Cyclists on their bicycles would replace the horses, and students could bet on the cyclists. He not only made the money back with some profit, but started a brand new University tradition that went on to become a massive event on the University and Bloemfontein's calendar (Mathews E.H. 2017).



Figure 14 The August medal in honour of my father (Author 2021)



Figure 15 History of the August at UFS (Kovsies) (Huis van Presidente 2007:58)

Buys *et al.* (2007:47) describe the August, first held on 9 August 1952, as "*een van die interessantste en kleurvolste gebeurtenisse op kampus*" [one of the most interesting and colourful events on the campus calendar].

As children, we could choose which perspective we wanted to read about and believe. My father instilled in us notions contradictory to that of my mother of having a salaried job: to work for yourself, to take chances, and that hard work does not equate clever work. He taught us to constantly look out for opportunities and to pursue success even after failure.

He believed that a series of failures is better than procrastination, and that even the work of a street sweeper is hard work.

My father set only one rule in our home: "Do not cause any harm, physically or verbally, to a sibling of yours." That was it. We could go to bed when we wanted to, we were not scolded if we broke something or made a mess, and we didn't have to eat up all our food either. Psychologist Theresa Amabile (Grant 2016:164) studied the upbringing of original thinkers and came to the conclusion that "ordinary children had an average of six rules, like specific schedules for homework and bedtime. Parents of highly creative children had an average of less than one rule and tended to 'place emphasis on moral values, rather than specific rules'."

Another unconventional practice for the time was the responsibility my younger sister and I assumed of managing household expenses (the three older siblings were sent to boarding school in Potchefstroom, as my father believed the standard of maths and science was higher there at the time). Our family had accounts with all the stores and street cafés as well as the pharmacy in town.
The owners of the stores knew the Mathews children, and we had permission to purchase anything on account at any time. My father gave us the task of buying our own clothes, stationery and other necessities as and when required. For cash purchases, he placed money in a central place in the house (the honesty box) and we could take what we needed to pay school fees and cover other expenses. No receipts were ever required. His system was based on trust. He believed we could and should be responsible and independent. It was drilled into us.

This practice made us aware of what we really needed and how much things cost. It encouraged us to participate in the running of the household and its finances. The onus was on us to carefully consider each purchase.

I believe my father's rules and practices had a great influence on how I run the office today, with values of freedom and trust. It is an office without timesheets and leave forms; without micromanagement. The only moral value held is that individuals should complete their tasks to the best of their capabilities and pull their weight. My unconventional upbringing contributed to the establishment of explorative-divergent methods in the practice of Mathews and Associates Architects.

B. Childhood: a field tilled for the seeds of creativity

We stayed outside of town in the employee housing compound for Whites Plymouth (the local Portland cement factory), which was later acquired by Lafarge Cement. My father was the production manager and chemical analyst at the plant before he started his own property business. We moved to town following his career change.

> I remember our large garden with its many secret spaces and overgrown sections, ideal for building shelters and tree houses, and playing in the mud (interview with Mathews in Booi 2013:2).



Figure 16 Playing house in a teepee (Mathews E. n.d.)



Figure 17 Building mud houses (Mathews E. n.d.)



Figure 18 Spatial awareness on a rooftop (Mathews E. n.d.)

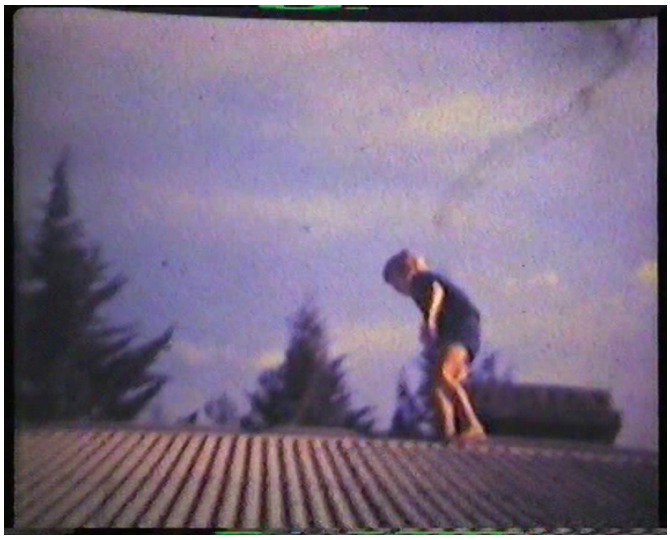


Figure 19 Spatial awareness on a rooftop (Mathews E. n.d.)

We grew up with very few toys and no television. Looking back, I think this was a great advantage as we had to improvise, use our imagination and be innovative from a very young age. It encouraged me to engage with materials and make things from found objects, and to be creative in the way in which we played and invented games. I believe these were the origins of my explorative-divergent practice methods. My engagement with the physical landscape provided the setting that would underpin my architectural work later in life.

Our house at the compound was separate from the houses of the general workers, but I remember playing with all the children. I would organise games and would get them to help me build houses and realise ideas, almost acting as an amateur film director or a future principal of an architectural practice. My parents also sent me to a nursery school in town. It was a place which I thoroughly enjoyed and where I could realise and express my creativity.

As the fourth of five children I could easily disappear in the crowd and do my own thing. Dean Simon (Grant 2016:156) theorises that the firstborns of a family tend to defend the status quo, whereas younger children are inclined to challenge it. Sulloway (Grant 2016:156) argues that, in general, "middle children are the most inclined toward diplomacy. Facing a dominant firstborn, and prevented from dominating the youngest siblings … they master the art of negotiation, persuasion and coalition building." My position in the family ingrained this sense of diplomacy, which would prove vital in an architectural practice where one often has to mediate between opposing parties with different agendas.

Our carefree childhood days were captured with the technology of the day: the Super 8 mm Motion Camera released in 1965 by Eastman Kodak. My father purchased it as soon as it became available on the market. For a long time we had no photos of my early childhood, until we rediscovered the 8 mm films. The footage shows us playing with tents (perhaps a first interaction with the notion of the temporary dwelling) (Figure 16), arranging 'furniture' in our tent, and making mud figurines, houses, and even complete mud towns.

In an interview with Graham Wood I stated: "I am sure I was born an architect. Building mud and clay houses formed part of my play routine" (Wood 2014:18) (Figure 17). The tactile experimentation with mud led to a fascination with the moulding of material – later manifested in a love for sculpture – and may have been the underlying inspiration for the 'mud' house I would build for my own family in 1998 (see 2.2.7).

When I was in primary school, the *Rapport* (the weekly Afrikaans newspaper) published a spread of the world map. I pinned it up on my bedroom wall. I promised myself I would one day leave the town and travel in an unrestricted way around the globe. It was not that I wanted to escape my rather privileged middle-class lifestyle, but was more out of extreme curiosity about what the world beyond held.

I remember one very cold Western Transvaal winter evening in 1976 when I clearly expressed my love for architecture and building: I wanted a real house of my own. I couldn't sleep that night. The tension in the house was palpable. My parents waited until the younger siblings were all tucked away in bed and then turned on the radio to hear what was going on in Soweto. As I couldn't sleep anyway, I went to their bedroom and lay down on the carpet to listen to a news report I didn't understand. I asked my dad why the people were worried. His reply was not to worry – the largest township in South Africa was very far away from us, more than 150 km away. To console me, he promised to help me construct my own real house with bricks and mortar. His assurance sufficed and I returned to my room. I lay in bed excitedly thinking of the white house with the flat roof that I would build.



Figure 20 The author's first 'house' (Mathews E. n.d.)

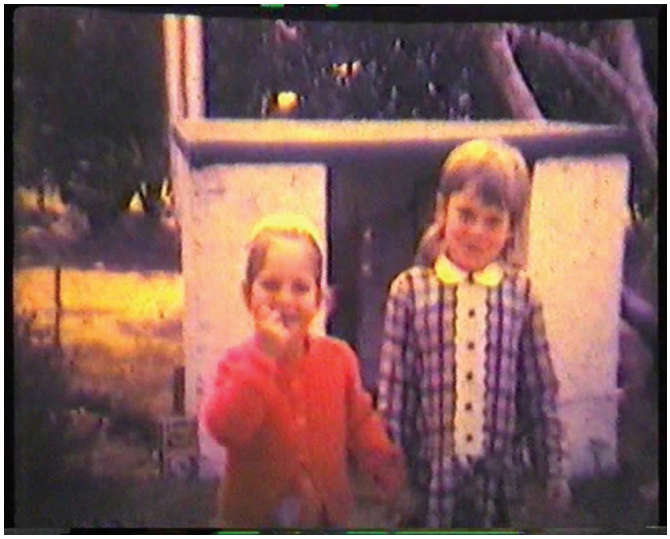


Figure 21 The author's first 'house' (Mathews E. n.d.)

The idea for a flat roof came from the houses of our two architect friends and their Modernist homes in town. "From a very young age, our family was closely acquainted with the only two architects in town, Peet Botha and Larry van Rouendal, both trained in the Bauhaus tradition" at the University of Pretoria (Mathews 2017:2). I believe these two architects-cum-family friends were my first role models in the architectural profession. Of all the new buildings in town, it was the houses of these young architects that truly sparked an interest. Through them, I also saw early on that the economic cycle of the building industry was not always favourable.

Looking back, I cannot miss the coincidence that my 'first' designed (play) house as a child was built during the 1976 Soweto uprising, and that I followed suit and built my first 'adult' house in 1994 – another year of political change when the first democratic election was held in South Africa (Figure 20-21).

C. Places and characters of Lichtenburg

In the small town of Lichtenburg, I was exposed to a world of characters and values: there was the *dominee* who was more interested in art than in religion and established the Willem Annandale Art Gallery; Maria and Tony Texeira, the Portuguese grocers; the prison warden from the Zion Christian Church; the prisoners who worked in our garden and told me all about their crimes and their sentences; a 'cathedral' of carpentry, a home library, the synagogue, the Muslim traders' stores and the Hindu tailor's shop.

I remember, as a preschool kid, accompanying my father to the house of a correspondent for the Afrikaans newspapers, Johannes de Beer[2]. His house was built of blue stone and dated from before the Boer War . It had a large *stoep* (veranda) and a *leivoor* or irrigation channel in front. The house was filled with thousands of books – one could just sense the importance of intellect and the significance of the place. His nickname was Oom Fiskaal, derived from the bird name *waterfiskaal*, as he also served as the water warden of the town. The water warden ensured that everyone in town had a turn to irrigate their gardens.

I recall attending the weddings and baptisms of my father's family members and the children of his Anglican friends in the tiny stone church, designed by Herbert Baker and FLH Fleming in 1923. Bosman (1968:81) describes the church as one of the most beautiful in town: "*Alhoewel piepklein, is die Anglikaanse kerkgeboutjie, wat sy interieur betref, seker een van die mooiste kerke op die dorp*." [Although tiny, the Anglican church building, where its interior is concerned, is probably one of the most beautiful churches in the town.] (Figure 22).



Figure 22 The Anglican Church in Lichtenburg (Author 2021)

This notion of church architecture was offset by the old Methodist church. Its façade had been 'chopped' off after it was deconsecrated so that cars and trucks could easily drive into my father's old school friend Jack Levy's workshop, Mieliebelt Motors (not a typical Jewish name for a business). The resulting effect of ephemeral light shining through the Gothic stained-glass windows onto the sounds of a workshop, the smell of oil and *ghries* and a jumble of metal and tools, was quite something to experience and is still ingrained in my childhood memories. It was a true 'makerspace'.

Opportunities also existed for more formal introductions to art. The *dominee* Willem Annandale played a part in the opening of a modern art gallery in town, which was subsequently named after him (Retief 2006:53). Another interesting character was Coral Fourie, an artist who had stayed amongst the San for two years in order to document and preserve their oral histories. I have one of her works in my collection. She lived in town and did a great deal to promote the art and culture of the San from the Eighties up until today. Her house and studio were previously the town house of General Koos de La Rey, where his widow stayed until her death.

Upon reflection, I realize that the intriguing spaces I encountered during my childhood had in common their own peculiar smells, unique stirring atmospheres and specific sounds that enriched my predominantly western preoccupation with the visual (Zumthor 1999; Ingold 2000). In western societies we tend to value the visual over the other senses, thereby devaluing our embodied understanding of space – the sounds of *ou* Van Dyk's tools and the smell of the wooden shavings in his workshop; the sound of water in the *leivoor* and the stuffiness of Oom Fiskaal's library; the call for prayers while we waited for Mahomed's shop to reopen on a Friday afternoon; the smell of incense and the statuette of Shiva in the cramped workspace of Dee Haries' tailor shop; and the grime and chaos in Jack Levy's mechanical workshop where the cars were given a (church) service.

I can relate with Peter Zumthor's reflections on experiences of architecture from his childhood years, and the influence these had on his work later in life. Zumthor reminisces that "there was a time when I experienced architecture without thinking about it" (Zumthor 1999:8). My father unknowingly gave me a taste of what Juhani Pallasmaa would later describe as a person's embodied memory of place (Pallasmaa 2005:72).

Social scientist Dan Sperber (Ingold 2000:43) believes that "the greater the diversity of the cultures that humans are capable of acquiring, the greater the complexity of the innate learning abilities involved". I doubt if any child raised in the white suburbs of South African cities or by a more conventional pair of parents would have been exposed to the variety of characters and places that formed the backdrop to my childhood.

I had always been convinced that it was my family's friendship with the town's two Bauhaus architects that had been my sole exposure to the discipline of architecture. They definitely made the profession tangible, and encouraged me to choose this complex vocation as a career (Mathews 2018:2). However, upon reflection, I am now of the opinion that the variety of cultures, spaces, typologies, experiences, and sights and sounds of this small farming town certainly contributed to my understanding of the holistic embodied experience of place, and subsequently influenced the work produced later in life. Subconsciously, I formed relationships with places through each unique encounter of space.

[2] De Beer also authored *Weerlig in die Weste: 'n geskiedenis van Lichtenburg* (1973) and *Stellenbosch of Verwoerd.*

2.2.3. Skills learnt and skills lacking: an architectural education

Upon completion of my high-school education, there was no other course for me to study but architecture. I was so certain of my choice that I filled in "architecture" as both first and second choice on my university application forms.



Figure 23 The author on the roof of Boukunde (Unknown n.d.)

My parents gave us all free reign to choose what we wanted to study. I applied to study architecture at both the University of the Orange Free State and the University of Pretoria (UP). My father promised me a car if I got accepted by his alma mater Kovsies and chose to live in Abraham Fischer residence. I visited both departments, and eventually based my choice on the buildings that housed them. Architecture would dictate my choice. The UOFS building was uninspiring and drab at the time, and it would be many years before Henry Pretorius of Typology Architects transformed the place. I now visit the department regularly for my own postgraduate studies and seminars, as well as when acting as an examiner of practical theses. It is an architectural delight.



Figure 24 A student visit to the Johannesburg Art Gallery with Willie Meyer (Unknown 1986)

The Department of Architecture at the University of Pretoria, better known as Boukunde, had been revamped by Daniel de Beer in 1973 (Barker 2019:17). The previous Bauhaus-inspired glass- and steel building had been encased by a Brutalist concrete shell, with a central atrium and high ceilings in the top-floor first year studio. Light flooded in through the cleverly designed clerestory floating windows. Creative work was constantly on display in the atrium and I am convinced that the volume of the studio increased our intuition and creativity. I later learned of a theory called the Cathedral Effect", which states that high volumes have a positive effect on creativity (Lidwell *et al.* 2010:38). No wonder that voluminous interiors are an important aspect of the studios we have designed for Mathews and Associates Architects[3].

I did not perceive the 70s concrete shell as a hard "dead mass of concrete and brick", as criticised by Professor JTB Theron (Barker 2019:17), but rather as a shelter protecting our creative space from an uncreative or mundane outside world. The building became my home and refuge for five years. We worked, studied, slept, ate and socialised within its walls. I formed a special relationship with the building that reached a climax when I recently worked on enlarging it through the Javett Art Square addition. Sennett's (2018:151) description of a creative place matches the Boukunde of our day: "A messy space littered with half-eaten pizzas and … cigarette butts sends a signal of creative engagement which tidy, homey environments with pleasure on demand do not." The building was open 24/7 and no security guards checked our comings and goings. We even met to study our theoretical subjects together in the small seminar rooms. It was a space where like-minded people could fuel each other's creativity.

I preferred to maintain a low profile in my official university residence, Mopanie. I did not see myself as the 'son' of a residence, but the *koshuis* did expose me to other perspectives and students studying a diverse range of subjects. It was a good antidote for balancing the archetypical life of an architecture student. My group of friends from Mopanie and their views, interests and thought patterns were immensely important in nurturing my own divergent thought patterns. Having only fellow architects as friends could easily lead to a one-dimensional way of thinking. The theme of the pianist's left and right hands is applicable here too: life in Boukunde represented the hand in flight, while Mopanie and its friendships grounded my world.

[3] Refer to case studies Kee Enterprises and Oaktree Studio in Chapter 5.

The lecturers at Boukunde had an immense influence on us. There were the young, energetic ones like Roger Fischer, Karel Bakker and Schalk le Roux, and the legends who personified the place, such as Gus Gerneke.

Gus was the *enfant terrible*, the lecturer who challenged every convention from teaching standards to examination rules. He would hand out test papers and tell us to hand them in any time the following day – group work was not prohibited. An elegant essay was easily awarded 130%! His classes were often nonsensical, yet always intriguing. We would be discussing the design of the Citroen D20 and then talk about Mary Quant who introduced the mini skirt to fashion.

> *Gerneke, wat beleë Europese motors en volksvreemde honde aangehou het, het as wederstrewige provokateur en ongeneeslike raconteur die hele skool gedurig in rep en roer gehad – met nuwe gedagtes of plekke waarvan niemand nog gehoor het nie en boeke wat niemand ooit (of weer) gelees het nie.*
>
> – Professor Schalk le Roux in Barker (2019:61).

> [Gerneke, who kept matured European cars and foreign dogs, was a recalcitrant provocateur and incorrigible raconteur who constantly had the whole school in a state of commotion – with new ideas or places that no one had ever heard of and books that no one had ever (or would again) read.]

Looking back, I realise that it was not so much the content of the lectures that was of importance. The best way to teach is to encourage curiosity and foster a fascination with and love for your subject. We were introduced to the spirit of the time in extremely broad terms so that we could understand different epochs and recognize paradigm shifts. Gus Gerneke's methods were the epitome of an explorative-divergent teaching method, broadening our general knowledge and instilling the idea of the architect as an amateur in various creative fields rather than a specialist in one. He liked to say that an architect should be a dilettante.

In my third year I had Heinrich Kammeyer as a lecturer, who taught me that 'making' is a way of exploring. He would page through my scribbled drawings excitedly, encouraging further exploration. We share a belief that architecture should be relatable and that the experiences it creates are more important than a formal facade construed mathematically on a drawing board. In an interview many years later at his home in Linden, Johannesburg, Kammeyer remarked: "I remember you as a hands-on thinker, a doer. You do things instead of talking about them. You also constantly used metaphors while examining what effects these would have on the design and the experience" (Kammeyer 2019).

At the time, Boukunde was renowned as a strong technical and pragmatic school of architecture. As expressed more eloquently by Professor Dieter Holm (Barker 219:20), the school "highlighted proficiency in building science, an understanding of materials and the evolution of detail". This could be attributed to having academics who also had thriving architectural practices, such as Joe Kemp, Hans Wegelin and CB Swanepoel. Sadly, the balance between the groundedness of these practitioners and the crazy antics of provocateurs the likes of Gerneke and Kammeyer has disintegrated in recent years, with the rise of professional academics replacing practising architects in the Department.

Visiting lecturers from other fields of study contributed to a multidisciplinary approach to architecture and expanded my cognitive understanding of the world. One lecture series I vividly recall was presented by Professor Marthinus Versfeld, a professor of philosophy at the University of Cape Town. He was also a writer and poet. Versfeld discussed aspects of dwelling with specific reference to the importance of the threshold, both in a house and in life. This intense series of lectures was my tangible introduction to Heidegger's notion of dwelling. I have often mused that this lecture series ignited a way of looking at elements and details in buildings that was more profound – a way that values their phenomenological contribution in addition to their practical functions.

2.2.4. A World Tour

Following my third year of architecture studies, I landed a job in London, which provided the opportunity to travel the globe. This has always been my dream. At the time, it was customary to attempt to complete an architecture degree in 5 years. The current practice of 'taking a year out' did not exist. To raise money to fund my trip I designed logos, made business cards, did a few private design jobs, and even worked in an agricultural irrigation shop.

My grand 'World Tour'[4] included a trip to Italy and Greece (organised by my enthusiastic studio masters Roger Fischer and Karel Bakker), followed by our own student trip to Turkey. From there I made my way to Paris and then to London where I worked for a few months. At the time, "London had a shortage of architects as Thatcherism was in full swing" (Mathews 2019:7). With enough pounds saved up, I travelled to New York, California and Las Vegas.



Figure 25 Las Vegas (Author 1989)

Las Vegas was an important architectural pit stop because of the almost biblical status Robert Venturi's *Learning from Las Vegas* (Venturi, Scott Brown & Izenour 1972) held for architects at the time. However, instead of inspiring awe and wonder, the stint cured me of Post-Modernism and Venturi's mantra of "less is a bore". 'Learning from Las Vegas' quickly became 'leaving Las Vegas' (Figure 25).

Hawaii was the next stop. I vacuum cleaned hotels for a few dollars to cover my expenses. Hong Kong and Thailand followed, with less emphasis on architecture and more on culture and food. Due to sanctions against South Africa, I could not get off the plane in Japan, and Australia also had to be scrapped from my around-the-world ticket.

In hindsight, taking a year out was the best thing I could have done for my career, in spite of seeing most of my classmates graduating a year earlier than I did. The sketches in my journals of the time hold clues as to the buildings to come and highlight buildings which would inspire projects later on. These buildings and their influence on my practice will be discussed in more detail in the next chapter.

[4] My World Tour and year out is fully documented in my Master's with specialisation in Design (Mathews 2019:6-8)



Figure 26 The Louvre with IM Pei's pyramid in the foreground (Author 1989)



Figure 27 The author and the Paris skyline (Unknown 1989)

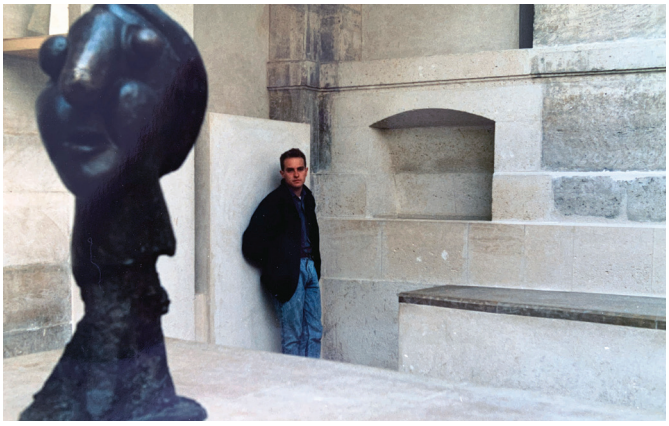


Figure 28 The author at the Musée Picasso (Unknown 1989)



Figure 29 The author at Parc de la Villette (Unknown 1989)



Figure 30 The author at Liberty Island, New York (Unknown 1989)

2.2.5. Seminal student work: a year out

Late into this study, while cleaning out my home study during the 2020 COVID-19 full lockdown, I discovered some old photos and slides of my student projects. In the box I also found letters and postcards from my classmates, friends and family. As I did not keep a journal of events, these letters were valuable finds that corroborated the visual story of the sketch journal of my 1989 travels. Retrospectively, many insights into my design process were gained and I discovered commonalities between student schemes and current work.



Figure 31 Author's old slides on a light box (Kruger J. 2020)

Although many work opportunities were available in the UK, I did not legally have permission to work; therefore, travelling with a large portfolio while 'on holiday' was not an option. I smuggled my portfolio past customs in the form of slides in a small plastic box. As a result of the shortage of architects in that country, employers looked the other way and allowed me to present my work on their light boxes. I was given a letter of employment, and with this and my passport I could open a bank account with the National Westminster PLC Bank.

One of the projects I smuggled in was a proposal for a Post-Modern train station in Mamelodi, featuring four freestanding pavilions resembling train carriages (Figure 32). A central totem, a circular tower, can be seen from all four carriages and serves as an orientation device. Traces of this scheme can be observed at the Tshwane Rapid Transit (TRT) stations and their totem poles, especially the Hector Pieterson Station with its four platforms, currently under construction.



Figure 32 A student scheme (Author n.d.)

Another project is a simple urban intervention: a memorial for the fallen jacarandas which were felled on campus because they were alien. The simple design features two convergent walls which direct the focus on a mound where a jacaranda tree had been removed. The design is an early example of sculptural work which narrates the story of a site; a love for the materiality of concrete; the importance of directional devices; and the simple public interventions which would later mark my work.

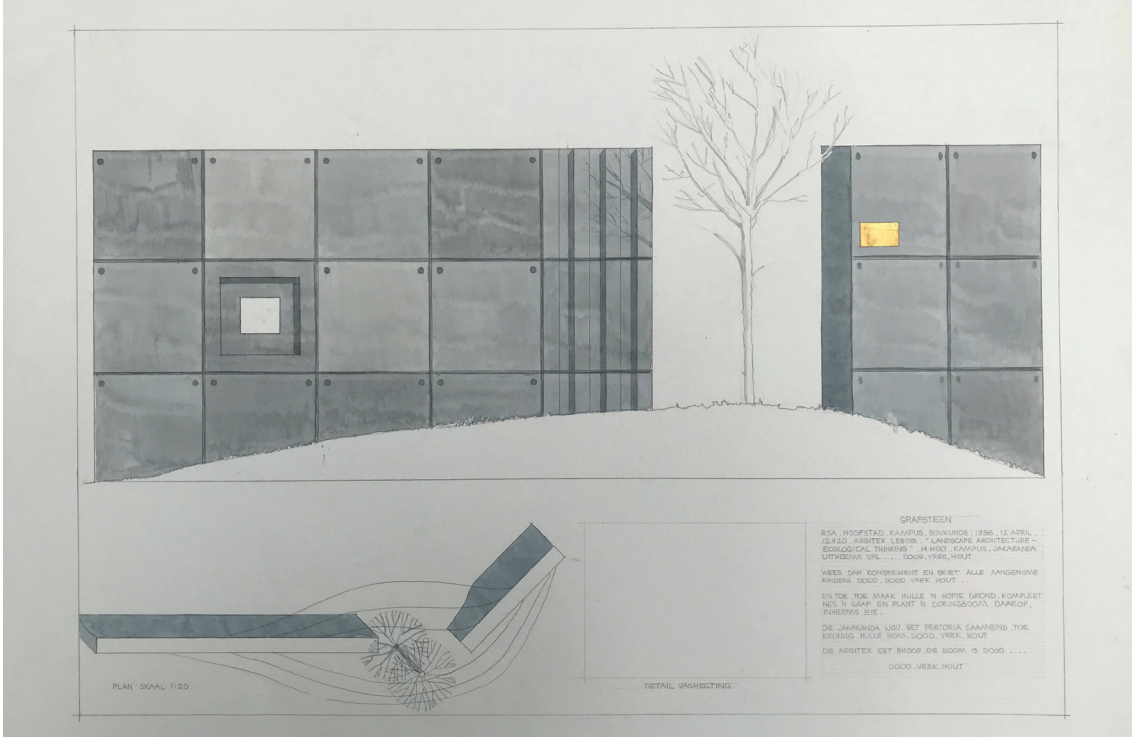


Figure 33 Student scheme: Memorial for a Jacaranda (Author 1989)

As an absent final-year candidate in the architecture programme at the University of Pretoria, the same technique of using slides to showcase my work was again used to present my design to my lecturers. Sending my work to Boukunde via courier proved stressful, as it was not guaranteed that it would arrive in time for the examination. A series of slides in sequence had to be placed in the slide carousel and showed at a very slow pace. I recorded an oral presentation on a cassette player, explaining the context and taking the examiners through the concept. In essence, it was a very crude film complete with instructions on when to change slides.

The scheme that I executed in London revealed the seminal influences, theories and methods of design as well as the thinking that underpin this study (Figure 33). The project which I submitted was an infill building for the Camden Market, which my friends and I frequented on Sundays. The intention with my proposal was to activate a leftover portion of space by providing an experience for visitors and exposing them to architecture. The building was defined by a pathway and a prominent curve that breaks the line of the market stalls. Deconstructivist influence was evident.

A landmark structure could also be used as a billboard, or be completely removed through a kinetic device. The space was to be used as a gallery by artists or to house traders on a Sunday. I used found objects (as sculptures) in the model to illustrate how the building lent itself to the exhibition of sculpture. The typology was open-ended and the cinematic experience of the route was an important design driver.

In this seminal student scheme, the roots of the divergencies discussed in this thesis could be seen: the sculptural making of space and the attempt to create a landmark object; curating design intentions and possibilities with found objects; and cinematic architectural choreography of routes, pause spaces and a series of platforms.



Figure 34 Student scheme for a site in London for the author's 4th-year exam at UP (Author 1989)

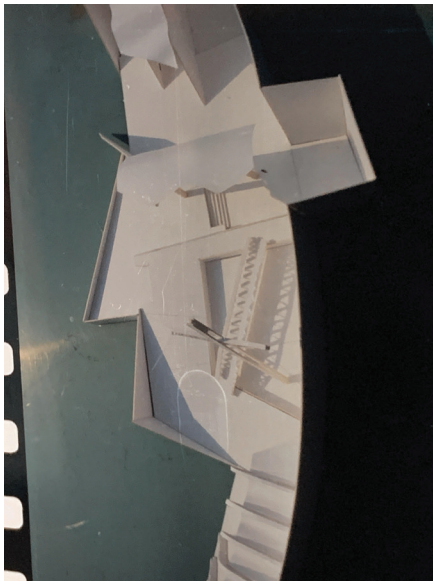


Figure 35 London student scheme (Author 1989)



Figure 36 London student scheme (Author 1989)

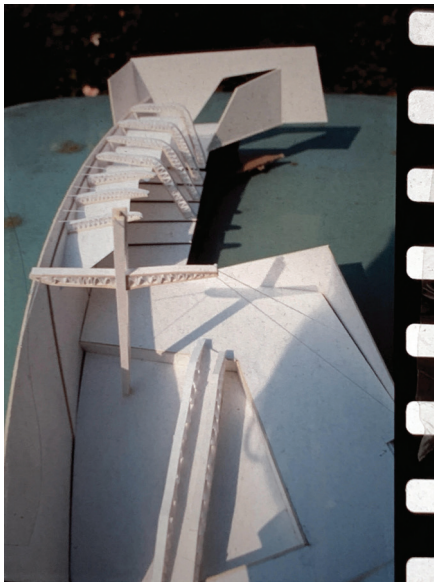


Figure 37 London student scheme (Author 1989)

Accompanying the slideshow for the examination was my sketchbook journal which presented the history and theory components. As a substitute for the lectures I could not attend, I visited important architectural sites and recorded my experience of these spaces. Flying up the staircase of the Pompidou Centre over Paris cannot be learned from a book or picture. Neither can the subtle sensitivity to heritage in the Musée Picasso be conveyed by an image (see Chapter 5: Case studies).

My photo journal contained a photo of the Barcelona Pavilion by Mies van der Rohe, which a friend and I went to visit. I was later told that one examiner was so excited to find out that the pavilion had been reconstructed that he shouted it out for the entire building to hear. I had not even realised we had visited a reconstruction of the original! Our experience was profound and gave me a better understanding of the epoch, the architect and the canonic value of the pavilion in the discourse of architecture.

If an explorative-divergent education model was possible with the basic technology of the late 1980s, it should be even more possible today.



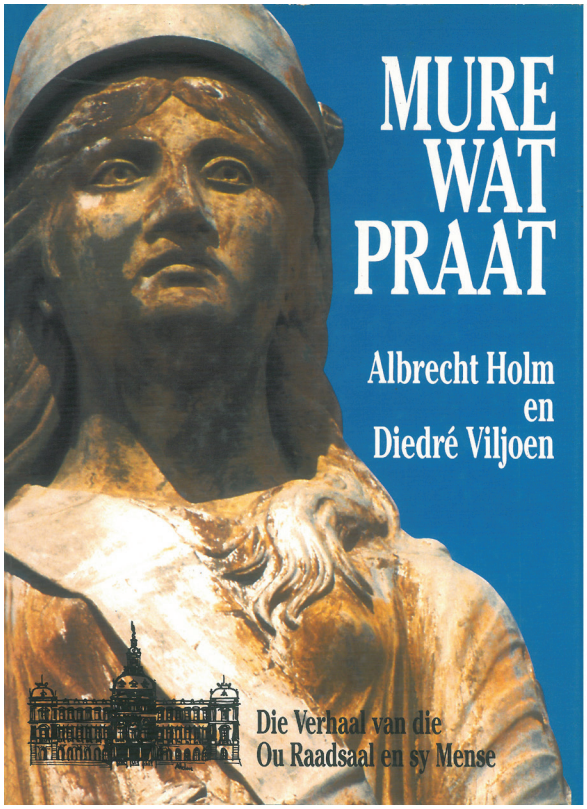
Figure 38 The author at the Barcelona Pavilion (Unknown 1989)

2.2.6. Early career and exploration of divergent practises

The economic climate of 1992 – the year I first entered the workplace – was extremely tough. Nobody could anticipate what the effect of the changing political landscape in South Africa would be, and investors clung to their money. As a result, I was jobless for the first three months of the year. I could not find a practice that wanted to take on a candidate architect. I sent out hundreds of CVs and few practises even bothered to send me a rejection slip.

A. Candidacy at Holm Jordaan Holm

Professor Dieter Holm, who was the head of the University of Pretoria's Department of Architecture at the time and partner at Holm Jordaan Holm Architects (now NewUrban), invited me for an interview. I landed the job. At Holm Jordaan Holm I learned a great deal about heritage, publishing, restoration and urban design, as well as sustainability. They were years ahead of their peers on the sustainability and affordable housing fronts. I enjoyed the practice, the people, and especially the Guild Gallery which they hosted and sublet to Frieda van Schalkwyk, who introduced me to all the artists who visited and exhibited at the gallery. Looking back, I think they could also be classified as an explorative-divergent practice in terms of the way they formed and valued the firm's culture, always making time to discuss divergent creative practices.



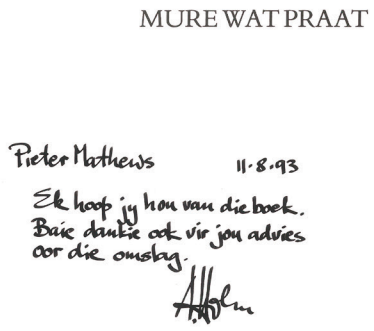


Figure 39 *Mure wat praat*, signed by Albrecht Holm (Holm & Viljoen 1993)

It was during this time of uncertainty that I built my first home (a duet I shared with my sister) as owner-builder overseeing a few semi-skilled workmen. The site was within walking distance of the Holm Jordaan Holm office and, during lunch hours and before and after work, I would check on the progress and advise the labourers.

Holm Jordaan Holm offered me a partnership to head their Mafikeng office, but I neither believed in the future of the homeland system, nor wanted to return to the Western Transvaal. I left the practice in search of a new experience.

B. Nel Nel Storm Architects

I accepted a partnership at Nel Nel Storm Architects following the passing of Mr TC Nel. The firm had deep roots in Pretoria, having executed many award-winning buildings and having employed the likes of designers such as Karl Jooste and Sieg de Beer. It could not have been a worse decision! With only one of the original partners left, it was not the firm it used to be. The commissions were drab – we used existing plans for new schools, drafting monotonous sheets of the same uninspiring typologies. My days at work became long and depressing. The economy had not fully recovered yet, and democratic South Africa was beckoning with all its uncertainties. However, without any creative challenges I decided I would rather die of hunger than of boredom. As psychologist Jordan Peterson (Peterson 2018) writes, "The worst for creative people is to not be creative – because they just die … they don't have any vitality. It is impossible to monetize creative notions." After only a year I left my high-paying job of placements, monotony and standard detailing to pursue an opportunity to produce work with meaning. As such a position did not exist, I had to create it for myself.

C. Mathews & Gerber Architects (MG)

A former classmate, Jacques Gerber, was in the same predicament as me, having recently left a large commercial firm. At the end of 1995 we decided to start a practice together, working from his home in a city which definitely had no shortage of architects.

It was possibly the worst economic era for opening a business. Interest rates touched 24% and nobody was building or buying property. The benefit of starting out in times like these is that it increases your economic vigilance as you are constantly on the lookout for ancillary opportunities to sustain your practice and livelihood. The circumstances forced us in the direction of explorative-divergent activities. What we needed were guts and a miracle. We were in the same boat as the architect Henry Hobson, who once said, "I'll plan anything a man wants, from a cathedral to a chicken coop. That's the way I make my living" (Dushkes 2012:48). There is an "upside to recessions", as Campbell notes in Sykes (2010:24): "They give people time to step back from the frantic pace of a boom economy and think hard about what it is they want to do."

We needed a unique selling point to enter the market. For us, it proved to be "building on a budget". In an interview with journalist Delia du Toit we had the following to say about our fledgling practice: "We're fresh – we don't do the run-of-the-mill stuff. We started our practice in 1995, in the heyday of the grotesque Tuscan era. There was a gap for a young dynamic firm with a fresh take on design, and we built up a name doing exactly that" (Du Toit 2008:30).

Incurring debt to fund the practice was not an option. As our office space we leased a semi-detached house in the less prosperous part of Nieuw Muckleneuk that was in desperate need of a paint job. Jacques stayed next door.

Intrigued by the young upstarts who claimed to counter the raging Tuscan style with budget buildings, celebrated journalist for *Business Day*, Heather Dugmore, visited our humble offices and had the following to say: "I am not sure about the two Jojo tanks round the back, nor the dog sleeping in the sun, but it is the badland cactus outside the front door that really makes me suspicious …" (Dugmore 1999:3).

We made a reputation for ourselves as "championing original South African design and affordable aesthetics … [and producing] striking homes and buildings that reflect the mood, lines and materials of the local landscape" (Dugmore 1999:3). We were intent on erasing the 'Tuscan' and 'Georgian' styles from the architectural vocabulary of South Africa and instead creating buildings that would be "food for the psyche" (Dugmore 1999:3).

Our good-architecture-within-a-budget led to widespread publicity. *Garden and Home*, under editor Margaret Wasserfall, had started a series of articles that included a full set of plans for home owners. We did the first of the series and designed "a house which includes as many cost-saving ideas as possible. [We] came up with a design listing 30 cost-saving ideas '' (Wasserfall 1999:8).

Our most challenging project was probably a series of low-cost government clinics in rural areas. We felt that the community should receive something well-designed because "good design need not cost a fortune" (Dugmore 1999:3). The clinics served as examples of how budgetary constraints could be turned into opportunities. We manipulated the line items in the bill of quantities to include items that we knew would greatly improve the quality of place, but which would not necessarily be top priority for the bureaucrats and quantity surveyor on the job. In this manner we managed to provide shade netting for the long queues of patients waiting outside, and had trees planted in a project which had no allowance in the budget for landscaping. I hold a theory that it is possible to draw a straight line with a crooked stick: oftentimes one has to use a few tactics to implement design decisions that will make for a memorable place. I would come to learn that explorative divergence (E-D) relies heavily on these types of tactics.

D. Studies in marketing

As fulfilling as architecture was, I would sometimes find myself paging through the Sunday papers and looking at the salaries that other professions offered. I could not believe what other professionals were earning! I decided to enrol for a part-time BCom degree in marketing at the University of Pretoria. I thought of becoming a corporate marketing manager or suchlike. This fad didn't last very long. I soon realised that I was born to create 'place'. However, the introduction I had to the world of marketing was not in vain. It allowed another divergent stream to enter my practice and reminded me that everyone has to know how to market their product or service. It is especially important when you are new to the industry and if you want to take an approach that differs from the usual.

E. Venturing into retail: MG Design Box

As the practice made a name for itself, we moved into the old Waterkloof Post Office. The rentable space was much more than we needed and the building had a large shop front, so we decided to convert the rest of the floor space into an interior decorating shop. MG Design Box opened in 2000.

Photojournalist for the *Beeld* newspaper, Franci Cronjé, described the shop as follows:

> *Hierdie juweel van 'n winkel het in Oktober 2000 sy deure vir die eerste keer oopgemaak. Met die intrapslag tref dit jou hoe geslaagd die ruimte is. Mathews hou van die idee dat 'n mens interieur inkopies kan doen by natuurlike lig sonder die gedrang van 'n inkopie sentrum* (Cronjé 2003:6).

[This jewel of a shop opened its doors for the first time in October 2000. From the outset it strikes one how successful the space is. Mathews likes the idea of doing interiors shopping by natural light without the throng of a shopping centre.]

Diverging into retail was not really a priority, but as we had the space and there were no interior retail stores at the time, we thought, "Why not?" The shop supported local design talent at first, but soon allowed us to source furniture too. This meant we had a ready supply of beautifully designed furniture and interior stock available for photo shoots. Most editors would refuse photos of the homes we had designed as a result of some clients' less than desirable taste in home decorating.

With the shop came a range of new skills that needed to be mastered: from logistics to financial planning and stocktaking, amongst others. The shop had to be feasible as it had to help us to pay our rent and keep the boat afloat when architecture and design were less lucrative. Inspired by my mother's belief of never buying on credit, we enforced a strict no-stock policy. I sold my shares in MG Design Box twenty years after the doors opened. The shop is still open for business amid the COVID-19 pandemic.

2.2.7. Two owner-built houses

The projects which kick-started my personal career as an architect were the two houses I built for myself, a duet in 1994 that I shared with my sister, and my family home in 1996 (Figure 40 -55). I describe them thus in an interview with Wood: "The first was an African-inspired Art Deco house, and two years later a house named the New 'Mud'ernism House because of its references to the earth" (Wood 2014:18). The title, "The New 'Mud'ernism", was coined by the architecture and decor editor of *Garden and Home*, Mary Jane Harris (Harris 1998). These two owner-built projects provided me with opportunities to test my design and aesthetic theories, and to gain first-hand experience of the practicalities of construction. The constraints were many, but so too were my concerns for producing architecture of value with plenty of photographic and videomatic or cinematic opportunities. Innovation was paramount. Both houses were widely published and established my architectural career.

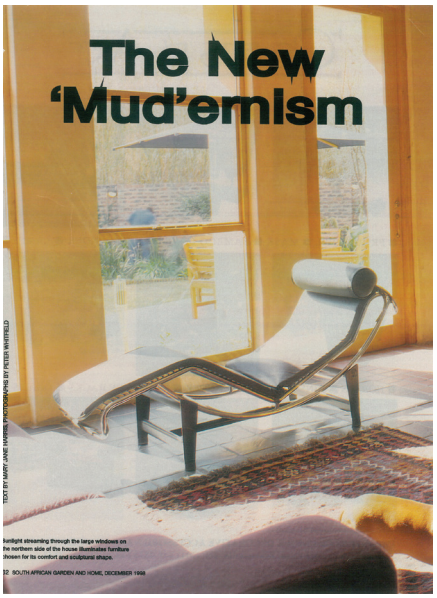


Figure 40 Opening pages of an article in *Garden and Home*, December 1999 (Harris 1998:62-67)



Figure 41 Article by Mary-Jane Harris for *Garden and Home* (1998:62-67)



PIETER MATHEWS IS NOT THE SORT OF ARCHITECT TO BE PUT OFF BY A TIGHT BUDGET. "ALTHOUGH A LOW BUDGET MEANS LOW FEES OF COURSE," HE SAYS WITH A WRY SMILE, "BUT WHEN funds are limited you have to be more creative."

Pieter, who studied at Tukkies and did part of his practical training in London, says, "I try to explain to clients that expensive is not necessarily good. Even a tin shack can be made into an acceptable home if you use a bit of flair."

He wasn't fazed by a client who only had R70 000 to build a house. "Well, we used the materials he could afford creatively and now he has a wonderful house." His firm, Mathews and Gerber Architects, also built a holiday home for another client for R60 000. "We used concrete for the floor. When it dried, we marked it out with masking tape and painted it with floor paint. Visitors often tell her that it's the best tiling job they've ever seen." In another house the design called for narrow, vertical windows. To custom make them would have cost a fortune so they found standard horizontal windows and used them vertically.

"Our firm is known for its variety," he says. "We don't have a certain look. We like to experiment a lot so that we create something different for each client. Each project is unique."

His ideas and ingenuity were used to their fullest in the house he built two years ago for himself and his wife, Ami, an Assistant-Master of the High Court. "It was designed for the two of us so when Gian, our son, came along we quickly had to do some baby proofing," he smiles.

"This was a relatively inexpensive house to build," he explains. Finishes were kept to a bare minimum. "Everything is in natural colours. The walls are the colour of the sand in the plaster, the ceiling is the colour of the cement, the tiles are clay or slate. There was no paint used." The ceilings upstairs are in plain Rhinolite supported by steel trusses.

"As it ages, the more character it gets," says Pieter, referring to the wall finish. At sunset the house seems to absorb the sun rays and glows a deep pink.

Although the finishes may be basic, the house is certainly not dull. Based on a repetition of rectangular shapes, it is a fascinating contrast of strong geometric lines and curvilinear forms. "The curves make it a bit more poetic," he says.

"The house is African but modern," Pieter explains. "The design is modernist, but here in Africa we don't have the precision craftsmanship that you have perhaps in Germany or America. ➤

ABOVE LEFT In the dining area the Mathews have combined contemporary chairs with an old table. The bench was designed by Pieter as part of his range of outdoor furniture. ABOVE CENTRE Gian and Ami play in the living room when Ami gets home from work. ABOVE RIGHT A free-standing screen hides the kitchen from the living room. It is curved to allow access to the phone from both sides.

RIGHT Upstairs, the enlarged landing is used as a family room for watching television and is furnished with practical wicker chairs. The bedrooms lead off towards the left. The ceiling is plain Rhinolite with steel trusses.

84 SOUTH AFRICAN GARDEN AND HOME, DECEMBER 1998

Figure 42 Article by Mary-Jane Harris for *Garden and Home* (1998:62-67)

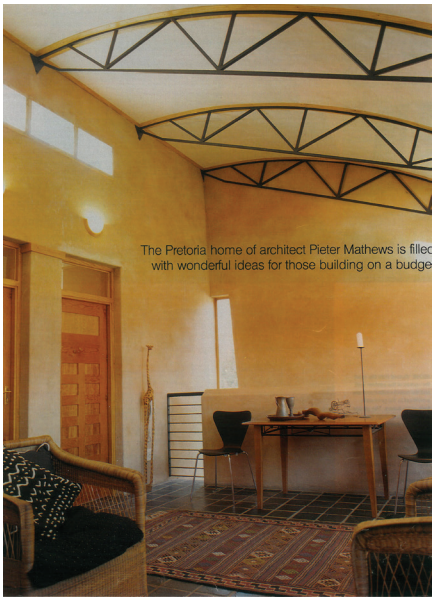


Figure 43 Article by Mary-Jane Harris for *Garden and Home* (1998:62-67)



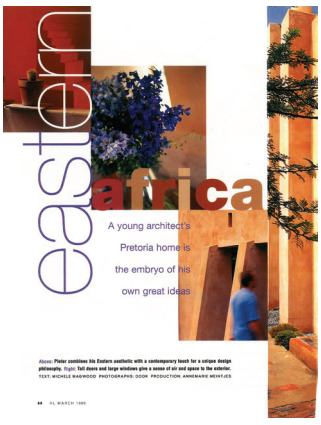






Figure 44 House Mathews II featured in House and Leisure, March 1999 (Eastern Africa 1999:68-70)

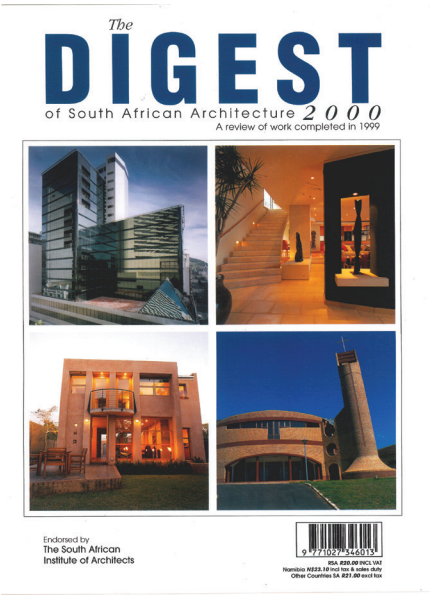


Figure 45 Cover of the 2000 *Digest of South African Architecture*

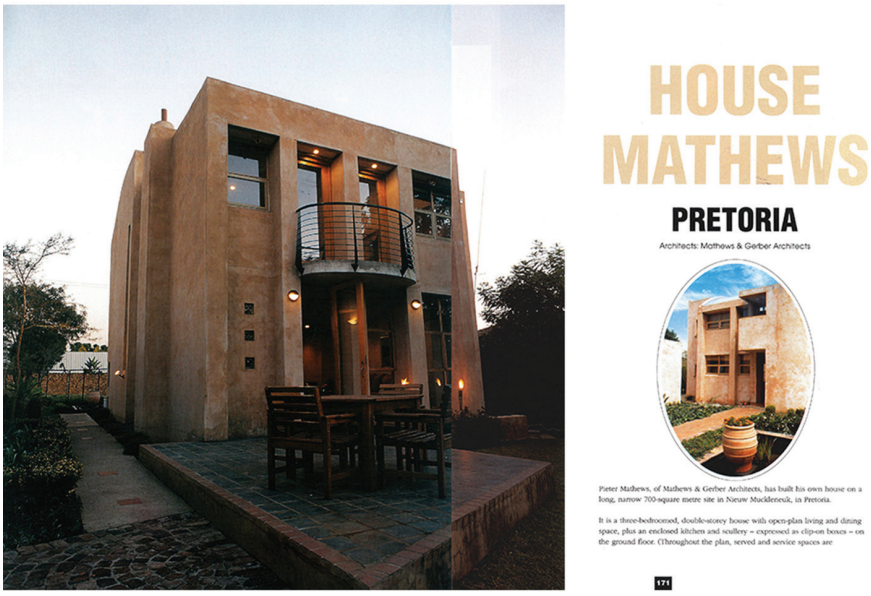


Figure 46 House Mathews featured in the *Digest of South African Architecture* (2000:170-171)

Looking back at these two houses through the lens of this study, the origins of many characteristics of explorative divergence are revealed. These include, amongst others, the constraints of a tight budget; innovation in construction; pragmatism; curation and composition; the interaction between art and architecture; the importance of the public reading of architecture; and a determination to push the boundaries of architecture within the means available.

A. Mathews Place

The first house was designed and constructed while working for Holm Jordaan Holm as a candidate architect. I embarked on the project with my elder sister, a chartered accountant and professor in tax law. Mathews Place was intended as a duet which would provide us both with an affordable home in an upmarket area.

To fund the construction, I begged the United Building Society for a loan, which they were not very keen to give to a young man with the meagre salary of a candidate architect. They were also not convinced that I would be able to purchase the property and build for the loan amount. My sister left the design to me, on the condition that her art collection must be accommodated. She assisted with ordering materials and managing the finances.

With a very limited budget we could not afford a professional contractor, and instead worked with a semi-skilled workforce which we had to guide throughout. It was particularly tough working with unskilled labour in an era before the mobile phone. I remember that the electrician would disappear to work on another job and I had no idea how to contact him. The workers also couldn't let me know when materials had run out until I arrived on site for inspection. The project was often stalled by these sorts of issues.

A.1. A visual analysis of the design characteristics

Mathews Place was designed in the era of the drawing board. This is evident in the two-dimensional way in which the façades as well as the interior sections were composed. Many of the sketches took form on site. At the time I was fascinated by Pretoria's Art Deco buildings. These buildings illustrated how accentuating corners and using bricks to create pattern and texture added depth and detail to a design. I was also determined to help develop a unique South African architectural language; an endeavour that is still central to my work and which has had several outcomes up to the present.

A photographic section of the main interior space reveals important aspects of the design (Figure 47):



Figure 47 Interior elevation of Mathews Place (Author 2021). Collage by E. Booyens (2021)

The floors were finished with clay Britti tiles that resembled the floors of old Cape Dutch homesteads. The factory had gone bankrupt and, as such, the tiles we sourced were the end of the range and represented the end of an aesthetic era. We sealed the floors with raw linseed oil and turpentine, as was the historical practice.

To save money I omitted skirtings, which meant that the connection between floor and wall was visible and had to be dealt with accordingly. The lower portion of the walls were painted with 'contractor's white' and could easily be touched up with a lick of paint once the floor mop's patina became overwhelming.

Textures were very important and can be observed in the use of multiple finishes: bagged plaster, smooth plaster and rough plaster, each set apart by subtle colour differences. The use of bagged bricks is a Pretoria School[5] tradition pioneered by architect Norman Eaton, as can be seen in his own studio and various houses which he designed in Brooklyn, Pretoria.

An interesting feature is the soldier course that runs through the house at 1 m above floor level. Due to the first democratic election that took place in 1994, and as a result of the political uncertainties of the time, nobody in Pretoria could supply bricks. The walls were 1 m high and we needed to continue the work. We made a plan and sourced bricks from a supplier in Middelburg, but these were not the same size as the ones we had been using thus far. I had to improvise: we would use the new bricks in soldier course so that the difference in size would not be as evident (Figure 47). For me, the upturned bricks will always mark a historically significant time in the architecture of the house and in the history of our country. In this way, a simple brick detail assumes meaning and significance as a historical marker. Simple means can achieve great narrative depth. This incident taught me that buildings can tell stories and that constraints can be overcome. Buildings are shaped by the time in which they are constructed. This has become a mantra

for our practice and our projects. A difficulty can always be sidestepped in a creative way, and how one deals with those difficulties is often what adds meaning. This was a first unintentional stab at propositional density and narrative depth – concepts which will be discussed further later in the study.

The main wall of the house also features Art Deco-style niches for specific artworks. Throughout, we kept our collections and possible future acquisitions in mind. Concealed glass bricks highlight the artworks in the niches during the day, while inexpensive light fittings were hidden in the reveals to light the niches at night.

I wanted to include narrow vertical windows alongside the entrance door, but we could not afford custom windows. An affordable and novel alternative was to use a standard horizontal timber window and turn it on its side.

Numerous old houses were being demolished in Hatfield, a neighbourhood close to the university, to make way for a new shopping centre. My old Citi Golf made many trips to salvage old Oregon pine skirtings and roof trusses, most with nail marks still visible. These planks were used to make the doors and frames for our houses (Figure 48). My main concern was not to recycle, but to save costs and test my creativity.

A zigzag motif, inspired by Kente cloth scatter cushions (Figure 49), is evident throughout as a subtle reference to indigenous African architecture and decorative motifs. The steel door handle is a tactile and visual focal point and the same pattern can also be seen on the balustrades (Figure 48, 50). These were made from inexpensive shutter-board timber. The panels which didn't match in colour were painted black and feature the motif.

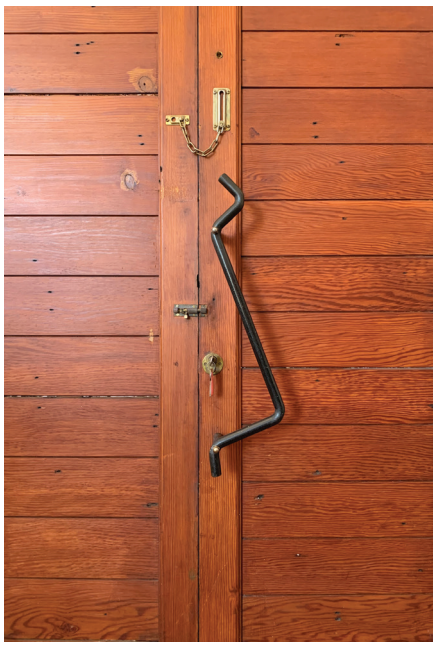


Figure 48 Door handle from my first house, Mathews Place (Author n.d.)



Figure 49 Kente cloth cushions provided design inspiration for Mathews Place (Author n.d.)



Figure 50 Balustrade detail (Author n.d.)

A free-standing wall directly opposite the front door partly conceals the open staircase (Figure 51). This wall serves as a junction between the horizontal path from the front door and the vertical movement route. Again, a glass brick and concealed lighting is used to light an African mask, the focal point, from behind, creating the illusion of shining eyes greeting visitors and intruders alike. I joked that this was an alternative, and much more attractive, home-made security system.

[5] The Pretoria School refers to the Modern-style architecture espoused by the Department of Architecture at the University of Pretoria in the middle of the 20th century.



Figure 51 Interior details (Author n.d.)



Figure 52 Mathews Place featured in DeKat, February 1999 (DeKat 1999:96)

Above each staircase is an improvised skylight. Imported German skylights were out of the question, and the necessity of bringing light into the spaces to highlight the art and architectural features was paramount. I came up with a solution to replace a portion of the roof sheeting with polycarbonate sheeting and filter the light through a panel made from standard pine shelving cleats. As the sun moves throughout the day, the mood of the interior changes. This would become a recurring theme in my work that will be explored later in the study.

A.2. Insights gained

Mathews Place introduces certain key themes that would prove influential throughout my career. The first is the notion of propositional density, which refers to the idea that multiple meanings can be contained in a singular building element, such as the wall being structural as well as telling the story of the 1994 election. Detailing and material choice can narrate the stories of the epoch and the place. Another important aspect is the way in which light enters the space, how it marks the passing of time, and defines and highlights architectural details and textures. The most valuable lesson I learnt, however, was that designing for an unskilled labour force was an exercise in designing for tolerance. The entire process was ad hoc and dependent on what we could source and salvage. This sort of wabi-sabi approach reveals the handmade nature of the architecture and the architect's direct involvement with the making of the building.

B. The New 'Mud'ernism House

A year or so after forming Mathews & Gerber Architects, I felt the need once again for a project in which I could experiment hands-on and test my tectonic and aesthetic ideas. No client is willing to give you their house and their money for an experiment, so I decided I had to build a second home for my family.

I leased my own house (Mathews Place) to the American Embassy for a handsome amount in US dollars, which allowed me to fund another project in 1998 – the 'Mud'ernist house. Harris intended the name as a pun on the natural sand finish and the stark forms of the house (Harris 1998).

I was owner, builder, developer and town planner, completing the applications for the subdivision and rezoning of the property myself. The site was a slither of land cut off from a larger portion in the same street as my first house. The small size had its challenges, but as Diane de Beer (2002:98) would write: "*Kleintyd Lego vernuf het 'n argitek gehelp om 'n huis ingepas te kry in 'n ongemaklike erf*." The rezoning and subdivision experience later proved handy as an additional service I could offer to clients.

The time was ripe to provide an alternative to the Tuscan pastiche developers had dished up to the public. "The Mudernist house … physically demonstrated an alternative liveable house, and [the possibility of a] local aesthetic … which was both modern/aesthetically contemporary and cost effective" (Barker 2019:190). Specifically mentioning the project, Sumien Brink, long-time editor of *Visi*, affirmed that it was time to explore an African aesthetic and "find our own style" (Brink in Roggeband 2001:11). The Mudernist house provided me with an opportunity to experiment and define my design philosophy, which I described as follows to Elzilda Becker, the editor of *DeKat*: "*My ontwerpfilosofie spruit daaruit dat ons in Afrika bly, maar ook deel is van die global village. Ek wil die dualisme vergelyk met 'n huis waarvan die fondamente sterk in Afrika staan, maar waarvan die vensters oop is sodat die winde met ander invloede gereeld deur die vensters kan waai. Verder leef ons vandag. Ontwerp moet dus die gees van die tyd en die gees van die plek weerspieël*" [My design philosophy originates in the fact that we live in Africa, but are also part of the global village. I want to compare this dualism to a house with strong foundations in Africa, but of which the windows are open so that the winds of other influences can regularly blow through them. Furthermore, we are living now. Design should thus reflect the spirit of the time and place.] (Mathews 2002). Richard Sennett remarks that the owner-builder experiences the primacy of creating a dwelling place and of discovering an inherent style, because "through discovery and experimentation we find functions for new forms and materials'' (Sennett 2018:14).



Figure 53 The Mudernist house: east elevation (Author n.d.)

In contrast to my first house, the New Mudernist House was conceptualised in three dimensions. The intention was to approach the building itself as an exercise in sculpture (Figure 53). Clay models were used to perfect the form of the structure. Texture and colour was provided by mixing white cement with the natural red soil of the area – to achieve a vernacular building and as an attempt to be innovative with materials. The effect was a sculptural volume in a natural pinkish hue, derived directly from the earth, which eliminated the need for paint as a finish. I recall countless times I would explain, beg, scold and eventually convince the workman that this was indeed the final finish. The plasterer, an illiterate but very skilled and experienced individual, stood back when the work was complete and remarked from his heart: "*Jirre, maar dis mooi! Dit lyk nes 'n pienk olifant*" [Crikey, it is beautiful! It looks just like a pink elephant]. I took this as the first honest feedback I'd received and as proof that I had succeeded in creating a sculptural architectural piece. The carpenter, however, did not understand the intended materiality.

He made rough working sketches on the walls and I had to live with these sketches adorning my home as reminders that new ideas do not stick easily when working with various teams.

Innovative ideas and ad hoc decisions can also backfire. I got hold of beautiful Jacaranda wood and approached a friend to manufacture window frames. The end result landed the house on the cover of many magazines. However, the look did not last long as Jacaranda wood is too soft for large window panes and I had to replace the windows with aluminium frames five years later. A positive outcome, though, was that this project kick-started my friend's carpentry business and he provided jobs for many others in the process.

A prominent feature of the house was a curved wall with a skylight. It accentuated the passing of the shadows throughout the day and led the eye to the beautiful view over Groenkloof. It also gathered space and directed one up the stairs to the family room on the first floor. This design foreshadowed the sculptural juxtaposition between curves and straight lines which would become a recurring theme in my oeuvre.

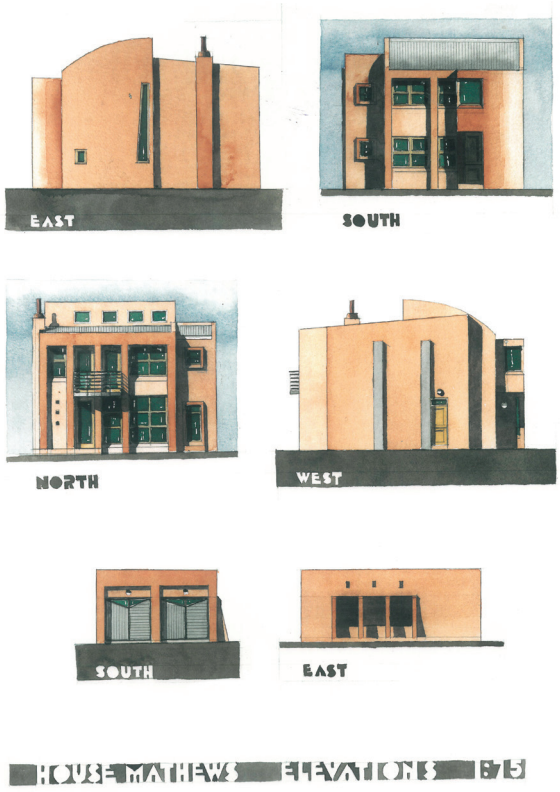


Figure 54 Watercolour elevations of House Mathews (Author n.d.)



Figure 55 The Mudernist house under construction (Author 1996)

B.1. Insights gained

The original watercolour plans and elevations of the house were donated to the Boukunde archive (now the Architecture Archive at the University of Pretoria [AAUP]) at the request of the late Professor Karel Bakker, Head of the Department of Architecture from 2009 to 2014. The Mudernist house attracted many new residential clients who found the aesthetic of the strong modern forms, simple layout and natural materials and textures appealing. They often had limited budgets, which further drove the need for alternative designs. The exercise in building on leftover land proved beneficial for many future projects in which the constraints of leftover space and small sites needed to be dealt with creatively.

The flood of enquiries into alternative materials and building methods sparked the idea to publish a book on the topic and present my experiments. *Architexture* was published in 2003.

2.2.8. Crossroads and *Architexture*

In 2000 I undertook a solo trip to Spain and Morocco. It presented a much needed opportunity to focus and to consider the future of Mathews & Gerber Architects. We held different views on architecture, and our practice was at a crossroads where we needed to decide what held more value: commercial work or 'architecture'. The trip led to my decision to end our partnership of 5 years. Perhaps it was the newly completed Guggenheim Museum in Bilbao by Frank Gehry that gave the young, ambitious architect that I was, the answer: money will be used up, but architecture can truly turn a city around.



Figure 56 Cover of the publication *Architexture* (Mathews 2003)

The catalyst that kick-started my work on *Architexture* was my tour to Morocco, and especially the city of Marrakesh – the tactile surfaces and textures, the cinematographic spirit of the place, the experience of Marrakesh's grand square with its smoke, smells, sounds and sights, the Imams calling the faithful to prayer … true instances of what Pallasmaa would term "embodied experience" (Pallasmaa 2005). The place inspired me to pen down what I saw and I felt that texture in architecture was something the public should and could grasp. I was so inspired that I started planning and writing *Architexture* right there and then (Figure 56).

Following the trip, I began experimenting even more with various finishes on buildings. I mixed alternative ingredients such as titanium dioxide into plaster, and tried to apply these mixtures in different ways to wall surfaces to see what effects I could achieve. My efforts and innovative ideas were published in magazines and I received a multitude of phone calls from home builders wanting in on the secret.

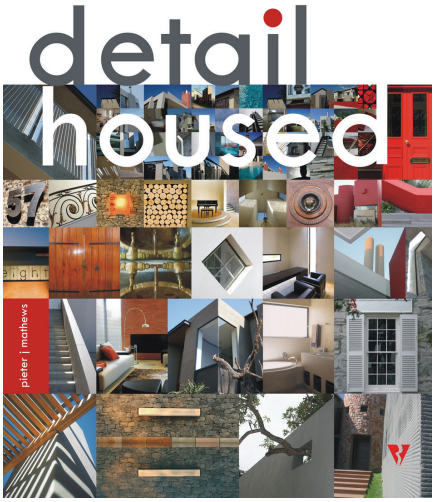


Figure 57 Cover of the publication *Detail Housed* (Mathews 2007)

The above encouraged me to publish a book that would make my experiments and photographs accessible to the public as an antidote to the Tuscan style, which was dominating the architectural landscape at the time. Struik was initially interested in publishing my manuscript, but following a committee meeting in Cape Town I received a 'Dear Johnny' letter: the local market was not ready for this book. To this day I cherish this letter. It served as inspiration and helped me become even more determined.

For the love of Marrakesh, I persevered: I decided to continue without a publisher and *Architexture* and Visual Books, the publishing imprint of MAAA, was born. *Architexture* would go on to sell almost 5000 copies and made it onto the top-sellers list at Exclusive Books.

> "That book changed the architectural landscape" (McInnery 2020).

The purpose of the book was to make architecture accessible to the public by showing how it can engender a tactile experience. One day I arrived early to collect my car after a service. The young mechanic who rolled out from underneath it asked me if I was the Pieter Mathews who had written the books *Architexture* and *Detail housed* (Figure 57). Amazed, I said yes and he then told me his dream was to become an architect, but that he could not afford to study.

To which I replied: "Become the best mechanic and open your own workshop – it will of course need to be designed." That was exactly his plan. Following this encounter I knew my book had reached the right people. It was awarded a PIA President's Award in 2005 for its success.

2.2.9. The emergence of three divergent interests

The autoethnographic narrative provides insight into the formation of my creative thinking. My childhood introduced me to various influences and encouraged a curious, open mindset. Clues as to the origins of the divergencies were discovered in old family films – making figurines, houses and towns from the mud; my first designed edifice; curating in a teepee; and experiencing movement on the ridge of our roof, amongst others. Architecture school served as a formal introduction to architectural thinking.
The practical approach of my Boukunde lecturers provided a solid foundation for practice.
Theory came to life during a world tour after my third year. The direct influences of this tour will be discussed in more detail in the following chapter of this thesis.

My early career was an experimental phase during which I found my own voice as an architect. During this time, other divergent creative interests developed which, unbeknownst to me at the time, would come to influence my architectural praxis. While conducting this autoethnographic study it became clear that, of these interests, three were particularly influential. The following section will provide a brief overview of how my interest in these fields developed and the relationships I have formed with mentors. In later chapters, these divergencies will be used to reflect upon the nature of E-D practice.

Angela Duckworth (2017:124) observes that "interests are not discovered through introspection. Instead, interests are triggered by actions with the outside world ... you can't really predict with certainty what will capture your attention and what won't." Therefore, "passion for your work is a little bit of discovery, followed by a lot of development, and then a lifetime of deepening". Much of what inspires my architecture has its origins outside the field of architecture.

A. Sculpture

Pretoria has long been the epicentre of sculpture in South Africa. The oldest and first foundry in the country, the Renzo Vignali Artistic Foundry, is still operational. Notable sculptors such as Anton van Wouw and Coert Steynberg were based in Pretoria. Eminent contemporary sculptors such as Wim Botha, Angus Taylor, Francois Visser, Ian Redelinghuys, Guy du Toit and Egon Tanya are all alumni of the city's two art departments at Tshwane University of Technology (TUT) and the University of Pretoria (UP) (Mosako in Mathews & Taljaard 2015).



Figure 58 Sybrand Wiechers installing his artwork *Nailed It* (Author 2016)



Figure 59 Pretoria sculptors in Anton van Wouw's studio (Crafford 2014)

A.1. Collecting sculpture

Sculpture has always intrigued me and I started collecting early on in my career. I was, and still am, fascinated by foundries and the studios of sculptors. They are temples of creativity concerned with the process of making. I experience the Vignali foundry in Pretoria North as a cathedral of making, complete with the cross, the Italian flag covered in dust, and the Mother and Child overseeing the creative process. Jordan Peterson says that "ar t is actually a process rather than an end product" (Peterson 2018). Nowhere is this more evident than in a sculptor's studio.

I have forged close relationships with many contemporary sculptors over the years, such as Sybrand Wiechers, Sanna Swart, Izanne Wiid, Isa Steynberg, Norman Catherine, Francois Visser, Jan van der Merwe and Ike Nkoana. I hold fond memories of my visits to the Johannesburg studios of the late Hannes Harrs and Eduardo Villa. I have met William Kentridge twice, first in his Johannesburg studio and later at an exhibition of his work at the Norval Foundation where he kindly shared some insight into his explorative-divergent methods. MAAA also designed a house and studio for sculptor Angus Taylor and his artist wife Rina Stutzer. My personal collection includes work by all of the artists mentioned above, as well as works by Maureen Quin, Noria Mombasa, Ezrom Legae and personal Ardmore commissions for our dachshund shrines.



Figure 60 Curated collection in House Mathews (Author 2022)

A.2. Sculpting

Living in the city of sculpture, it was not long before I decided that I, too, would try my hand at it. The Fried Contemporary Gallery, owned by Professor Elfriede Dreyer, who was at the time the Head of the Department of Fine Arts at the University of Pretoria, presented weekend classes by sculptor Sybrand Wiechers, grandson of the illustrious sculptor Coert Steynberg. My son and I initially enrolled for the six-week course, but we ended up going for a year and forged a lifelong friendship with Sybrand.

The course improved my visual literacy. I learnt about materials and techniques, and how to carve material away and how to add it. This assisted me in balancing additive and reductionist approaches when designing buildings. These were all skills I could use for the purpose of exploring form and shape in conceptual investigations for architectural projects. The course also introduced me to new materials such as Material One (M1). Creating moulds was a difficult task and achieving likeness in portraits is not an easy feat.

The first course left us so inspired, we were ready for more. We had developed a liking for found objects and steel, and my son and I would spend hours looking for pieces of scrap metal with potential. Angus Taylor was so generous as to offer us his workshop where we could weld our pieces together. We put on an exhibition at the Pretoria Association of Arts, opened by Dr Jan van der Merwe on the 2nd of September 2011, called *Form, Scrap and Order* – a play on Francis DK Ching's book *Form, Space and Order* (Figure 61-62). The exhibition was a collection of "*kinetiese, soos-gevinde en assemblage stukke*" [kinetic, as-found and assemblage pieces] (Litnet 2011). It was a great success and most of the works were sold.



Figure 61 Works from the exhibition *Form, Scrap and Order* (Author 2009)

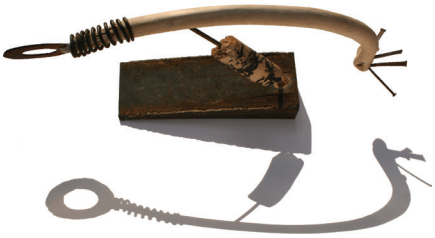


Figure 62 Artwork from the author's *Form, Scrap and Order* sculpture collection (Author 2009)

Not only did sculpture give me new tools with which to explore conceptual forms, but it also taught me practical skills like welding. Understanding a craft places one in the shoes of the artisans on a building site. Frascari (in Nesbitt 1995:506) says of Scarpa that his "daily working and dealing with [the artisans] ... [resulted] in a modern architecture that is more than rational structure and functional spaces". He achieved this because he could manipulate materials and connections so that they too became representational and expressive. The skills I acquired through sculpting, and working with the artisans on my own two houses, definitely improved my ability to mould form and use material connections to advance design intentions.



Figure 63 Sculpture of the author's son, Gian (Author 2009)



Figure 64 Gian with his clay sculpture and mould of his brother Kyle (Author 2009)



Figure 65 The SIT bench: a concrete experiment (Gouws 2012)



Figure 66 Casting both Gian's and the author's sculptures in bronze at the Vignalli Foundry (Author 2010)



Figure 67 Custom bench by the author for Southern Guild (Author 2013)



Figure 68 Artwork by the author for Mashova International (Unknown 2011)



Figure 69 Maquette for the *Koeksister* bench carved out of oasis foam (Author 2014)



Figure 70 The *Koeksister* bench (Author n.d.)

B. Cinematography

B.1. Architectural programmes

I owe my education in cinematography to Lizzy Staunton, one of the producers of the television show *Top Billing* for over 20 years. We met when one of the houses I designed was selected to be showcased on this South African glamour architecture programme. Her frankness and honesty taught me very valuable lessons.

Before shooting a house for the series, we would discuss the narrative and the route that the camera should take through the space to simulate a bodily experience. Important interior and exterior spaces in which the camera needed to pause as well as details that had to be highlighted were also determined. She taught me about the technical aspects such as editing, and where to create stops for editing between shoots. I explained the narratives of the buildings and told her about the best time of the day to shoot when the sunlight would be just right. Narration was paramount. We would later send the footage with the written script for the team to do the voice-overs. Through this way of working we showcased more than twenty houses on television.

Live studio interviews taught me how to talk about architecture in a language that everybody could understand. Footage for these programmes had to be carefully planned in advance; they had to fit into the time slot available for the interview, while still allowing ample time for the conversations.

Through my acquaintance with the members of the camera crews, I was commissioned to assist with a low-budget architectural programme for the DSTV channel KykNet. Due to budgetary constraints, I had to source content, present, and write the voice-overs. This required a lot of time out of the office.
The launch date for the programme was set as the 11th of September 2001, better known as 9/11. I doubt anybody ever watched one episode – the world was mesmerized by the footage of two planes crashing into the Twin Towers.



Figure 71 Being interviewed for DSTV's *Finest Homes* at Albe's Barn (Unknown 2021)



Figure 72 With the *Pasella* crew during a break from filming (Unknown n.d.)

B.2. Radio interviews

I have done various pre-recorded radio interviews with Christelle Webb-Joubert for the SABC RSG radio station. Christelle suffers from deterioration of the retina, which means her sight is limited and architectural spaces need to be experienced through the other senses. Although challenging, it is interesting to consider how one can explain a project and make someone feel, hear and touch the architecture in the absence of sight. This is also the manner in which the radio audience will 'visit', and relate to, the building: by relying solely on sound to experience and imagine the building. The way of presenting for radio is in general more relaxed and less academic. It includes ambient sounds such as birds, traffic and background conversation, and focuses on descriptions of texture, colour and light. Consideration has to be given to how one explains the route through a building and the various functional spaces. A picture has to be painted in the mind of the listener through audible clues. Three of our buildings have been documented in this way: the Javett Art Centre at UP, the Afrikaanse Hoër Meisieskool Pretoria (AHMP) school hall and the Afrikaanse Hoër Seunskool (AHS) Arts Campus. Heinrich Kammeyer sent me a sketch of the Javett Art Centre at UP that he drew just by listening to the interview with Christelle (Mathews, 2020) (Figure 73). It is astounding how well he understood the building by just listening to the programme.

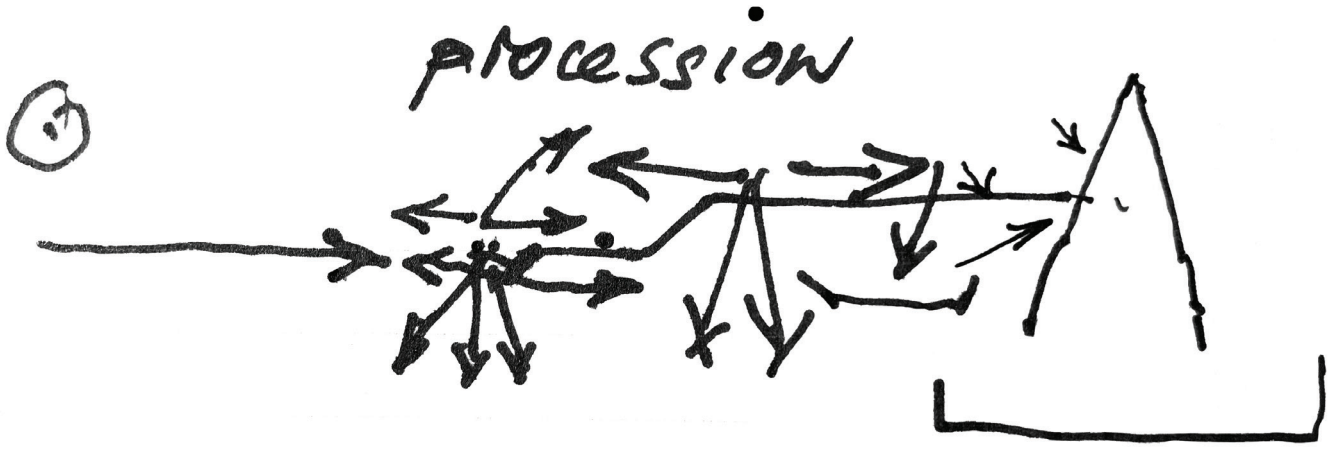


Figure 73 Sketch by Heinrich Kammeyer of the Javett: UP, drawn from descriptions given in a radio interview with Christelle Webb-Joubert (Kammeyer 2020)

B.3. Feature films

I was fortunate to be involved in the conception and production of a documentary on architect Norman Eaton entitled *In search of our own: the forgotten legacy of Norman Eaton* (Figure 75-76). The film was part of an important awareness campaign to educate the public about a significant part of Pretoria's architectural heritage. As a project, I believe it proved that a cross-disciplinary approach (in this case combining film and architecture) could add value to different disciplines and enrich public perception.

The production of the film led to the privilege of guest lecturing at the Open Window Film School. I taught the second-year class how to narrate architectural productions for a project they were doing for the Dutch Footsteps initiative[6], an endeavour which documented Dutch architectural heritage in South Africa.

A key aspect of explorative divergence is that it tends to open new doors and opportunities where one least expects it. While we were busy with the Cool Capital guerrilla biennale, two final-year film students whom I had met at Open Window, Neil Human and Christo Niemandt, started to record some of the urban interventions. Soon we were working together to document the entire biennale. A documentary was assembled, but it lacked a clear narrative. The footage was stunning. We approached their mentor and the head of the Open Window Academy, Pluto Panoussis, for advice. Pluto was himself trained as an architect, but ventured into filmmaking soon after completing his studies. His advice was simple but brilliant. Instead of chronologically documenting the various projects, we should start with a project that depicts a solitary person working, and incrementally show how more and more people started to participate. The film ends with a rock concert and a huge crowd, showing how Pretoria came together to make Cool Capital happen. In reality, this had been our opening party …



Figure 74 *DorpStad* poster (MAAA/ ENABA Productions 2015)

The film proved so successful that it was selected as a finalist for the Silwerskerm Fees and was also presented at the Hilversum Film Festival in the Netherlands. Working on *DorpStad: unwrapping a cool capital* taught me to narrate and curate scenes in order to convey a strong message (Figure 74).

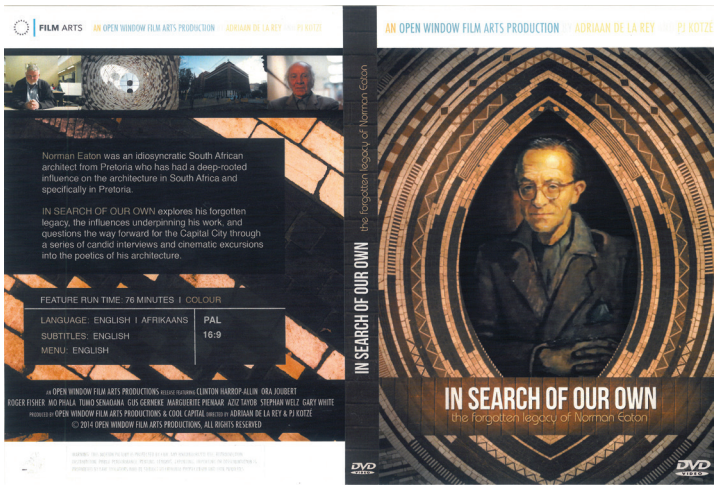


Figure 75 *In search of our own: The architectural legacy of Norman Eaton* (Open Window Film Arts 2014)



Figure 76 Interview with Clinton Harrop-Allin (Unknown 2014)

[6] View the outcomes of the project at Dutchfootsteps.co.za.

C. Curation

As a child I would help my mom to hang her art in the house and to buy new art pieces. In my own teepee and play house I had the freedom to arrange my toys and furniture to my heart's desire.

Lichtenburg's Association of Arts was very active. It convinced the town to construct a contemporary art gallery on top of the local library in lieu of a museum, and amassed an impressive art collection (Mathews 2019). I would hop on my bicycle to visit each artist's exhibition. In 1984 they displayed work by Conrad Thys (who was classified as Coloured), ignoring all apartheid laws. His exhibition, curated by the architect Larry van Rouendal, sold out.

When I was fourteen, the curator Bambi Jonker extended an invitation to me to exhibit my own artworks at the gallery, which I gladly accepted to make some pocket money. She taught me a great deal about the basics of curation. The advantages of living in a small town, I think, are the hidden opportunities for amateurs to develop core competencies.



Figure 77 Invitation to an art exhibition at the Mudernist house (Guild Gallery n.d.)

I took art as a subject in high school under a young avant-garde teacher who introduced us to architecture and Pop Art, amongst others. We even organised and curated a Pop Art exhibition of everyday objects à la Andy Warhol for the school. The show drew some ridicule and laughs, but was a great success because everyone wanted to see the absurdity. This teacher exposed ordinary learners to art, which made a great impression on me (Mathews 2019). It could even have impacted on my obsession to create relationships between ordinary folk and architecture.

The Guild Gallery at Holm Jordaan Holm, owned by Frieda van Schalkwyk, was influential. She introduced me to many eminent artists whom she represented and I also purchased works from her. During lunch hours I would assist her with putting up shows and offer my opinion when asked. Her gallery was a beautiful space.

When my second house was complete, she persuaded me to open the house to the public and host a pop-up exhibition (Figure 77). She was convinced that the novelty of the architectural design would encourage more clients to visit the exhibition out of curiosity. I installed a rudimentary flat-bar hanging system and spotlights in my garage to accommodate more artworks. The 'garage as artistic space' repeated itself in the *Sample Workshop* exhibition we organised in the parking basement of the Javett: UP many years later. A portion of the proceeds of The Mudernist House pop-up exhibition was donated to the Bramley Children's Home. The exhibition was a huge success for all the parties involved: for the charity, for Frieda van Schalkwyk's Guild Gallery, and for us who were desperately looking for the right clients. In those days it was deemed improper for architects to advertise. What better way to meet prospective clients than at an exhibition curated in my own home?

I preferred for the houses I had designed to be published in editorial, not advertorial, magazines. I was aware of the fact that editors judged interiors harshly and knew that the houses would only be published if the interiors were well curated. I approached suppliers and interior decorating shops to lend me furniture and objects to style the houses in return for free exposure. Styling requires judgement and an eye for the composition of various elements within a space. In this sense it is a form of curation. I believe this is the reason why we have been able to successfully publish a large number of projects in the design and architectural press. The network of suppliers, interior designers, editors and furniture outlets proved helpful when we eventually went on to open our own shop, MG Design Box.

In 2011 I tried my hand at curating an actual exhibition, namely the sculpture exhibition by my son and me, *Form, Scrap and Order*.

My first major curatorial undertaking in the field of architecture was an installation at the Palazzo Bembo during the 13th Venice Architecture Biennale in 2012. We exhibited the concept designs for the Nellmapius Bridge under curator Karlyn de Jong (Figure 79). The main curator of the overall event was Sir David Chipperfield, who had chosen the theme "Common Ground". It was here that I saw a poster that inspired Cool Capital, a citizen-led design initiative that transformed Pretoria. For me, "the pro bono projects are always the most fun ... Cool Capital [is] an open-source project giving a platform to anyone to join in and make an intervention in our city" (Wood 2014:18)[7]. Ironically, it was this maverick idea of a DIY guerrilla biennale that landed me a most prestigious curatorial position. In 2016 I presented Cool Capital as the official South African Pavilion at the 15th Venice Architecture Biennale (Figure 81). Curated by Alejandro Aravena, it was themed, "Reporting from the front".



Figure 78 *The Sample Workshop* (Crafford 2018)

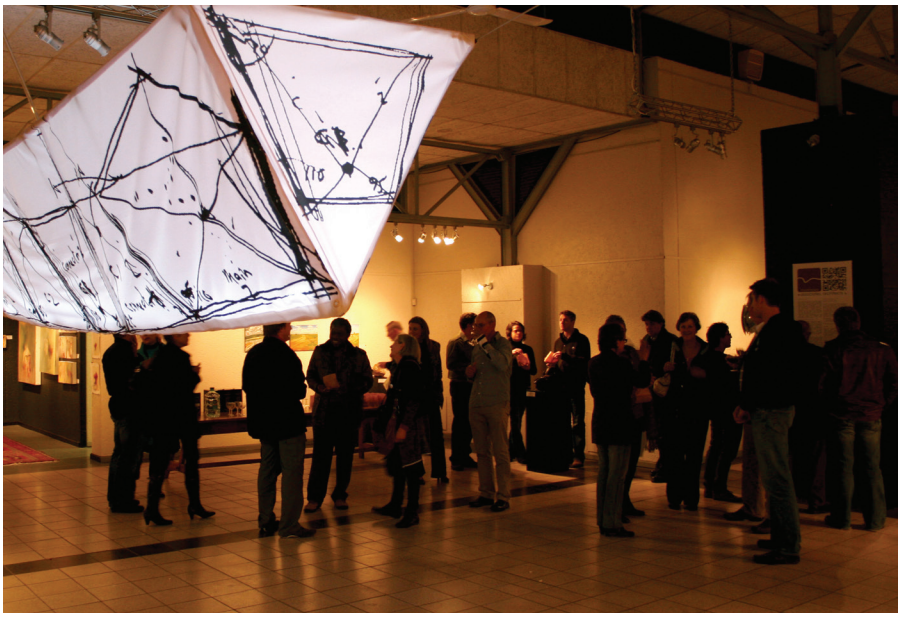


Figure 79 Preview installation of the Nellmapius Bridge exhibition at the Association of Arts Pretoria (Author 2012)

[7] Interview with Graham Wood for the weekly "My Style" *column in Sunday Times Home*, p18, published 18 May 2014.



Figure 80 *Saadjies* exhibition, Pretoria (Crafford 2016)


Figure 81 The South African Pavilion at La Biennale Architettura di Venezia 2016 (Crafford 2016)

My Master's with specialisation in Design, entitled *The spatial act of curation: How the intersectional spatial relationship between place and artwork unlocks meaning* (Mathews 2019), is an in-depth study of the intersectional spatial relationship between place/space and art and how this intersection unlocks meaning. The master's thesis looks at various projects that I have curated, amongst others the station artworks for the Tshwane Rapid Transit (TRT) system, and the *Saadjies* travelling exhibition of 100 miniature works of sculpture, photographed in various urban locations and exhibited throughout South Africa (Figure 80).

During the course of working on the current study, I realised that my curatorial endeavours are part of a broader cross-disciplinary awareness related to E-D, which have all shaped my architectural practice in various ways.

2.3. Conclusion: the making of this E-D practitioner

This autoethnographic study shed light on my childhood and early working life to better understand the influences that shaped my architectural career. My upbringing and its contextual biases, my exposure to unique places and characters in Lichtenburg, and my architectural education, both at Boukunde and abroad, helped to define my approach to life and architectural praxis. My early career offered opportunities to experiment, and my findings during this time culminated in two books, namely *Architexture* (2003) and *Detail Housed* (2007).

This section also delved into the development of three divergent interests outside the field of architecture which would become important architectural influences in my oeuvre. Their impact will be evaluated in the discussion of case-study projects later in the document. The analysis of my two owner-built houses illustrates how I expressed my architectural concerns and dealt with the constraints of the time. As such, these houses function as important markers indicating ways in which an explorative-divergent approach started to emerge in my architectural output.

Chapter 2 served to gain an understanding of the individuals and the influences that shaped my architectural career and introduced various themes connected to an E-D approach. It also set the methodology that will be followed throughout the study, namely an anecdotal narrative recounting the divergencies which are supported by theoretical premises.

3

INFLUENCES OF PLACE AND LIKE-MINDED CREATIVES

3.1. Introduction

In Chapter 3 the themes introduced in the previous chapter will be contextualised and the study will be positioned within current architectural discourse. First, a general overview of the web of influences that impacted the architectural development of the author is presented as a visual diagram (with clarifying notes) intended to position the author's approach and orientate the reader. A more focused autoethnographic interrogation will follow, focusing primarily on buildings and architects that had a direct influence on my explorative-divergent (E-D) practice. Through an exegesis of my sketchbooks and photos of my travels, amongst others, I will investigate and reflect on the influences of various projects on the development of my architectural career. The emphasis will be placed on the lessons learnt from my own experiences of places, rather than on more traditional forms of academic analysis.

Contemporaries will be studied to buttress explorative divergence (E-D) as a design and practice method. I have selected individuals whom I have either met and admire, or whose work I have visited and experienced. Furthermore, buildings and places that I have visited and with which I have formed first-hand experiential relationships will be discussed and considered in order to understand how these experiences have contributed to the forming of my E-D methods.

My theoretical stance will be systematically clarified in terms of the influences of the abovementioned creatives, architects and works of architecture, in order to present explorative divergence as a coherent theoretical stance. The discussion will clarify how propositional density and narrative depth facilitate a relationship between architecture and dweller and how E-D practice brings this about.

3.2. Web of influences

The aim of the visual diagram (Figure 83) is to plot and position the major influences on my career as an E-D practitioner, in order to gain insight into the roots of my E-D thinking. To obtain these insights, career turning points, the chosen three divergencies, practice guidelines, mentors, peers, like-minded thinkers and other influences were used as markers.

3.2.1. Reading the web of influences

In the diagram concentric ellipses, depicting key years in the author's life, upbringing, education and career radiate outwards from the centre. The markers (Figure 82) on the diagram are placed in relation to each of the above mentioned years. The positioning of the markers should only be read in relation to the time-ellipses which are plotted close or on each year's ellipse. The radius of the time-ellipses is not to scale, but represents significant turning points in my life and career, including upbringing, schooling, tertiary education, travels and career. For example, buildings that influenced me in my 1989 tour are arbitrarily placed on the 1989 ellipse. Nothing should be read in the positioning (top, bottom, left or right) of the markers other than their relationship with time.

The following key can be used ro read each individual marker:

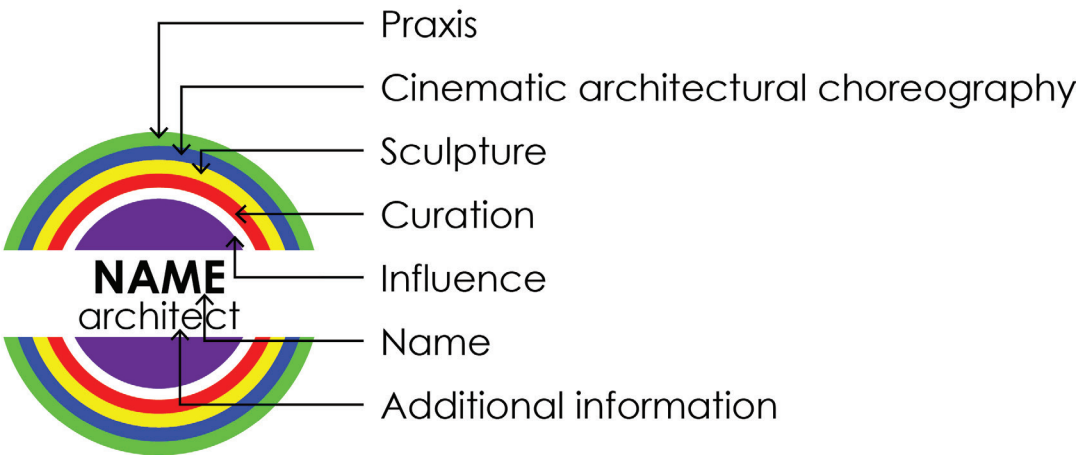


Figure 82 Marker for web of influences diagram (Author 2023)

At the core of the circle a colour is assigned to each influence marker designating whether the marker refers to the categories of travels, buildings, mentors/educators, role models, like-minded thinkers or influences from other disciplines. In order to indicate whether the marker can primarily be associated with one of my three core divergencies or have contributed to my understanding of practice an additional concentric circle of colour may be added around the core. If an influence was only influential in terms of one divergency, only one circle will be coloured to the corresponding divergency, but a marker may be influential in all four categories.

This graphic method will assist the reader to understand the level of influence of the marker in particular and its relation to the chronological web of influence in general.

Many of the markers are discussed in detail in the document and will therefore not be elaborated on in this section, however markers that are not discussed or mentioned in the rest of the thesis are considered in the accompanying notes with clarifications below. Most of them are local contemporary architects and sculptors who not only had a significant influence on me, but also use some or all of the same divergent tools (even if their form of practice differs from my own). Intentionally including them assists in positioning the author amongst local contemporaries.

Heinrich Kammeyer was my third year studio master and he introduced me to phenomenology in

3.2.2. Local contemporaries, peers and mentors

architecture on a pragmatic note. It is the first time that I became aware of the phenomenon of window, wall and threshold to name but a few. Perhaps that was the beginning of my thoughts which would later crystalize in my second book, Detail Housed as well as my affinity with the theories used in this study, namely propositional density and narrative depth. My first year studio was taught by pragmatists. Therefore, at first, Kammeyer's ideas on phenomenology did not make sense, but it sure made an impression. He was an Adhocist, hands-on architect and an owner builder to which his house in Fourways next to the Jukskei River (completed in 1981) is testimony. "The low key method of construction and local materials correspond to available skills and to ensure "a comfortable and economical thermal performance" (Joubert, 2009:190). His putting together of elements and materials refers to a sculptor at work, valuing process as a method of design.

Henri Comrie and I studied together and he followed me to London to take a year off of studying. We built houses in the same period, being our own first clients. Henri went on to study Urban Design as well as completing his PhD in Oxford. He uses all of the divergencies in creative ways, always willing to experiment. He formed a very fruitful partnership with Chris Wilkenson, but currently practises under the name of Urba.

His first commercial building was a competition for PG glass where he used shattered glass as reference. I consider it as one of the first Deconstructivist buildings in South Africa. It was later demolished. This object building was built next to the N1 Highway and turned sculpture into a cinematic device as cars could experience its facets from different angles and views.

In the Chapel of Light project in Vanderbijlpark, Comrie + Wilkinson Architects (in association with Morné Pienaar's team) produced an excellent cinematic project. Here diffused light constantly changes to enhance the spiritual effect of the interior.

As urban designer Comrie curates in between spaces masterfully, but he can also work very skillfully within the constraints of an existing urban design framework with prescriptive guidelines regarding materiality. For example, the Sol Plaatje University's lecture hall building is not only sculptural but full of cinematic experiential tactics like pause spaces, arched gateways, vistas and views to the city which all contribute to a cinematic experience full of architectural moments.

I met the sculptor **Angus Taylor** when I was looking for someone to make a table with sculptural legs for the Visi magazine stand at the Decorex exhibition. Subsequently, our shop MG Design Box commissioned him for other unique functional furniture pieces. We became friends and in the process I gained invaluable knowledge of new materials, opening up new possibilities ranging from moulding to

Web of influences diagram

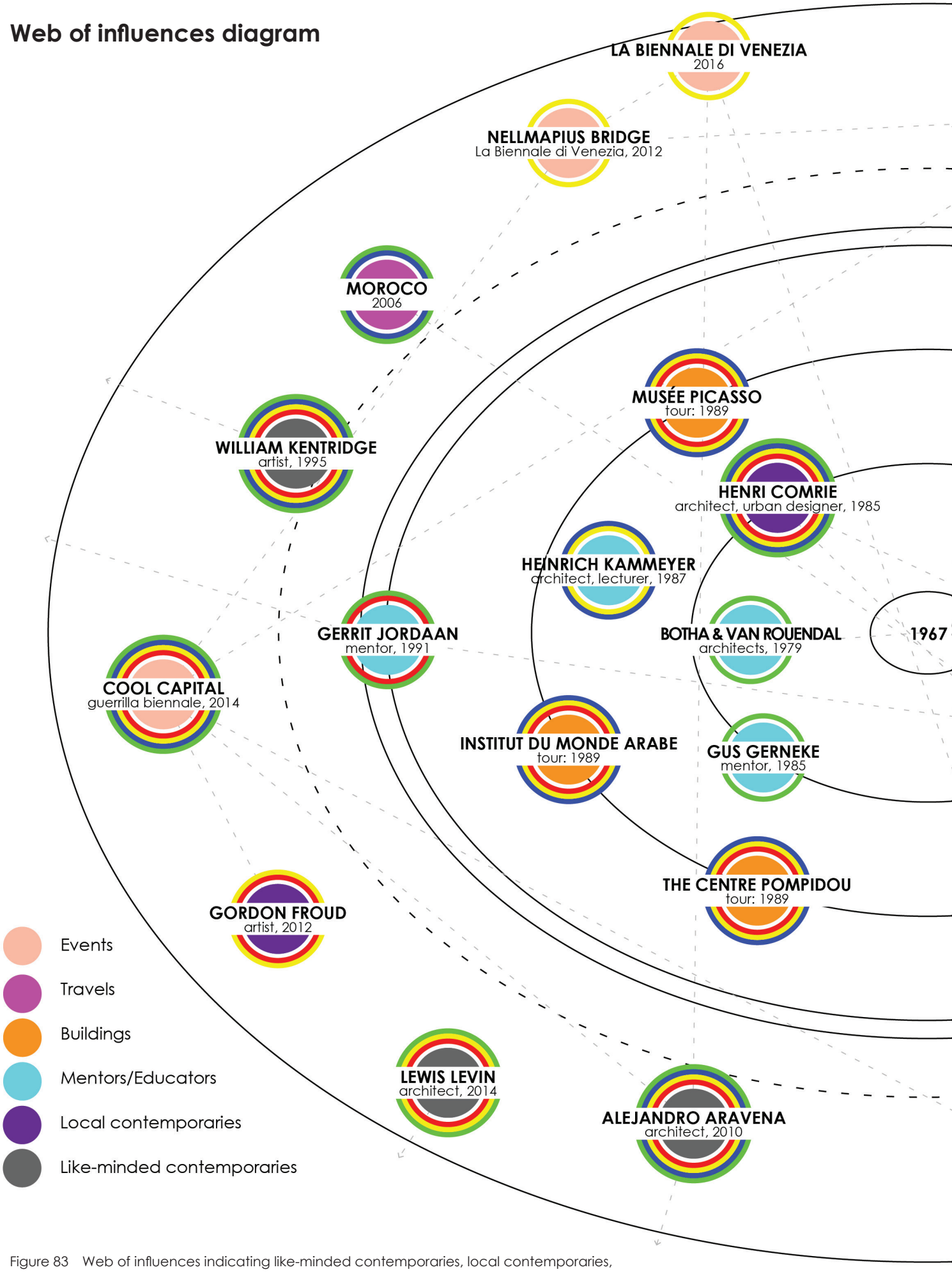
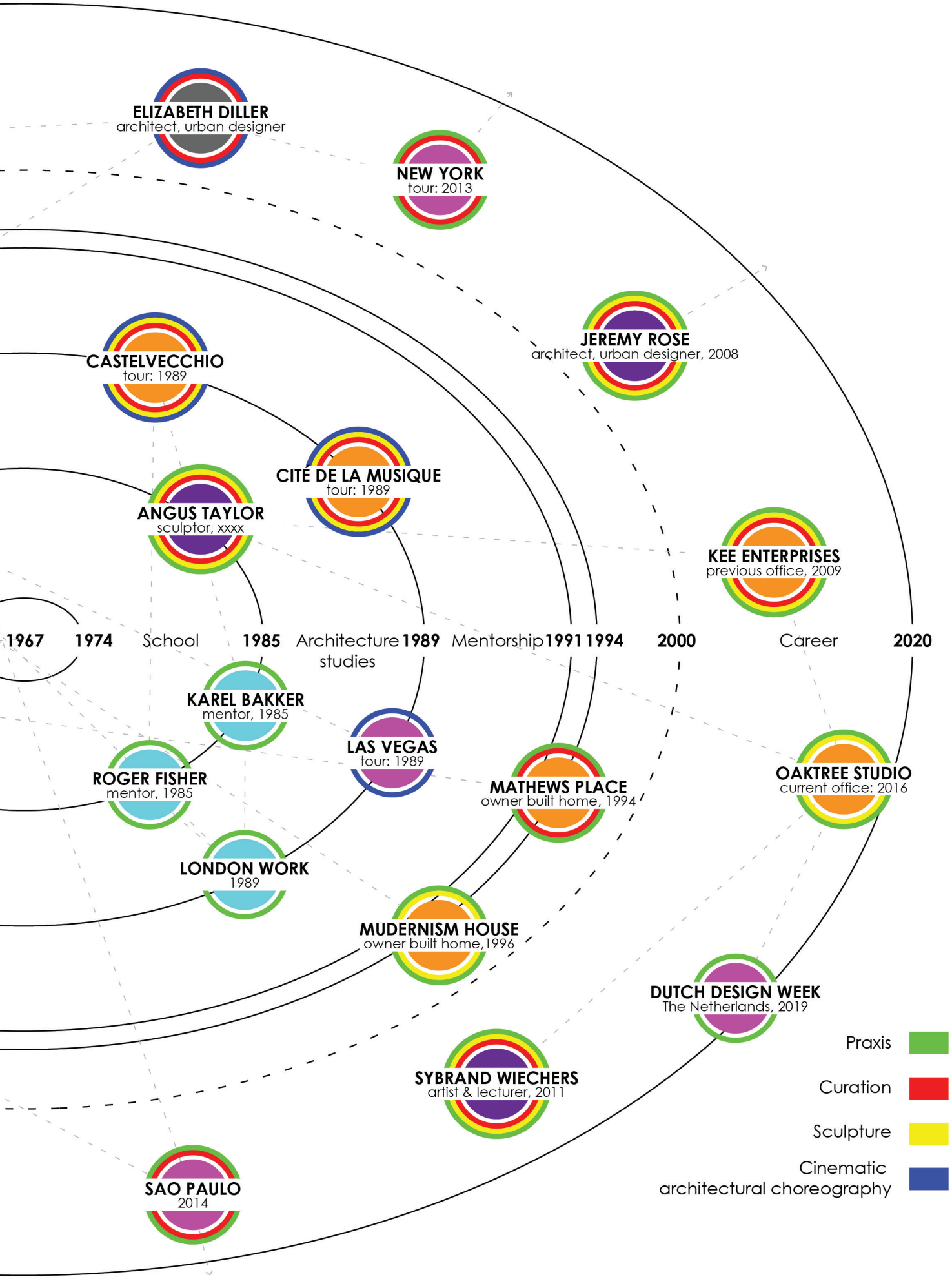


Figure 83 Web of influences indicating like-minded contemporaries, local contemporaries, mentors or educators, buildings, travels and events that affected the author (Author 2023)


ELIZABETH DILLER
architect, urban designer
NEW YORK
tour: 2013
JEREMY ROSE
architect, urban designer, 2008
CASTELVECCHIO
tour: 1989
CITÉ DE LA MUSIQUE
tour: 1989
ANGUS TAYLOR
sculptor, xxxx
KEE ENTERPRISES
previous office, 2009
1967
1974
School
1985
Architecture studies
1989
Mentorship
1991
1994
2000
Career
2020
KAREL BAKKER
mentor, 1985
LAS VEGAS
tour: 1989
ROGER FISHER
mentor, 1985
MATHEWS PLACE
owner built home, 1994
OAKTREE STUDIO
current office: 2016
LONDON WORK
1989
MUDERNISM HOUSE
owner built home,1996
DUTCH DESIGN WEEK
The Netherlands, 2019
SYBRAND WIECHERS
artist & lecturer, 2011
SAO PAULO
2014
Praxis
Curation
Sculpture
Cinematic architectural choreography

sculpting with rammed earth. He founded Dionysus foundry, employing technical, administrative staff and professional sculptors to execute his monumental works for which he became globally acclaimed. Dionysus also casts works for other sculptors. He made this studio available to my son and I to practise our hobby of making sculpture by welding reclaimed steel pieces.

It was the design of his own house that really cemented our collaboration. Initially, he designed a very sculptural concept as part of our commission to design his house. I convinced him, however, to rather allow for change and future flexible curation as his style or oeuvre might evolve. I told him to leave most of the design work to me but that he could execute it as an abstract sculpture with a reductionist approach. An example of his hands-on technique is the main entrance block which he cladded with granite offcuts, cut into tiles with the bore marks still visible. This was an exercise in curating randomness. His willingness to experiment with new methods and materials still inspires me.

In the following years Taylor contributed to our oeuvre in many ways. For instance, by drawing on his vast experience of the logistics and curation of exhibitions, he assisted with improving the functionality of the Javett: UP (discussed in chapter 5). One of his stone figures guarded both our offices; at Kee Enterprises where the facade was designed to receive this work by means of framing (see chapter 5) and now at Oaktree Studios where the figure is currently curated as a focal point.

Jeremy Rose practised as partner in Mashabane Rose Architects, who were involved in many heritage and public-art projects commemorating the struggle against apartheid. These include Freedom Park, the Mandela House Visitors Centre, the Hector Pieterson Memorial and Museum, the Apartheid Museum, the Liliesleaf Liberation Centre in Rivonia and the Mandela Capture Site public sculpture near Howick in Natal. He worked extensively with sculptor Mario Cianfanelli on the project which he later introduced me to. We commissioned Marco Cianfanelli for the Rivonia Trial totem sculpture. He was also the project architect for the previous Art 2015 Venice Biennale with Christopher Till as curator for the South African Pavilion (Christopher Till later became the inaugural curator at the Javett: UP). His sculpture of Mandela's cell at the Nirox foundation sculpture park blurred the lines between architecture, pavilion, installation and art; experiential in the sense that a person can get a feel of the space Mandela was locked in for many years. What I learned most from him was to extract site narratives and translate them into architecture, always robust to ensure low maintenance but mainly as an expression of the forceful way the apartheid government treated the oppressed. Rose was a master of extracting narrative depth. We worked together on the BRT stations with MRA winning the competition for the general stations called the Retro Tram and MAAA winning the stations for the heritage sensitive sites such as the Rivonia Trial and Church Square stations. It was a great collaboration with both teams sharing and assisting each other.

3.2.3. Identifying specific markers as turning points

These markers are pointed out and elaborated on, in order to highlight key reference points as armature for the web of influences:

1986: I Started studying architecture, with Gus Gerneke having a major influence on my way of thinking in terms of design, zeitgeist and the appreciation of architecture as a way of living (as previously discussed).

1989: Before my world tour (which will be discussed later in the chapter), Roger Fisher and Karel Bakker initiated a study tour to Greece and Italy to teach us history in a tangible and experiential way. It is after this tour that I decided that I haven't seen enough and decided to work in London, earn enough money and travel around the globe.

1994, 1996: These years mark the leaps of faith I took to build my own houses. Mathews Place and Mudernism gave me enough novel content to make a market shift in the housing market in a time when pseudo-Tuscan style houses were the norm.

2000: After travelling to Spain and Morocco I decided to part with my partner of Mathews and Gerber Architects because our design approaches were too different. This trip also signifies the start of writing about textures in buildings which culminated in the well received book Architexture. This brought many clients with an alternative mindset to design, but also led me to establish Visual Books (an imprint of MAAA) which has since its inception published more than 10 books.

2000-2016: The location of our various studios and offices – the Old Post Office (2000), Kee Enterprises (2009), and Oaktree Avenue (2016) – played an important role, by fostering an environment for E-D to flourish in.

2011: Attending formal sculpture classes by Sybrand Wiechers exposed me to new materials and processes which fostered innovation, not only in sculpting methods but in terms of materiality, conceptual thinking and making. Sybrand was often invited to the office to critique our projects from a sculptural and conceptual perspective.

2012: La Biennale di Venezia (in general) and the American pavilion (in particular) triggered the idea of Cool Capital. The idea that creatives and ordinary citizens are allowed to take a hands-on and proactive approach to solve local urban problems, in order to make a difference in their own communities, led to the realisation of Cool Capital in 2014.

2014: Pretoria gets its own DIY guerrilla biennale, Cool Capital.

2016: When Alejandro Aravena announced the theme "Reporting from the Front" for the 15th International Architecture Exhibition at la Biennale di Venezia, thereby challenging architects to show what they have done in their cities, Cool Capital was tailored to be presented. I was the official curator of the South African pavilion at this prestigious event.

The following sections will go into more detail regarding the influences (markers) that had the most pronounced impact on the study.

3.3. Influential works and masters of architecture

3.3.1. World Tour 1989: foundational influences

> Richard Sennett, urbanist and professor of sociology, writes about the value of "abandoning the comforts of home" to allow one to develop both "psychologically and ethically". He goes on to explain that the English word "experience" is one-dimensional as it lacks the depth of its translations in the Germanic languages. "Experience" could be translated into German as *Erlebnis* or into Afrikaans as *belewenis*, but it can also be taken to mean *Erfahrung* (German) or *ervaring* in Afrikaans. The term *belewenis* denotes the immediate experience of the adventure. *Ervaring* is what we have when we have gone through a deeper process of "sifting through these impressions [*belewenisse*] … and becoming 'experienced'." The *ervaring* is about creating long-term stability from these experiences (Sennett 2019:202).

I have travelled extensively throughout my adult life to visit and learn about buildings, cities and other cultures. At the time, I did not know what these trips were teaching me and how they were contributing to my growth as an architect. However, upon reflection, it is clear that these experiences significantly contributed to my overall experience and the insight I have today, specifically as it relates to architecture.

The 'World Tour' discussed in the previous chapter gave me an opportunity to explore the best of European architecture of the time. Of all the places I visited, it was probably Paris that most captured my imagination. At the time, it was an exceptional city: President Mitterand's Grands Projets were nearing completion in 1989. The city was a laboratory in which I came to understand how we experience place, form, and, most importantly, the in-between spaces which exist amongst a complex of buildings and in a city.

A. The Centre Pompidou

Paris, France. 1977.
Architects: Renzo Piano, Richard Rogers, Peter Rice, Mike Davies, Su Rogers, Gianfranco Franchini.

The Centre Pompidou is the single building which had the greatest influence on my work. It specifically informed my understanding of services and experiential movement. It served as reference for the Javett Art Centre at UP, Diamond Hill Toll Plaza and the Kee Enterprises office building, amongst others.

In their book *Adhocism: The case for improvisation*, architectural historian Charles Jencks and architect and writer Nathan Silver describe the Centre Pompidou as the ultimate form of "adhocism", the term being born from "… the conjunction of ad hoc, meaning 'for this particular purpose,' and *ism*, shorthand for a movement in the arts" (Jencks & Silver 2013:vii). Their argument follows the ideas of Arthur Koestler and others who have pointed out that "… all creativity depends on the coming together of disparate material" (Jencks & Silver 2013:viii). The Pompidou Centre, at the time of its opening, was definitely an anomaly; a building stitched together the wrong way out. Renzo Piano, the architect of the Centre Pompidou (with Richard Rogers), wrote the following in his design journal which I think explains the mindset behind this building quite aptly:

> Designing is a journey, in a way. You set off to find out, to learn. You accept the unexpected. If you get scared and immediately seek refuge in the warm and welcoming lair of the already seen, the already done, it is no journey. But if you have a taste for adventure, you don't hide, you go on. Each project is a new start, and you are in unexplored territory (Piano in Brawne 2003:78).

The Centre, the legacy of President Georges Pompidou, had caused much upheaval and furore. It was my first stop upon arriving in Paris, and I would return to it many times. I expected to be overwhelmed by the edifice, but on my first visit (midwinter at minus four degrees) I hardly noticed it through the rain and mist as we approached it from a side street. The rhythm of the service pipes on the street-facing facade is in civil dialogue with the proportions of the adjacent historical buildings. "How well mannered," was my first thought. And then it revealed itself – the "Aha!" moment.

The 2007 Nobel Prize winner in Economics, psychologist Daniel Kahneman, affirms that: "Studies of

‘priming effects’ have yielded discoveries that threaten our self-image as conscious and autonomous authors of our judgement and our choices” (Kahneman 2011:55). My obsession with this building was thus not by my own judgement, but rather due to the fact I had been primed for a positive relationship to the building by my first-year lecturer, Gus Gerneke. My first visit to the Centre Pompidou in 1989 was in fact my second, as I had already been introduced to the building during a stunning slideshow that Gerneke gave the students of Boukunde. French thinker Jean-Paul Sartre discusses the phenomenon of ‘knowing’ the object through the image in his book, *The Imaginary*. Sartre says that a photograph has the ability to “make present an object”:

> This object is not there, and we know that it is not there. We therefore find, in its place, an intention directed at an absent object. But this intention is not empty: it directs itself through a content, which is not just any content, but which in itself must present some analogy to the object in question (Sartre 2004:19).

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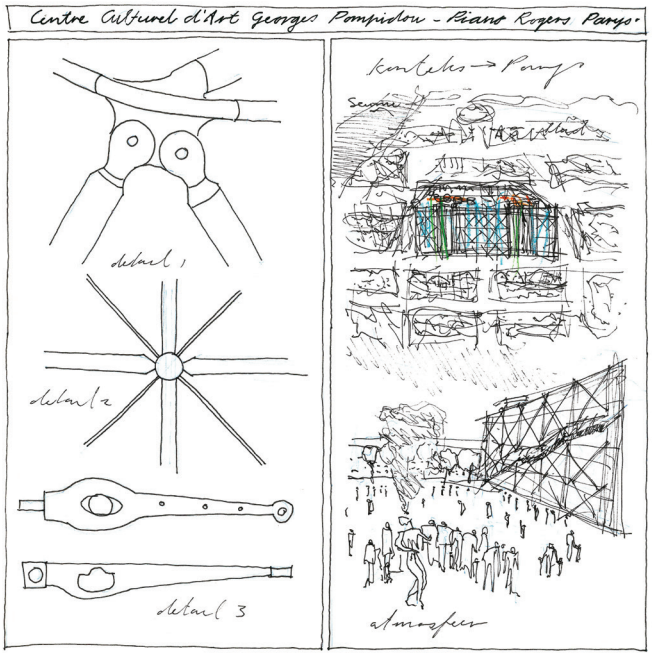


Figure 84 Journal entry on a visit to the Centre Pompidou (Author 1989)



Figure 85 The Javett Art Centre at the University of Pretoria (Southwood 2019)

On a second visit, a few months later in spring, I took along my friend Frits Metz who worked with me in London. I made sure that we would approach the Pompidou from the piazza so that the building and its iconic escalators can be revealed in a dramatic fashion. From the piazza the scale of the building can be appreciated and the movement of people up and down the exposed escalators is evident.

The Pompidou’s ‘flying’ escalators provide one of my favourite architectural experiences (Figure 84). The escalators offer a feeling of flight as one rises to the top of Paris. They also serve as orientation devices, sculptural facade treatment and, of course, circulation. It could be said that they have a high propositional density. The end user is free to rationalise this element as they see fit, as is evident in the various ways I, my friend, my wife and my children experienced this element on various occasions. My boys could not get enough of rising above Paris just to descend again. I never thought that riding escalators could be such a great treat. Each visit to the Centre Pompidou offered a different experience. I saw the building through the eyes of a range of travel companions. The seasons and time of day also impacted my experience of the building.

The exposed services are the Centre’s main feature. By placing the services on the exterior, the interior is freed up. Movable walls make the interior arrangements adaptable. I have borrowed heavily from the sculptural exposed services, most notably for the N4 Diamond Hill Toll Plaza, Kee Enterprises and the Javett Art Centre at UP (Figure 85) (these will be discussed in more detail in Chapter 5).

Many years later I had the opportunity to interview the project architect for the Pompidou and partner in Richard Rogers and Partners, Mike Davies. He received the Legion of Honour *(Légion d’honnour)* from the State of France for his work on the building (Mathews 2019:6). He told me an interesting story about the cobblestones in the piazza, which the students had thrown at them in the aftermath of the 1968 uprising. The cobblestones served a double role as paving and as weapons.

When I took my family to visit Paris, we booked an apartment overlooking the city near the Sacre Coeur. From this vantage point we could see how the Pompidou stood out amongst its surroundings. Architectural critic for *The Guardian*, Rowan Moore, recounts that at the time of its opening, the oldest French newspaper, *Le Figaro*, declared that Paris had found its own Loch Ness monster (Moore 2017). Two decades later, the *New York Times* wrote that the design of the Centre had "turned the architecture world upside down" (Pogrebin 2007). Incidentally, the Mapungubwe exhibition space at the Javett: UP was also called a 'monstrosity' by a senior project manager.



Figure 86 Centre Pompidou (Author 2005)

For me, the Pompidou Centre is a sculptural element within the otherwise monotonous Paris landscape, yet at street level it doesn't interfere with its surroundings (Figure 86). It made me realise that curation should take place on an urban scale. Not all buildings should be like the Pompidou, but sometimes a landmark building is exactly what a cityscape needs.

The jury of the 2007 Pritzker Prize described the Pompidou as the edifice that "… revolutionised museums, transforming what had once been elite monuments into popular places of social and cultural exchange, woven into the heart of the city" (Pogrebin, 2007). Newman described the reaction to the design as "love at second sight", which speaks of a growing relationship between man and building (Newman 1980:469). Instagram presents an interesting perspective on the relationship between the public and the building. The hashtag #lepompidouvuparvouz is a collection of photos and posts by visitors and travellers, and a scroll through the collection quickly shows which elements are the most loved. This is an alternative way of 'measuring' the public's experience and reading of, and engagement with, a building.

I remember a conversation I had with Professor Anthony Melck in 2013, during our visit to New York on a study tour for the Javett: UP. He asked me what my favourite building was and I replied the Pompidou Centre. My answer shocked the man who was steeped in the classical and who thought Chartres Cathedral was the best work of architecture in the world. He thought the Pompidou was vulgar, and a lengthy discussion ensued until Stephan Welz joined in and agreed that the Pompidou was a masterpiece. Looking back, this discussion proves that the Pompidou had made an impression, albeit in different ways, on all of us and confirms that various relationships had been formed with the building.

B. Institut du Monde Arabe

Paris, France. 1987.
Architects: Gilbert Lèzenes, Pierre Soria, Martin Robain, Jean-François Galmiche, Rodo Tisnado, Jean-François Bonne.

In 1989 the newly completed Institut du Monde Arabe in Paris, by Jean Nouvel, had a major impact on the architectural fraternity. I was so inspired by the building that I chose to give up my lunch money to purchase a poster depicting its facade of camera shutters. It gave me many years of joy.

The facade screens on my poster are the highlight of the building (Figure 87). The metal screens function much like camera shutters. Sensitive to light, they close and open mechanically to filter the sunlight entering the building. They were inspired by Arab *brise soleils* used to filter harsh light, and follow the principles of Arabic geometric patterns. The screens fulfil a practical function while referencing the cultures that the building represents, and as such can be said to have a high propositional density and narrative depth. This notion of cultural patterning and symbols as architectural devices inspired the concrete screens and roof shading devices at the Javett Art Centre at the University of Pretoria.

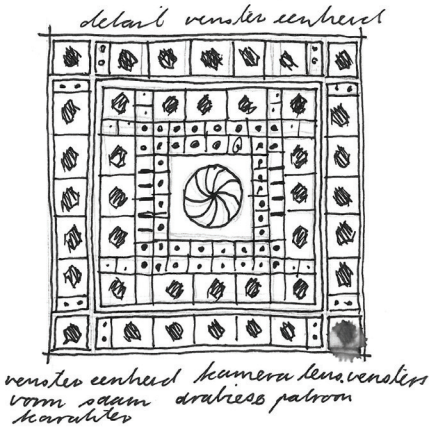


Figure 87 Sketch of the screens of the Institut du Monde Arabe (Author 1989)

The Institute also narrates its context on plan. The curved facade references the flow of the Seine River (Figure 89). The juxtaposition of this curved wing with the otherwise simple rectangular plan is noticeable, linking the Arab Institute to its Parisian context. The theme of juxtaposing a straight line with a curve would become a recurring theme in my own oeuvre.



Figure 88 The author at the Institut du Monde Arabe (Unknown 1989)

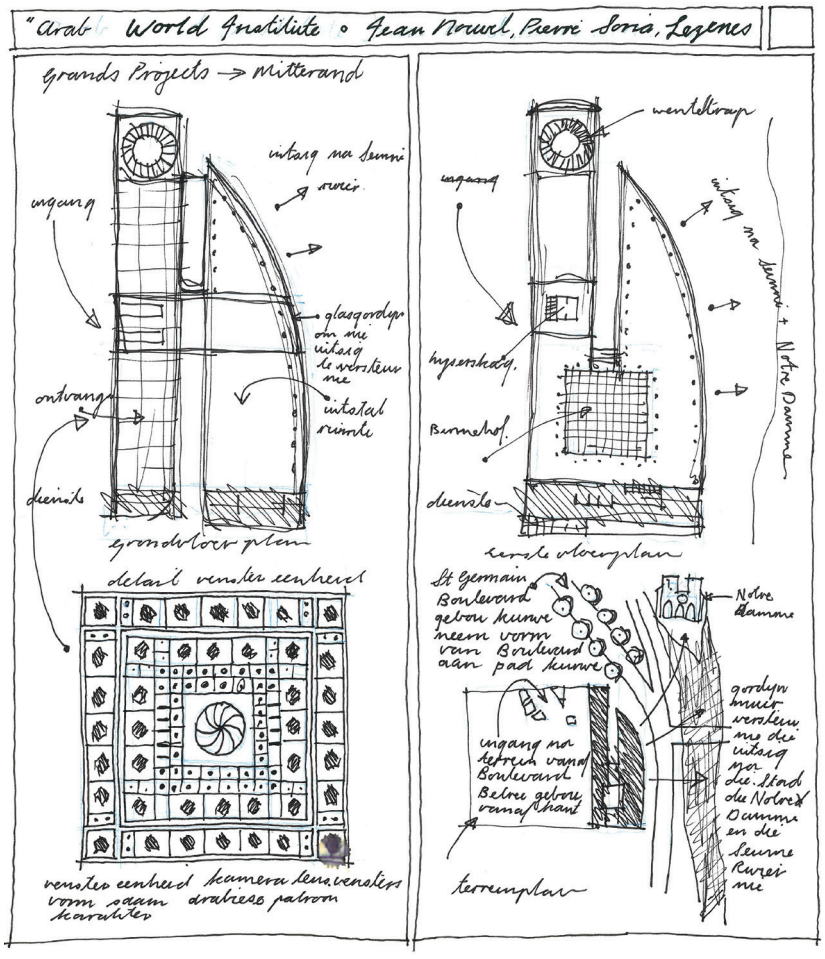


Figure 89 Journal entry on a visit to the Institut du Monde Arabe (Author 1989)

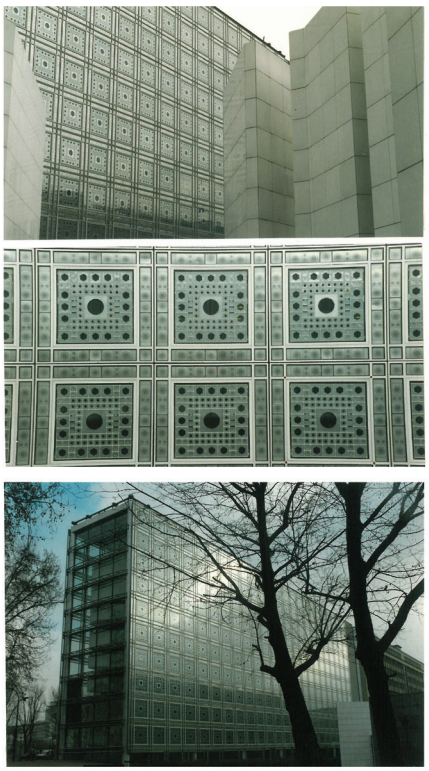


Figure 90 Journal entry on a visit to the Institut du Monde Arabe (Author 1989)

C. Cité de la Musique

Paris, France. 1995.
Architect: Christian de Portzamparc.

The first time I visited the Cité de la Musique, designed by Christian de Portzamparc, it was still under construction. The raw concrete was visible and scaffolding stood everywhere. This construction site showed me the plasticity and sculptural properties of concrete. I was awed by the choreography of the facade, and attempted to sketch and photograph the delight I experienced walking next to this building. It brought concrete to life. Ada Louise Huxtable, author and architecture critic associated with the Pritzker Architecture Prize, is of the opinion that "Portzamparc's buildings succeed because they address fundamental concerns – the needs and pleasure of the body and spirit – those human values that all great architecture serves and turns into art" (Huxtable 1994:3).

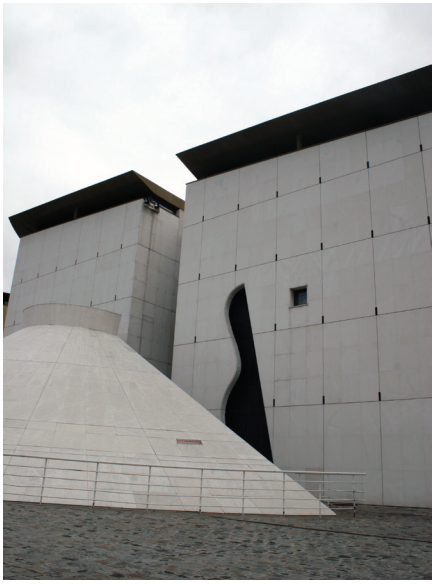


Figure 91 The Cité de la Musique (Author 2000)

Portzamparc's work hints at the importance of the relationship between elements, and between building and context, as a means to establish rapport and hint at narrative. Huxtable describes Portzamparc's approach to space as thinking "in terms of interior space" firstly, and only thereafter in terms of enclosure. The significance of this approach is that it encourages "reinterpretation of the relationships of use and form" of the elements of a building (Huxtable 1994:3). In addition to questioning the relationships between elements, Portzamparc's work adds a fourth dimension to architecture, namely "an aesthetic of time-related experiences and effects" (Huxtable 1994:3). In this sense his work can be described as being 'cinematically choreographed'.



Figure 92 The Cité de la Musique (Author 2000)

I must confess that when I visited the building again after completion I was disappointed to see the raw concrete I had fallen in love with covered in render and paint. Concrete expresses the process of creating and has a sculptural quality. It forces one to accept the aesthetic of the process – the imperfections and the soul of concrete. I believe that my very first visit to the building during construction may have inspired the Mapungubwe structure of the Javett: UP as concrete sculpture.

The notion of the Cité de la Musique as a building that 'makes' music inspired the Arts Campus of the Afrikaanse Hoër Seunskool (AHS). It made me realise that building complexes can be composed much like musical pieces. The Arts Campus consists of a composition of buildings on a small leftover site with various references to music. I will elaborate on composing (curating) a series of buildings in Chapter 5.

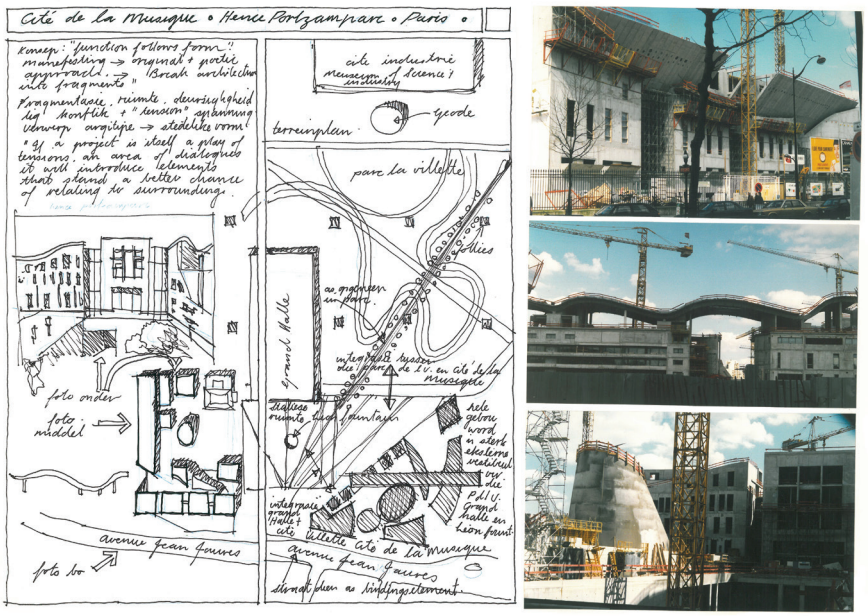


Figure 93 Journal entry on a visit to the Cité de la Musique (Author 1989)

D. Musée Picasso

Paris, France. 1985.
Architects: Roland Simounet, Erik Dhont.



Figure 94 The author at the Musée Picasso (Mathews A. 2005)

The refurbished Musée Picasso taught me that art and architecture can strengthen one another. It gave me my first understanding of the cinematic nature of architecture. The last of the Paris projects that I visited had a major impact on my understanding of how curation, sculpture, narrative and route can be closely interwoven.

The museum is housed in a historical mansion, Hotel Salé, which was refurbished and adapted by architect Roland Simounet to display the Picasso collection. Simounet worked with the historical fabric to create rooms and scenes that flow into one another. In some cases the original interior was restored; in others, such as on the basement level, whitewashed walls offset Picasso's oeuvre.

Doorways incorporate details of small sculptures to emphasise the importance of the threshold, and forces the viewer to look up. The doorway serves as podium, exhibition space, threshold and wayfinding device. In other instances glimpses of spaces to come are proffered, allowing the visitor to visually engage with the route through the museum. I vividly recall a small detail above a transitional space that forced me to look up and discover Picasso's famous bull head (a bicycle seat and handles) through a slit in the wall. The exhibition spaces can be understood as a series of platforms suspended throughout the historical structure.

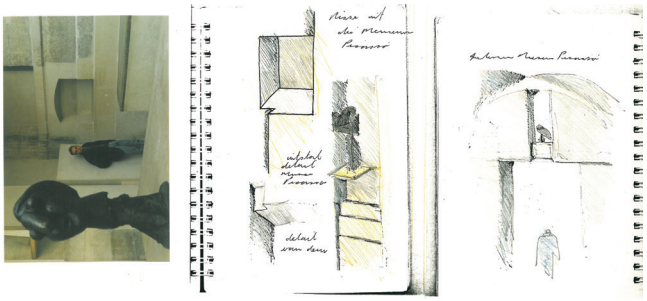


Figure 95 Journal entry on a visit to the Musée Picasso (Author 1989)

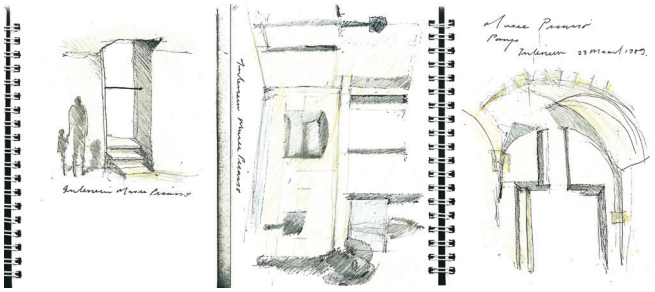


Figure 96 Journal entry on a visit to the Musée Picasso (Author 1989)

The Musée Picasso illustrates how architecture can be designed not as a sculptural highlight in itself, but as a backdrop which showcases other art pieces. The architecture anticipates the inclusion of sculptures to complete the visitor's experience. I assumed the same approach in the design of the Afrikaanse Hoër Meisieskool Pretoria (AHMP) school hall in which an existing art collection had to be incorporated into the architecture. In contrast, in the design of the Javett Art Centre at UP we had to accommodate exhibitions of unknown works and rotating temporary exhibitions. Displays needed to be anticipated and the building designed with that in mind. The intimate domestic scale of the Musée Picasso taught me the principles of focal points – an approach which would prove beneficial in giving an edge to residential designs.

It is important to note that my encounter with the Musée Picasso was the total opposite of my encounter with the Centre Pompidou. I visited the Musée Picasso purely as a lover of art and sculpture who wanted to experience the work of this modern master. It was my intention to immerse myself in his works, envy his freedom and leave. This was before the time of social media, e-magazines and online architecture. I had no idea that Roland Simounet had refurbished the museum so befitting the master Picasso. It was thus a great surprise to see how it had been designed with each artefact and sculpture in mind. Each piece, podium, view, threshold and sequence had been carefully choreographed. Sartre emphasises that the formation of mental images often involves the kinaesthetic sensation of bodily movement (Sartre 2004:xxii). I spent the entire day sketching architectural moments, and would return a few times more.

E. The Museum of Castelvecchio and the Olivetti showroom

Verona, Italy. 1973 (restorations completed).
Restoration architect: Carlo Scarpa.

Prior to my visit to Paris, I travelled to Italy with our Architecture school group. There, our lecturers and tour leaders, Roger Fisher and Karel Bakker, introduced us to the work of Carlo Scarpa in Venice and Verona. I was amazed by Scarpa's curation of jewellery-like interventions in the historic Castelvecchio in Verona. The sequence of the interventions and how he connected views, frames, balustrades and details was fascinating. It taught me how old and new could meet harmoniously and introduced me to the notion of curation in architecture (Figure 97-100).

What I didn't realise at the time was that Scarpa's work could also be seen as cinematographic, perhaps because I didn't have an awareness of the overlap between architecture and cinematography at the time. The architectural academic and writer Graham Cairns, calls Scarpa the "cinematographer of space" (Cairns 2013:77) and describes the spatial organisation of Castelvecchio as follows:

> In contrast to the conventional spatial organisation of galleries, Scarpa distributed the artworks these buildings housed along routes that were sometimes fragmentary and intricate. Taking into account their positions relative to each other, their location along the spectator's route, and their placement relative to set architectural backdrops, they formed part of an elaborate "sequential spatial set" whose principal aim was to multiply the spatial configurations through which pieces of art, generally sculpture, would be perceived... Similarly, he tended to use architectural elements as compositional devices, alternatively framing sculptural figures or placing them against smooth background surfaces. (Cairns 2013:73)

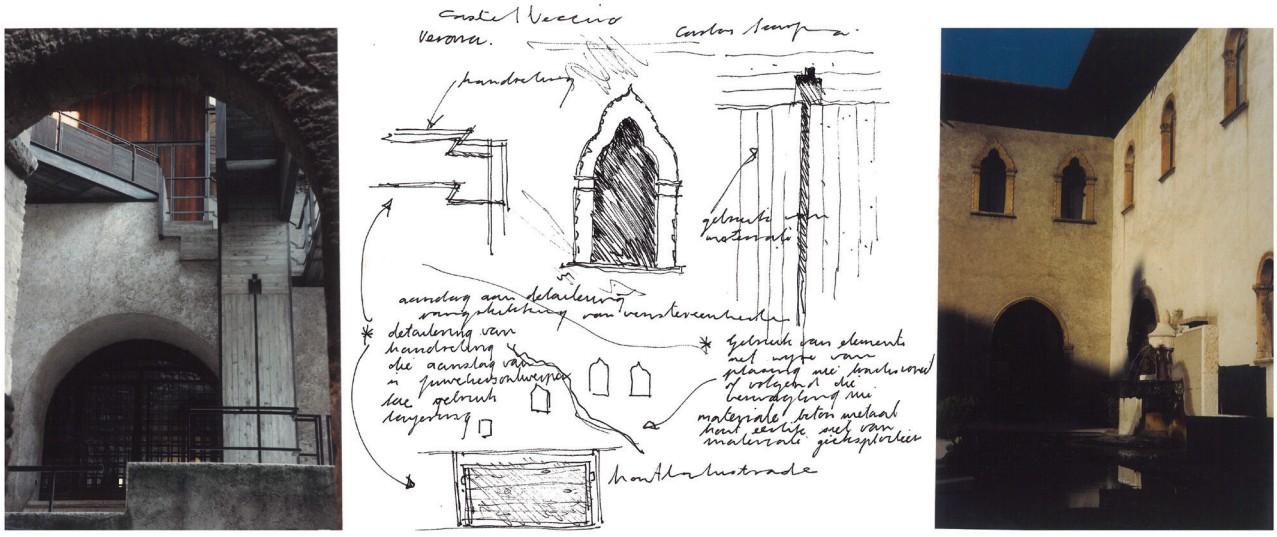


Figure 97 Sketchbook entry on the Castelvecchio (Author 1989)



Figure 98 The Castelvecchio (Author 2007)



Figure 99 The Castelvecchio (Author 2007)



Figure 100 The author at the Castelvecchio (Mathews A. 2007)

Venice, Italy. 1958.
Architect: Carlo Scarpa.

The small Olivetti typewriter showroom off Saint Mark's Square in Venice showcases Scarpa's meticulous eye for detail. Each typewriter, calculator and machine is carefully curated within the architectural design (Figure 101). Cairns believes that "Scarpa's ability to highlight different qualities in the same pieces ... led him to consider them on their own unique terms, ensuring a better understanding of their inherent qualities and … a greater understanding of how to elicit multiple readings from them" (Cairns 2013:73). The visitor's route through the showroom was considered to reveal each product. New vistas and perspectives are revealed through every step one takes through the exhibit.

My book *Detail Housed* (2007) was inspired by this experience of space and details close up (Figure 102-103). I realised details can be curated, that they can fulfil various roles (propositional density), and that an experience can be architecturally choreographed.



Figure 101 Product exhibition in the Olivetti showroom (Author 2015)



Figure 102 Doorway of the Olivetti showroom in Venice (Author 2015)



Figure 103 Bronze detail in the Olivetti showroom (Author 2015)

F. Summary: How did these works inform my E-D stance?

The case studies in this subsection played a foundational role in my formative years as an architecture student and young practitioner. In the ensuing years, following many repeat visits, I formed a special relationship with each, whether experiential, visual, emotional, or of being intrigued. These buildings directly influenced my own oeuvre in various ways. For instance, the Musée Picasso introduced me to the notion of cinematic space in architecture and the important role architects play in curating an experience of objects and place. Most importantly, the cases discussed here illustrate how relationships can be formed between buildings and dwellers through the experiences that they offer and the meanings they convey.

Exquisite detailing in the work of Scarpa and Simounet show the care with which architecture is approached, in order to showcase artefacts and give the visitor the experience of a route filled with expectancy and surprise. Curation is a skill that is crucial in bringing various elements together harmoniously, whereas a cinematic understanding of space allows the architect to plan a spatial experience in time.

The bold forms of the Cité de la Musique attest to the power of sculptural work at an urban scale. The tension between various forms which comprise the centre and the overall composition reference the music that it represents. The Centre Pompidou is another example of a sculptural building, albeit in different form. Its exposed services are an honest representation of the innards that make a building function, and for that reason Silver (2013) classifies it as being adhocist – born out of necessity.

The Institut du Monde Arabe draws together the Arab world that it represents and its Parisian context through clever yet simple narratives. Its sunscreens reference traditional Arabian geometries, while the plan form mimics the Seine. The movement of the Arabian geometric sunscreens is dependent on the intensity of the Parisian sun. As such, the architectural elements can be said to be propositionally dense, as various readings of them are possible.

Each of these examples illustrates different devices that allow visitors to form a relationship with the buildings through the experiences that they facilitate.

3.3.2. Subsequent travels: inspiring places and catalysts

Two other trips stand out as having had a major and direct impact on our practice and oeuvre. The first is a trip in 2012 to Germany and Italy, and the second is the New York study tour in 2013.

In 2012, I was invited to exhibit a project at a collateral event at the Palazzo Bembo as part of the 2012 Venice Architecture Biennale. I decided to include a detour to Berlin, and to Kassel to attend the Documenta (13) exhibit. As the architectural editor for *DeKat* magazine, I had to visit and write about Daniel Libeskind's Jewish Museum in Berlin. An international press card had the added benefit of giving me access to many events at the Biennale too.

In preparation for the design of the Javett: UP, I was privileged to take a study tour of New York's art museums and galleries by invitation of the Andrew W. Mellon Foundation. This trip would prove influential not only on the Javett: UP, but on our oeuvre in general.

A. Berlin 2012

I spent an entire day at the Bauhaus Archive in Berlin, walking the ramps, studying the building, and looking at the various handmade items, crafts and disciplines, from furniture to jewellery design (Figure 104-105). The Bauhaus reinforced my belief in a multidisciplinary approach to making and learning. Visiting the Bauhaus was, for me, a very personal experience and reinforced my ideas regarding architectural education and practice.



Figure 104 The author at the Bauhaus Archive, Berlin, Germany. Architect: Walter Gropius. 1979 (Unknown 2012)



Figure 105 The Bauhaus Archive, Berlin, Germany. Architect: Walter Gropius. 1979 (Author 2012)

In between my academic activities, I paid an eye-opening visit to Eisenman's Memorial to the Murdered Jews of Europe (Figure 106). The seemingly clinical and austere structure offered a wealth of experiences that only came to light (or rather darkness) as I moved through the blocks, lower and lower into their depth (Figure 107). The experience is intended to be reminiscent of the Jews' disappearance into the earth, and the blocks remind one of graves or the train coaches that carried people away. The Memorial illustrates how architecture can narrate the story of a place, while allowing a personal embodied experience that uncovers events in one's own life. The Memorial is simultaneously civic sculpture, building and landscape, and I only understood it by moving through the structures. Walking made it come alive hauntingly.



Figure 106 The author at the Memorial to the Murdered Jews of Europe in Berlin, Germany. Architect: Peter Eisenman. 2005 (Unknown 2012)



Figure 107 The Memorial to the Murdered Jews of Europe in Berlin, Germany. Architect: Peter Eisenman. 2005 (Author 2012)

Following my visit, I sat on one of the granite blocks and watched the sun set over Berlin. My visit had left me with a lot to contemplate. Feeling depressed, I downloaded some emails on my phone. Technology allows us to escape the moments that we should be 'living' before we allow them to be. An urgent email from Professor Pattabi Raman lay in my inbox. His message said that he had serious cancer and would not live long. We were busy with the second edition of *Detail Housed*, and he wanted to Skype me. The joint publication was a way to intellectualize construction and to also publish his research into incremental housing at the Cape Peninsula University of Technology. I replied and recounted my experience of the Memorial for the Jews, and that the visit had shown me that it is an honour to be able to spend one's last days with dignity and with one's family. I promised to Skype the following day when I would have Wi-Fi, but alas, the following day turned out to be too late. As the sun set over the Berlin skyline, his message was a confirmation of the temporary nature of our existence and the transience of life.

The Neues Museum by Sir David Chipperfield, also in Berlin, had recently reopened, and I was impressed by the manner in which artefacts and sculptures were exhibited and integrated into the architecture of the building (Figure 108-110). The exhibition of Tutankhamen's walking sticks made an enormous impact on me. At the time, my son had just been diagnosed with juvenile arthritis and I could place myself in Tutankhamen's parents' position. I knew how they must have worried about their son's condition. My own history allowed me to relate to the building and its context. I had previously visited the Tutankhamen exhibition in Egypt, but had not had the same profound personal experience because I did not share Akhenaten and Nefertiti's worries at the time.

The curatorial decision to place the famous bust of Nefertiti alone in a dark space, and the cinematic approach and route to this chamber, highlighted her importance as a historical figure and made me understand why this queen was regarded as the benchmark of beauty (Figure 110). I would take a similar approach to the Mapungubwe exhibition at the Javett: UP a few years later.



Figure 108 Collection of busts in the Neues Museum, Berlin, Germany. Renovation architects: David Chipperfield Architects in collaboration with Julian Harrap. 2009 (Author 2012)



Figure 109 Collection of busts in the Neues Museum, Berlin, Germany. Renovation architects: David Chipperfield Architects in collaboration with Julian Harrap. 2009 (Author 2012)

Atkins (n.d.) states that the philosopher Paul Ricoeur articulates a subjective relational experience, such as my experiences in Berlin, quite aptly. According to Ricoeur, we can know on a philosophical level that there is an objective reality and a "… metaphysical constraint on human existence [but] we can never understand human existence simply in terms of this objectivity" (Atkins n.d.). Relations to place are always deeply connected to personal realities, and in that sense are neither easily quantifiable nor objective – as became clear to me through my experiences in Berlin.



Figure 110 The Nefertiti bust in the north Cupola Room of the Neues Museum, Berlin, Germany. Renovation architects: David Chipperfield Architects in collaboration with Julian Harrap. 2009 (Von Becker 2009)

B. Venice Biennale

Following my visit to Germany, I participated in the 2012 Venice Biennale, where we exhibited an abstraction of the Nellmapius Bridge in the Palazzo Bembo (Figure 113). "[We] were asked to design the courtyard feature at the Palazzo Bembo and chose an abstraction of a recently completed South African bridge façade. The hand sketches represent the act of creation of this piece of civic sculpture for the actual façade" (Mathews and Associates Architects 2012:57). Our near life-size light installation was suspended in the courtyard. In the city of bridges I thought it apt to activate an external space or courtyard with a 'model' of the bridge rather than exhibit actual drawings in the *Traces of Centuries and Future Steps* exhibition, held inside the Palazzo Bembo.

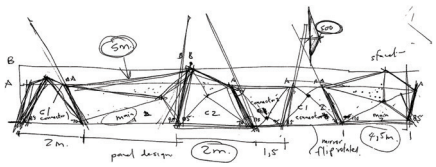


Figure 111 Concept sketch of the Nellmapius Bridge (Author 2010)



Vrydag 22 Junie 2012 **Beeld** . Nuus 9

Heinz Janz en Pieter Mathews, argitekte van Mathews and Associates Architects, by die "ligbrug" wat die oorspronklike rowwe ontwerpskets van die Nellmapiusrylaan-brugfasade oor die N1-hoofweg tussen Centurion en Midrand vertoon. Dié vertoonstuk word tans by die Pretoria Kunsvereniging in Bailey's Muckleneuk in Pretoria uitgestal, voordat dit in Augustus saam met die argitekspan na Venesië, Italië, sal vertrek. Foto: ALET PRETORIUS

Brug wat origami naboots, kry aftrek

Fanie van Rooyen

Die argitekte van die nuwe Nellmapiusrylaan-brugfasade oor die N1- Die nuwe, nog onvoltooide Nellmapiusrylaan-brugfasade. Foto: PIETER MATHEWS

Figure 112 Article in *Beeld*, Friday 22 June, 2012 (Van Rooyen 2012:9)



Figure 113 Installation of the concept for the Nellmapius Bridge in the Palazzo Bembo, Venice (De Carlo 2012)

However, the truly important moment of this trip was the idea conceived in Venice to start a local DIY guerrilla biennale – Cool Capital. Three opening days of standing around and socialising (the honour reserved for the press, participants and invited guests) had taken their toll. I bought a pizza, sat down on a narrow staircase and stared at a poster advertising the Canadian exhibition poster on the opposite wall: "We expect the discussion to continue beyond Venice." (Figure 114). I thought: "What an excellent idea!" On a more practical level, the American Pavilion had introduced me to guerrilla tactics which empowered communities to solve local problems themselves, rather than waiting for governments and bureaucratic processes. I guess I took up the instruction quite literally, because I came home and initiated Cool Capital to deal with Pretoria's issues in a creative manner (Mathews 2019:12) (Figure 115).



Figure 114 Posters for the Canadian pavilion which sparked the idea of Cool Capital (Author 2012)



Figure 115 Cool Capital poster depicting the Voortrekker Monument, designed by Louis Minnaar of the Open Window Institute (Minnaar 2014)

Four years later, I returned to Venice as the official curator of the South African Pavilion at the 2016 Venice Biennale, to share how we had taken the discussion beyond Venice to our home town. The Biennale was curated by Alejandro Aravena whose theme "Reporting from the Front" challenged architects to report on endeavours that had made a physical impact, rather than on theoretical stances (Fondazione La Biennale di Venezia 2016).

C. The New York study tour

Twenty-four years after my first 'World Tour' I embarked on an architectural study tour of New York's museums, sponsored by the Andrew W. Mellon Foundation (Figure 116). The trip was intended as a learning opportunity to prepare us for and assist us with the design of the Javett Art Centre for which we had been appointed in 2012.



Figure 116 The study group sponsored by the Andrew Mellon Foundation visiting New York: Stephan Welz, Prof Norman Duncan, Pieter Mathews and Prof Antony Melck (Unknown 2013)

An early edition of the Visi design magazine published my answers to questions that journalist Diane de Beer had set to me. She asked which type of building a young architect like me would like to design. My answer was a contemporary art gallery. One could say this trip and the commission was a dream come true.

> *Die dualisme van die gebou wat op die agtergrond moet tree, maar ook 'n kunswerk uit eie reg moet wees, tesame met 'n eenvoudige akkommodasieskedule sal vir my 'n uitdaging wees. Ek hou ook van en probeer kontemporêre kuns versamel* (De Beer 2002:107).



Figure 117 Research facility at the Metropolitan Museum of Art. New York, USA. Architects: Kevin Roche John Dinkeloo and Associates. 1991 (Author 2013)

Professors Antony Melck and Norman Duncan represented the University of Pretoria. Mr Stephan Welz accompanied us on the tour on behalf of the donor, the Javett Foundation Trust, sponsored by businessman and philanthropist Michael Javett. The 9 days in April 2013 were packed with a full programme (Mathews 2017:9). Our brief was to learn as much as we could about management, curation, storage and display from the best of New York's museums. My two visits to New York City could not have been more contrasting. In 1989 I begged Pan American World Airways to fly me out of the city of drug addicts, criminals, pimps, prostitutes and murder. In 2013, as a guest of the Andrew W. Mellon Foundation, I stayed in a posh hotel.

Our first stop in New York was the Metropolitan Museum of Art, or 'the Met' as it is informally known. We were introduced to the team and the facility where art is restored (Figure 117). The Mellon Foundation was sponsoring a research programme on art restoration at the University of Pretoria, and a small facility to house this programme was to be incorporated into the design of the Javett: UP. My simple notion of a gallery evaporated when I saw the equipment used by the world's experts!

The storage facility at the Johns Hopkins Archaeological Museum in Baltimore is based on the principle of visual storage: the artefacts are stored in glass cases so that they can be observed and easily accessed by researchers. The storage becomes both display and research tool (Figure 118-119).



Figure 118 Johns Hopkins Archaeology Museum: storage/exhibition design. Maryland, USA. (Author 2013)



Figure 119 Johns Hopkins Archaeology Museum: storage/exhibition design. Maryland, USA. (Author 2013)

Another highlight was a visit to the Yale University Art Gallery, designed by Louis Kahn. The coffer slabs and *béton brut* capture the spirit of the time. The staircases are shrouded in shadow and illuminated from above by skylights (Figure 120). In a way, the Mapungubwe mount references these spaces that remind one of silos (refer to Chapter 5).

The building for the Barnes Foundation in Philadelphia, designed by Tod Williams and Billie Tsien which was officially opened in May 2012, incorporates patterns inspired by Kente cloth (Figure 122) in the layout of the floor tiles (Figure 123) and in the patterned screen doors (Figure 124). This metaphor caught both my and Stephan Welz's attention, and sparked a discussion on whether the South African story could also be narrated through pattern. The idea to use shweshwe cloth as a representation of our narrative in the Javett: UP was born on this day. However, the origins of borrowing patterns from African textiles can be traced back to my first house, where the zigzag patterns of Kente cushions were translated into door handles and balustrades (as illustrated in Chapter 2) (Figure 48, 50).



Figure 120 The author in the Yale Gallery designed by Louis Kahn. 1953 (Unknown 2013)

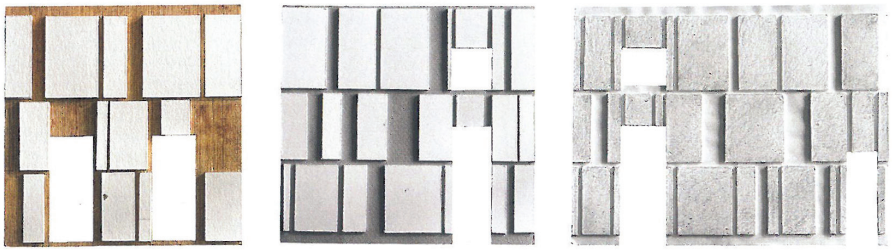


Figure 121 Maquette studies of the façade of the Barnes Foundation illustrate random curation (Brownlee 2012:66)



Figure 122 Kente cloth inspired the motifs at the Barnes Foundation (Brownlee 2012:57)

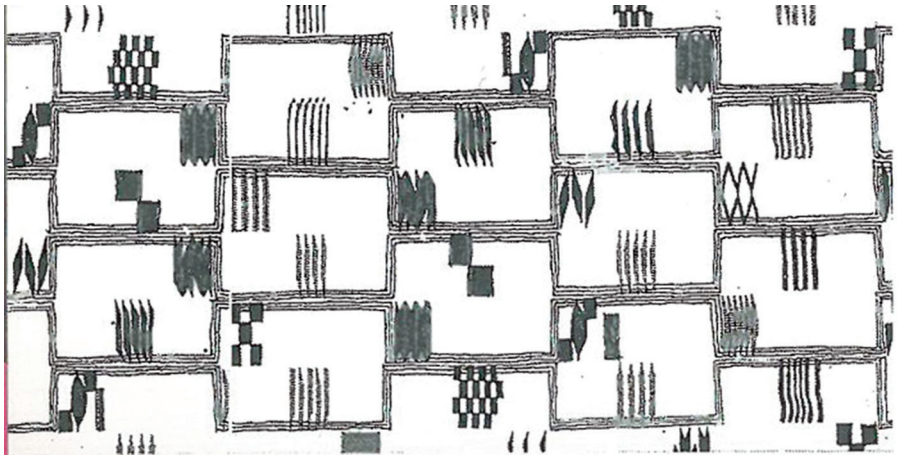


Figure 123 Concept sketch of the tiling pattern at the Barnes Foundation (Brownlee 2012:5)

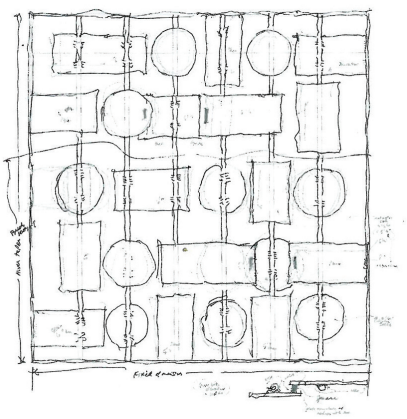


Figure 124 Concept sketch of the gates of the Barnes Foundation (Brownlee 2012:3)

During my first visit to Frank Lloyd Wright's Guggenheim Museum in New York (completed 1959) in 1989, it was covered in graffiti and exhibited Jenny Holzer's postmodern neon lights. It was a great relief to visit again and experience the vistas from various points of the iconic rotunda in its original guise. Again, as in the Musée Picasso, the benefit of having different vantage points in a museum was proven (Figure 125-126). The new addition to the Guggenheim assumes a subordinate role and pays homage to the iconic form of the original.



Figure 125 Linked views in the Guggenheim Museum (Author 2013)



Figure 126 Linking spaces visually in the Guggenheim Museum (Author 2013)

At the time, Professor Melck was an avid organist and a personal friend of the organist and choirmaster at St Patrick's Cathedral. Out of courtesy, we attended the church service on Easter Sunday. The cathedral is situated next to MoMA (the Museum of Modern Art), which did not form part of our tour plan. The Museum of Modern Art is located in New York was designed by architects Yoshio Taniguchi, Edward Durell Stone, Philip Goodwin and was completed in 1939. I desperately wanted to make use of my time and snuck out to the museum. MoMA illustrates how important it is in a museum to have breathing space and contact with the outside world (Figure 128-130). Although the scale of the museum is immense, one never feels lost. White boxes, black boxes and large framing windows are in perfect harmony. In the Javett: UP we tried to accommodate this visual connection to the outside without compromising on hanging space for the art.



Figure 127 Connected vistas at MoMA (Author 2013)



Figure 128 MoMA interior (Author 2013)



Figure 129 MoMA interior (Author 2013)



Figure 130 Connections with the exterior at MoMA (Author 2013)

The Zimmerli Art Museum at Rutgers University, a public university in New Brunswick, New Jersey , thoroughly impressed me, especially the curator's explorative approach. In one instance, the School of Psychology teamed up with the curatorial team to organise a portrait exhibition in order to teach medical students how to read and interpret facial expressions. The museum serves as an active learning site on the campus. At the end of our tour, the president of the Mellon Foundation asked which of the prestigious universities' galleries impressed me the most. I had to say that the public university outsmarted the rest and went beyond what was expected. He responded that it was often the galleries with fewer resources that were innovative and transcended expectation.

The Cheim & Read Art Gallery in New York, designed by Richard Gluckman in 2001, taught me that scale as well as light from the top is of utmost importance. Lighting and services should be integrated, and major art works need breathing space. We had to design a specific place for the *Discovery* painting by Alexis Preller in the Javett: UP. It was to be one of the main attractions and a focal point. The lessons I learnt in the Cheim & Read Gallery came in very handy in this regard.

Walking around and admiring the urban landscape led to many unexpected discoveries, such as the Bryant Park subway station (Figure 131), which informed the notion of a 'non-building' and served as inspiration for the Rivonia Trial TRT bus station discussed in Chapter 5. A visit to the Highline by Diller Scofidio + Renfro (DS+R) was also an eye opener and will be discussed in more detail in the next section.



Figure 131 The Bryant Park Station in New York served as precedent for the Memory Box TRT stations (Author 2013)



Figure 132 Cheim & Read Gallery: study of scale and light (Author 2013)

D. Summary: Insights obtained from New York, Berlin and Venice

My experiences in Berlin made me acutely aware of the fact that personal situations and encounters influence the way in which we experience and engage with architecture. The installation artist and sculptor Olafur Eliasson says that the experience of place and object should be handed over to the participant (Dadich 2019). However, the architect needs to facilitate opportunities for individual experiences – in the way that the work of Chipperfield and Eisenman had orchestrated experiences for me.

These experiences, followed by my visit to and participation in the Venice Biennale 2012, encouraged me to create more experiential opportunities in my own home town. Upon my return, I initiated the experimental think tank and citizen initiative, Cool Capital. I imagined a few creative friends would assist in one or two creative guerrilla interventions, but never expected the 150 interventions executed by at least a thousand participants. Cool Capital ensured that I would return to Venice in 2016 as official curator of the South African Pavilion.

The trip to New York was influential, specifically in the design of the Javett Art Centre at the University of Pretoria. Direct influences are clearly visible in the design of the Javett: UP, such as the visual storage for the Barber Mueller Ashanti Gold Collection; the use of a Barrisol stretched ceiling to create the illusion of natural light; and the sequencing of spaces and visual links and the shweshwe-inspired panels.
The discovery of the Bryant Park subway station also influenced the detailing of the Rivonia Trial Memory Box TRT station.

3.4. Like-minded contemporaries

This section places the study in the broader context of architectural discourse. Practitioners with whom I share commonalities in design and practice methods have been selected, with the aim of illustrating key concepts which will be crucial in clarifying the characteristics of explorative divergence and, ultimately, defining it as a form of architectural practice.

3.4.1. William Kentridge

In 2012, attending Documenta (13) in Kassel, Germany, strengthened my understanding of international curation and of new academic routes in architecture and sculpture, especially kinetic sculpture. At one of the exhibitions, the suspense was palpable and the queue was immensely long, right up to the Hauptbahnhof next to the railway tracks: it was for William Kentridge's opera, *The refusal of time* (Documenta 2012:352).

I first met Kentridge when he had just opened his studio in the heart of Johannesburg. The precinct around his studio has undergone a lot of change in the last few years. It is now part of the trendy Arts on Main complex, but it was not so when Kentridge moved in. My initial thought at the time was: "Why would a famous artist choose to work here?"

The city of mines and migrant workers, depicted in the production at Documenta (13), was geographically so close and yet so far away from my own city, Pretoria. I mused over the fact that I had travelled so far to this prestigious art event to understand something so close to home. Kentridge's work referenced South Africa's political baggage in a layered manner, portrayed by the movement through space, the projections, processions, and music. As the catalogue explained, "Kentridge has been strongly informed by the political and social realities of South Africa. But beyond their specific context, his observations serve as allegories for the human condition and the world at large" (Documenta 2012:352).

William Kentridge is not a trained and registered architect, but I decided to include him as an apt example of an explorative-divergent creative. His work, like architecture, depicts and constructs space. As the Finnish architect and writer Juhani Pallasmaa 1996:451) puts it: "A writer, film director or painter has to give the human event he is presenting a setting, a place." He has the freedom to make architecture without the rules of the discipline to "regulate the experience or the way it is presented" (Pallasmaa 1996:451). As a creator, Kentridge has a unique manner of integrating cinematography, sketches, models, music, acting and spatial design into an art form. I see him as a contemporary version of the Renaissance man, a protagonist of the cross-pollination of seemingly unrelated disciplines – the ultimate explorative-divergent creative.

At the close of 2019, Kentridge put on an exhibition at the Zeitz Museum of Contemporary African Art (Zeitz MOCAA) in Cape Town, entitled *Why should I hesitate: Putting drawings to work*. I was fascinated by his architectural models for the exhibition. Kentridge found the exhibition spaces of the museum to



Figure 133 Kentridge's maquette for his exhibition at the Zeits MOCAA (Booyens 2019)



Figure 134 Kentridge's maquette for his exhibition at the Zeits MOCAA (Booyens 2019)

be unsuitable, and had the interior remodelled and adjusted to create a coherent spatial experience that would successfully display his work. He designed new entrances and specified paint colours and wallpaper (Figure 133-134).

A concurrent exhibition at the Norval Foundation, *Why should I hesitate: Sculpture*, was equally well curated (Figure 136-137). The narrative, the route through the gallery, the approach to the sculptures and their relationship to the space was carefully planned (Kentridge n.d.). Kentridge's talk at the exhibition, during which he explained his philosophy on concept, design methods and the importance of making and exploring with one's hands, struck me as especially applicable to the realm of architecture. For Kentridge, it is important that the audience come away from the exhibition "… with the sense that it's possible to make things, and that they think about the agency of making ... A lot of the objects are really stupid. There's a big space for non-reflective, physical making, rather than theoretical analysis before the work is done. I hope people come away thinking, 'I could do that' or even, 'My six year old could do that'" (Kentridge in Van Niekerk 2019:33). The above alludes to the artist as facilitator of a relationship between the viewer and the work.



Figure 135 The author's son, Kyle, and Jani Visagie with William Kentridge (Author 2020)



Figure 136 Kentridge's exhibition, Why should I hesitate – Sculpture, at the Norval Foundation (Author 2020)



Figure 137 The author at Kentridge's exhibition at the Norval Foundation (Mathews A. 2020)

In an interview with the BBC journalist Zeinab Badawi (2020), Kentridge recounts his long route to finding his own voice as an artist. If he were to write an autobiography, it would be about how he "was rescued by his failures": he failed as an oil painter, at a career in acting, and as a filmmaker. Conventional wisdom of the time was to do one thing and do it well, but Kentridge never mastered one particular endeavour particularly well. When he decided to focus on sketching, he found his mind continuously returning to theatre and wondering whether sketches could become films. He explains further that he only understood much later "… that this cross-pollination, this bastard form of partly drawing partly theatre, mixing it with music was by far the richest way for any one of those forms" (Badawi 2020). It is on this open-ended principle that E-D is founded and Kentridge's approach clearly illustrates this in practice.

Kentridge's sketches are characterised by layers of charcoal marks that have been erased and added to in the process of creating his stop-frame films. He reflects that this manner of creating "… was interesting to find a way, within art making, to be able to show the world as process rather than fact" (Badawi 2020). Even his sculptures, fixed objects in themselves, cannot be seen as 'fact'. The works are 'provisional'. From one angle they say "yes, this is how it is", but then one moves around the sculpture and something else appears. The "… sculptures are about transformation from one image to another" (Badawi 2020). They are open works, a process of understanding rather than fact. We could also say that these multiple readings enhance the propositional density of his work: from one angle, a sculpture projects the shadow of a tree; from another angle, the shadow is a typewriter (Figure 139). Each work can be understood in multiple ways.



Figure 138 Kinetic artwork by William Kentridge, exhibited at the Norval Foundation (Author 2020)

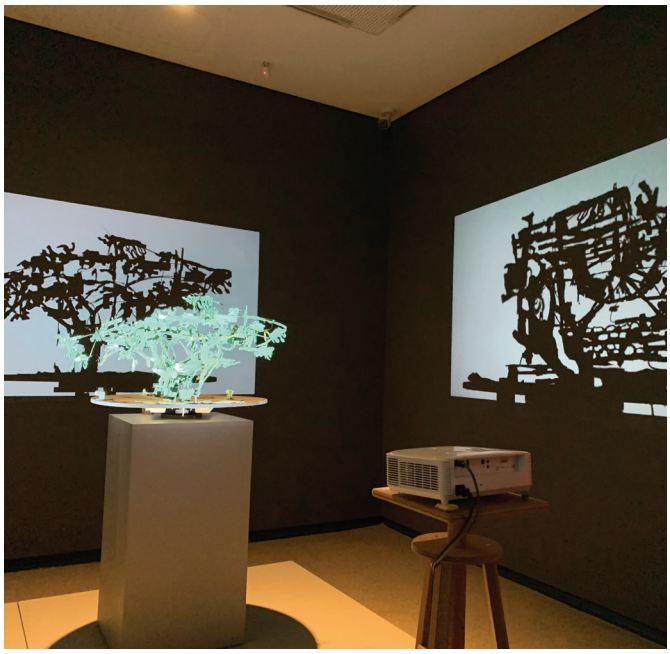


Figure 139 *Construction for Waiting for the Sibyl* (2019) by William Kentridge exhibited at the Norval Foundation: one object, two images (Author 2020)

For Kentridge it is the process rather than the product that is important. The animations start with a simple drawing that evolves (or doesn't evolve) into a message. The films are not planned with scripts and storyboards. Kentridge is "… interested in the impulse, in following the impulse, and in seeing what the impulse becomes" (Badawi 2020). As long as there is confidence in the idea and in the work, Kentridge believes the meaning will emerge naturally. The creative process is "… a thinking in materials, having trust in the material to reveal to you the things you already know, but know not that you are aware of ..." (Kentridge in Badawi 2020). Kentridge's methods shy away from perfectionism, opting for a more explorative way of working. The process often involves "stupid" tasks such as drawing, cutting and pasting torn bits of paper. These actions are part of the process of discovery because, while working on an idea, another idea often creeps in, especially in moments of improvisation. These "peripheral ideas can become central ideas" (Badawi 2020), testifying to the fact that E-D is not perfectionist, but rather leans towards the beauty found in imperfection. The surrealist painter Salvador Dali stated: "Have no fear of perfection – you'll never reach it." (Salvador Dalí Quotes | The Dalí Universe, 2021).

Kentridge criticises art schools that advocate starting a project with a theoretical essay and then figuring out how best to convey the message. This approach, he says, takes the idea out of art and reduces art to a mere representation of the idea. I believe the same can be said of many architecture schools. Kentridge's mantra of following a 'less good idea' has become the inspiration and name of an art centre that he runs: the Centre for the Less Good Idea. The centre typifies his concept of the ideal creative studio: "… a very safe space for uncertainty, for doubt and for stupidity" (Badawi 2020).

The economist David Galenson differentiates between "… two styles of innovation: conceptual and experimental. Conceptual innovators formulate a big idea and set out to execute it. Experimental innovators solve problems through trial and error, learning and evolving as they go along" (Grant 2017:109). These two styles of innovation might explain the difference between early geniuses and late bloomers. Some individuals produce their best work later in life, after they have had many years to experiment and develop their concepts. Kentridge has an experimental way of innovating: instead of setting out with a clear goal, he has continuously been experimenting throughout his career. His contribution to art and creativity is not a singular idea or method; rather, it is the body of experimental work that highlights the importance of process and of making.

Upon personal reflection, William Kentridge personifies E-D for me. He has mastered all three of the core divergences discussed in this study together with the competence of studio practice (including effective marketing). I became aware of Kentridge more than 30 years ago and I remembered discussing his work with the gallerist Frieda van Schalkwyk at Holm Jordaan Holm while doing my internship. She advised me to buy a Kentridge charcoal work for a few thousand rand. My salary was R2000,00 to which I replied, "I will never use three months' salary on a charcoal drawing". One of the professional artists that Frieda represented joined in on the conversation. He explained that the sudden rise in prices were all because of good marketing and strategy. This anecdote stuck with me and I now realise that business acumen and feedback loops are an important part of E-D practice. Had I just followed her advice, my investment would have grown exponentially, which goes to show that an explorative attitude can trump overspecialisation.

The MAAA studio functions in a similar manner to Kentridge's studio. Ideas are uttered as they make their appearance. We spend at least half an hour every morning sharing stories, having a laugh and philosophising. It is during these conversations that interesting notions often creep in. Nobody's idea is holy, not even mine. Notions are thrown around in the studio, with each person latching on or proposing alternatives. I believe, as does Kentridge, that tacit knowledge is not to be disregarded. We all inherently understand something about space and materiality through our own daily experiences. As a designer, one's role is to tease that knowledge out of its hiding place through experimentation and make it manifest in a design. No design is born complete and perfect; it grows into what it wants to be. This is especially evident when a project goes to site and factors beyond the control of the architect shape the building.

It is with his creative community-driven project "The Centre for the Less Good Idea" that I can most directly associate myself and my credo with, which is to bring creativity to the public. The name of his non-profit interdisciplinary incubator "The Centre for the Less Good Idea" also implies a negative stance towards perfectionism. I will later argue that perfectionism does not sit well within E-D. However, parallels can also be drawn between the "The Centre for the Less Good Idea" and our Cool Capital project, dubbed the world's first DIY guerrilla biennale which invited others to engage with their urban surroundings in creative ways. This wider collective brain we created with Cool Capital is also one of the core aspects of William Kentridge's organisation.

I can associate myself with his divergent methods in terms of making and narrating local stories. I believe that it is in the behind the scenes where the studio practice, as a core divergency is paramount to his success. These include marketing, networking, curating teams and collaborating with other disciplines where needed.

William Kentridge's methods highlight the importance of process and of making. His work can be deemed explorative-divergent as it is open-ended, favouring the cross-pollination of seemingly unrelated disciplines. His methods enable continuous experimentation, and illustrate the value of being open to uncertainty and seemingly stupid ideas in order to allow these ideas to unfold and develop in an intuitive manner – improvisational, emergent and in search of work that can sustain multiple readings by the viewer.



Figure 140 *Lexicon* (2017) by William Kentridge exhibited at the Norval Foundation (Author 2020)



Figure 141 *Polychrome Heads* (2014) by William Kentridge exhibited at the Norval Foundation (Author 2020)



Figure 142 *Saadjies* exhibition at the Anton van Wouw House in Pretoria (Crafford 2016)

3.4.2. Designing for the Third World – Alejandro Aravena

Alejandro Aravena was lauded by the 2016 Pritzker Prize jury as having "… expanded the role of the architect … to connect social responsibility, economic demands, design … and the city" (Palumbo *et al.* 2016). Architecture critic for the New York Times, Michael Kimmelman, describes the Chilean architect's formative years during the Pinochet regime as a time during which many "… foreign magazines were banned and Chilean architecture students had limited access to what was going on in the rest of the world" (Kimmelman 2016). Aravena reckons the upside of censorship was that they were "saved from postmodernism" and left to formulate their own identity as designers. They were guided by professors who were also practitioners, and who therefore taught the students how to "get buildings built" (Kimmelman 2016). Aravena graduated at a time of great political change in Chile, at the end of the Pinochet regime, and subsequently moved to Venice in 1992. He views the period following the move as a time during which he "really began to study architecture". In Venice he was "on a completely different planet" and remembers the period as a time during which he absorbed the architectural history they didn't learn in Chile (Kimmelman 2016).

I see countless similarities between Aravena's education and the socio-political context of my formative years. As a student in South Africa during the 1980s, we were also very much cut off from the world and had similar practically minded lecturers. Aravena and I were born in the same year and both graduated during a time of political change in our respective countries. We both spent a period living and working abroad that broadened our understanding of architecture. We would both go on to establish creative entities alongside our more conformist architectural practices – Elemental and Cool Capital respectively.

I had the privilege of meeting Alejandro Aravena at a conference at the University of Pretoria in 2010, before he had achieved fame. Much later we would meet again at the 2016 Venice Biennale, where I was the curator of the South African Pavilion and he was the main curator of the Architecture Biennale (Figure 144). The Cool Capital endeavour had placed us in a favourable position to win the tender to represent South Africa at the biennale.

Aravena acted as the main curator of the exhibition. His intervention at the Biennale was intriguing: the entire installation was made of materials salvaged from the previous year's exhibitions, speaking to his philosophy of using whatever is available to create the envisaged aesthetic – much like Lewis Levin.

This is an "… advantageous method precisely because it seeks solutions from among actually available, proven resources'' (Silver 2013:117). The aesthetics of Aravena's pavilion represent a process of discovery through making, rather than a predetermined set of rules (Silver 2013:113). By using the discarded drywalling, substructures and metal hangers, he saved on transport and material costs (Figure 143).



Figure 143 Alejandro Aravena in the pavilion he designed for the 15th Venice Biennale in 2016 (Mollison 2016)



Figure 144 The author meeting Aravena at the Venice Biennale 2016 (Spies 2016)

Despite the use of reclaimed materials, the exhibit was well curated and offered a cinematic experience enhanced through his use of light. Most notable was his placement of Jean Nouvel's light-beam installation in the otherwise dark interior of the room (Figure 145).



Figure 145 Jean Nouvel's light-beam installation at the 15th International Architecture Exhibition in Venice (Author 2016)

Aravena views the conditions of working in a Third World country as an advantage: "Less money means more creativity. The context I am working in is full of restrictions and rules, caused by scarcity. It forces me to the very edge of my capacities … The more restricted the context and the more difficult the question, the more relevant the answer can become" (Nuijsink 2008:182). In addition to limited budgets, the quality of construction in Chile leaves much to be desired. Aravena knows that a construction crew in Chile won't be able to achieve the same as one in Switzerland; however, instead of lamenting the quality of construction in Chile, he turns it into an advantage: "Instead of looking for perfection, we embrace irregularity and variation" (Kimmelman 2016). I have assumed a similar approach in my oeuvre, embracing the available skills (or lack thereof) and designing buildings that incorporate and celebrate imperfections. I call this 'designing for tolerance', i.e. designing for a lack of skills and in anticipation of mistakes.

The initiative that brought Aravena fame was not his architectural practice, but Elemental. It started as an experimental platform that considered how social housing could be improved. Elemental's seminal endeavour, a housing project in Quinta Monroy, Chile, was an investigation into providing incomplete forms which could be adapted by residents. Sennett (2018:228) explains that "… his idea was to build half a good house which the inhabitants could fill in with their own labour, rather than provide a finished dwelling built to a lower standard". In addition to designing the buildings, Aravena took on multiple roles – negotiating with authorities and engaging in town planning – "… and by doing so [discovered] that such opportunities may be created by architects themselves" (Palumbo 2016). Part of E-D practice is venturing outside of one's scope and going the extra mile to get a project built. This is an example of the architect as a being of care or, as better stated by Auret (2018:15): "The reality is that buildings and people form part of a reciprocal relationship in which the shared identity of place is continuously re-appropriated as a region of concern by a being of care."

Aravena believes that: "The power of architecture is the power of synthesis … to achieve a solution in as few moves as possible" (Kimmelman 2016). This approach gives a new dimension to the architectural profession. Aravena challenges architects around the globe to exhibit that which they have done, rather than their theories.

He sees the available resources as a starting point which dictates the narrative of his design. His work illustrates an attitude that embraces the irregular, and is forgiving towards the uncontrollable aspects of practising architecture in a Third World context. It is work that is both conceptual and transcending its scope; it is challenging, while responding appropriately in the light of complex limitations.



Figure 146 A *Saadjies* artwork, *Itinerant Jacaranda* by Carla Crafford, in Aravena's pavilion at La Biennale Architettura di Venezia 2016 (Crafford 2016)

Reflecting upon the work of Alejandro Aravena, I have noticed many similarities. Both of us established initiatives in parallel with our practices; Aravena created Elemental and I established Cool Capital. These kinds of initiatives give architectural practices more forms of exposure and create unique selling points. By establishing such initiatives together with marketing and networking activities one is able to make significant differences in one's community. One of the most compelling aspects of Elemental is the way they leave the completion of the project up to the inhabitants. This reminds me of what we tried to accomplish with our mass housing units at Impala Platinum Village, a mining company.

Coincidentally, our respective initiatives led us to meet again at the 2016 La Biennale di Venezia where he was the official curator and I the official curator for the South African Pavilion. The pavilion he created for the 2016 La Biennale di Venezia featured a unique solution of using reclaimed material from the previous biennale. I believe this is a design residue stemming from his upbringing in a third world country, where one subconsciously takes cognisance of materials that normally get discarded.

In some ways his pavilion also foreshadowed the approach we used to design the Braak Pavilion for the Stellenbosch Triennale. The 'Boer maak 'n plan' approach is quintessentially adhocist and points to an overlap in approach. I see curation as one of my core divergencies and it also manifests itself the way Aravena's pavilion frames specific views. Sculpturally, the texture created by the novel and innovative use of reclaimed materials are evident in both Aravena's 2016 Venice Biennale Pavilion and our Stellenbosch Braak Pavilion (Chapter 6). In terms of cinematic architectural choreography, I believe Aravena's pavilion succeeded in playing with light and experience. For example, consider the way in which the reflections of the reclaimed drywalling metal hangers ensured ever changing light, juxtaposed with the experience and curation of Jean Nouvel's light rays in a dark space.

The work of Alejandro Aravena deeply resonates with my E-D approach. It shows a way to practise exploratively, yet in a way that is sensitive and appropriate to the context.

3.4.3. Guerrilla approaches that changed New York – Elizabeth Diller

Visiting the High Line in the Meatpacking District of New York was not on our schedule, but I convinced Stephan Welz and Professor Melck to make a detour under the pretext of visiting the new Whitney Museum that was under construction at the time.

The New York-based practice, Diller Scofidio + Renfro (DS+R), famous for conceiving the acclaimed High Line park in New York City (in collaboration with James Corner Field Operations and Piet Oudolf), started out as a practice doing experimental installations. Architecture critic Rowan Moore (2019) states that the word "performance" encapsulates the outputs of DS+R: "It's in their early installations … but it is also in the moves they make – their manoeuvres with mayors, developers and media – to get what they want and what they think is good for cities" (Moore 2019).

Jencks writes that "… needs and purposes are normally frustrated by the great time and energy expended in their realisation" (Jencks & Silver 2013:15). Adhocism can fulfil needs almost immediately, as "… it cuts through the usual delays caused by specialisation, bureaucracy and hierarchical organisation" (Jencks & Silver 2013:15). The ad hoc approach sidesteps convention and thinks on its feet. This can be likened to the guerrilla approach Mathews and Associates Architects assumed with Cool Capital as well as our tactics to ensure that budgets allow for art in buildings. Adhocism is also an outlook that views all requirements, whether the beautiful entrance hall or the ugly EXIT sign above the door, as "an opportunity for delight", because it understands that the "… creative treatment of these warts [may be] the most enjoyable parts of a design" (Chimero 2012:105). Adhocism relies as much on curation as it does on creation.

Elizabeth Diller attended a New York high school which specialised in art. She opted for a degree in the arts at the Cooper Union, pursuing filmmaking and photography. She had started to explore photography during her high school years, an era of anti-war protests (Bailey 2019). At some point during her studies she took a class called Architectonics in the architecture department. The course introduced her to John Hejduk, the dean of the school. She remembers him as "a guru, a poet, and an architect" (Bailey2019). The course was fascinating and it allowed her to think about space in a different way. She transferred to architecture, but without any real desire to be an architect one day. Diller recounts that she did not graduate with the intention of pursuing a career in architecture as such: "I wanted to work in space" (Fazzare 2019). She hoped to explore the crossover between space, media and film. She returned to the Cooper Union to teach, and during this time she "decided to experiment with bringing media into space-making" (Diller in Bailey 2019). She recounts, "I never needed the clarity of either being a professional architect or being an artist, and found some kind of middle ground that was contaminated from all sides" (McGetrick 2011).

According to Diller, architects should be asking the right questions, rather than wasting time trying to answer bad questions. It isn't an autonomous discipline; quite the contrary. It is a discipline that crosses over "politics, policy, economics, culture and cultural concerns" (Diller in Bailey 2019). One needs to be a hustler, networker and connector (Noble 2020).



Figure 147 The Highline in New York (Author 2013)



Figure 148 The Highline from below (Purnell 2012)

DS+R approached the High Line with the following attitude: they knew they would have to pitch the project based on its merits of economic growth in a city driven by real estate. In essence, the project brings people together for a very old-fashioned activity: walking and sitting (Figure 147, 149). As Diller says, "There's not much you can do there. You can't really throw baseballs around, you can't bring a bike or dog. You can walk and sit. But this was a total discovery for New Yorkers—the notion about doing nothing" (Diller in Bailey 2019). In spite of the lack of apparent things to do on the promenade, "… the influence of the High Line has also infiltrated the surrounding buildings. Many of its neighbours seem to have been inspired by the creativity and design of the park and in some places they even seem to be 'putting on a show' for the passing visitors" (Purnell 2012:106). Buildings that previously had their backs turned to the railway line are now vying for a view of the High Line.

The transformative impact of the High Line inspired me to also make a difference in my city. Reflecting on this, I can see the seed of Cool Capital germinating years before it sprouted. The High Line proved to me that an E-D practitioner should use all tools at her/his disposal to materialise a vision one believes in, like business acumen, networks, contacts, challenging bureaucrats, perseverance and peripheral vision able to spot potential. As professor Jonathan Noble told me in our first PhD symposium: "Pieter, you must make it clear that you are a hustler, networker and connector" (Noble 2020).

I have spent some time on the High Line experiencing how the adaptive reuse of existing infrastructure and the possibilities of the existing route (cinematic movement) was curated, while incorporating landscape architecture and street furniture design. Diller considered a series of framed views and platforms, social and pause spaces, linearity which all enforce the cinematic architectural quality of the project. The fact that she looked at space through multi-perspective lenses like film and media significantly impacted my personal E-D design and practice attitude.

However, it is Diller's attitude toward guerrilla tactics which I found most compelling. With the Cool Capital initiative, we ignored bureaucrats and just continued with our interventions, promoting adhocism in order to make design accessible to the public. I received phone calls from artists and creatives asking permission to do installations all over the city to which I just replied, "Yes, sure". The bureaucrats phoned me when an intervention made headlines and landed on the covers of newspapers asking "Was that you guys", to which I replied "Of course". Cool Capital had a great impact on our city with over 150 installations completed by members of the community.



Figure 149 People relaxing on the Highline (Purnell 2012)

3.4.4. The Johannesburg Holocaust and Genocide Centre – Lewis Levin

Closer to home, the Johannesburg Holocaust and Genocide Centre (JHGC), designed by Lewis Levin, was established in 2008 and officially opened to the public in March 2019. The aim with the Centre was to support the history curriculum of high-school learners, and to create a space of commemoration and dialogue on holocausts and genocides (Nates 2020).

Comprising space for public events, permanent exhibitions, a bookshop, a memorial garden and a resource centre, the Johannesburg Holocaust and Genocide Centre draws parallels between the Jewish Holocaust and the Rwandan Genocide. It is located off Jan Smuts Avenue in Forest Town, close to the Johannesburg Zoo on a site that, according to Levin (May, 2018), "… was spot on, because it had a public side and addressed the fast moving traffic on Jan Smuts Avenue and also the quiet neighbourhood and landscapes …" on the other side. The property was the site of an old fashion museum which had been donated to the city by two Jewish sisters, with the express wish that the site be used for a museum or site of commemoration (May, 2018). Levin was approached by the South African Holocaust and Genocide Foundation to assist with the design, having worked on a variety of Jewish community projects in the past (May, 2018).

I met Lewis Levin at the 2018 Corobrik SAIA Architecture Awards ceremony where he received a well-deserved Award of Excellence for the JHGC. We were placed at the same table during the function and had a meaningful conversation about architecture. The passion with which he spoke about the project was inspiring and invigorating. It was clear that he was personally invested.

Levin's intention with the Centre was to create a work of architecture that would reflect the artefacts and witness accounts of genocide survivors. The building had to encapsulate "a history of horror, pain and resilience" (Nicolson 2015), yet at the same time "provide an uplifting message" (May, 2018) and a space in which initiatives for a better society could be hosted.

I visited the JHGC several times during its construction phase, as we were busy planning the Javett: UP with Stephan Welz who lived in the area at the time. It was an intriguing project from the start. During my research for this thesis I visited the completed centre. A guided tour and interviews with various users of the building provided insight into the profound visitor experience and the relationship between man and edifice.

The material choices immediately sparked conversation. I remember thinking when I drove past the construction site, how can an architect specify such an ugly brick? A mundane one associated with old



Figure 150 The JHGC: burnt bricks (Kruger J. 2021)

spec houses … Catherine Boyd, our tour guide, informed us that the bricks were selected from the kilns to represent the German industrial buildings of the Holocaust. The bricks are slightly deformed and burnt and were bound to be discarded, much like the bodies of the Holocaust victims. The bricks are thus an apt analogy for the atrocities and the gas chambers in which they took place. Furthermore, English bond was used throughout, as this bond is characteristic of the industrial buildings of the era. The clever use of masonry alludes to multiple interpretations (providing high propositional density) and gives meaning to the experience of place by imbuing the building with narrative depth (Figure 150).

The cobbled courtyard is another fitting example (Figure 151). The architect sourced granite off-cuts from a tombstone manufacturer. His intention was to reference the cobblestone streets of Europe where the atrocities of the Holocaust took place. To Boyd (2020), what is more interesting, though, is "how the school groups interpret the experience and materials". Some read it as a representation of the millions of souls lost; others see the variation in finishes and colour as a representation of different cultures, languages and races that co-exist within the space. This testifies to the open-ended nature of E-D and its ability to inspire multivalent readings.



Figure 151 The JHGC: paving detail (Kruger J. 2021)

A striking feature is the large, rough concrete wall that faces the courtyard. Railway tracks are embedded in its surface and tell the sad story of the tracks that transported millions of people to their deaths. This wall serves as billboard, artwork and facade. Boyd (2020) emphasises that the wall is like an urban artwork and landmark which is clearly visible from Jan Smuts Avenue and is often used to direct people to the Centre. The narrative is extended in the interior where voids have been formed in the same wall, referencing the missing tracks and placing the focus on the large stones used as aggregate in the rough walls. Many read this as a reference to the hard labour prisoners were subjected to in the concentration camps (Boyd 2020). For the first-floor level exhibition halls the "… language of the railway car was dismembered and reassembled as a façade facing the busy street, using steel members and wooden slats" (Eicker 2018:25).

Natural and artificial lighting were important design considerations. In contrast to other museums honouring the same topic, the JHGC is filled with light to make the visit and experience less gloomy (Figure 152).

The lighting also emphasises that the atrocities that the Centre commemorates did not take place in the dark. Shirley Sapire, a volunteer who works at the Centre, puts it as follows: "The neighbours can see in. That's an important point: Holocausts and genocides happen in the light, not behind closed doors ... It's a matter of whether people want to see" (Sapire 2020). The visual connection between the gallery space inside and the street outside further strengthens this idea of 'atrocities in plain sight'.

Tali Nates, the Centre's founding director, concurs: "Levin wanted to bring the windows all the way down into the exhibition space – quite unusual. His intention was to link to the exterior – to see and hear" (Nates 2020).

Artificial light is used just as powerfully. In the hall, a flickering light represents the way light enters through the slats of a moving cattle truck or railway cart. Carefully concealed lighting in other areas creates a soft glow on floor surfaces, while minimising glare on the exhibitions.

In the permanent exhibition on the Rwandan Genocide, a circular structure offers a dark, secluded space in contrast to the light, white exhibition around it. This transition from light to dark provides an experience similar to that of entering the Mapungubwe exhibition from the white gallery spaces of the Javett Art Centre. The transition highlights a change in user experience, and people automatically start to whisper in response thereto. The journey through the Centre ends in a memorial garden that is located between the two wings. Its sensitive landscaping "offers relief and a final message of upliftment" (Eicker 2018:25).

Tali Nates (2020) says that Levin curated his team. He joined forces with others to assist in detailing, managing, marketing and the sourcing of materials. Much of the detailing was resolved by Clara de Almeida and the exhibition was designed and completed by Clive van den Berg when Levin relocated to the Netherlands.



Figure 152 The Johannesburg Holocaust and Genocide Centre: train tracks as narrative (Kruger J. 2021)

"The architects put in a lot of effort!" declares Nates (2020). Levin had to improvise, innovate and fulfil many roles, from obtaining funding to design and execution. Levin was both architect and project manager, and practically fulfilled the role of contractor as well. Employing a main contractor was an inappropriate solution to their funding model, as they did not have a lump sum to pay a contractor to source all the materials. Instead, Levin (Eicker 2018:26) explains that they "chose to view this as a community project with very little money but a lot of goodwill". They used a team of labour-only contractors who were coordinated by the professionals on the job and led by Levin himself.
In his personal capacity, Levin also spent a lot of time sourcing donations for the materials and for the fees of labourers and professionals. Nathan Silver, co-author of Adhocism: The case for improvisation, refers to this way of working as "practical adhocism" – using materials and human resources which are at hand (Silver 2013:110).

The project depended heavily on donations. Items from office furniture to first-aid equipment were sponsored. A cement factory contributed cement and the glass and granite were also donated. To maintain the integrity of the design, the donation of materials had to be negotiated. As much of the material was received at cost price or for free, the team could not always expect to receive material on site as planned. In many instances promises were not fulfilled, which resulted in delays and necessary improvisation. To solve the problem of money, time and coordination, a decision was made to source and commission every component of the building from within a 30 km radius of the site. "Levin managed all the trade contracts so that there were no mark-ups" (Eicker 2018:29). The relationships that he had

built over the years in the construction industry were instrumental in obtaining the assistance his team needed. People responded to the "goodwill of the project". Levin (Eicker 2018:26) recounts the story of a man who "… phoned out of the blue, introduced himself, and said that he had a debt to settle with the Almighty ... He wanted to be part of the project."

During the course of the project, Levin trained unskilled labourers to execute the building work, as specialised contractors were unaffordable. The lack of access to skilled labour and material did not, however, compromise the detailing and the final quality of the building. Rather, this constraint was met with creativity on the part of the architect. The need for a better understanding and relationship between architect, supplier and craftsman led to some of the most successful elements in the building. One such example is "… the way that glass and steel come together in the facades, balustrades and office partitions. This was done by connecting the steel supplier and glass cutter to eradicate, as far as possible, wastage of materials and mark-ups … [By] working with the industry-standard sizes of raw steel as far as possible, a puzzle of components was developed that clip together, resulting in both clever detailing and small quantities of waste" (Eicker 2018:29). Similarly, cost effective LED strip lighting was integrated with the structural I-beams and aluminium lips of balustrades, eliminating the need for cable trays and costly fittings.

Levin's approach to detailing explores "the possibilities of innovation and invention" (Frascari 1996:501) and, in doing so, bestows harmony onto what could otherwise have been a disorderly amalgamation of found objects. In the Centre, details have rightfully been restored as integral parts of the building, rather than only featuring on an abstract production drawing (Frascari 1996:503). The details recount the context, history and the human condition that the Centre represents. Moreover, the whole building is the result of the story of the construction process and speaks of the collaboration between sponsors, consultants, craftsmen and architects. It encapsulates what Kate Nesbitt refers to when she describes "… construction as a process of 'becoming' [which] develops a material narrative" (Nesbitt 1996:494).

Hustling is an integral part of E-D practice. Building networks, negotiation and getting buy-in on one's project is often necessary to turn dreams into reality. A currency of exposure can be just as valuable as monetary compensation. Levin and his team may not have become rich through the construction of the JHGC, but their architecture testifies to their abilities as designers. I can relate to and appreciate Levin's enterprise and determination. In the construction of my own two houses I had a similar experience of sourcing materials at lower prices, and using what I could find in innovative ways to make do on my



Figure 153 The Johannesburg Holocaust and Genocide Centre (Kruger J. 2021)

limited budget. Our current Oaktree office was built in a similar fashion: using repurposed materials, samples and off-cuts, without compromising on design and spatial quality. The school projects also come to mind: the after-care centre at Laerskool Pretoria-Oos was a passion project constructed on a tight budget. The refurbishment of the AHMP school hall also resulted in a similar architect-as-builder situation when the main contractor was declared bankrupt. Instead of re-tendering, I convinced the board that I could finish the AHMP hall as owner-builder.
This afforded me the opportunity to curate during construction and experiment without the fear of variation-order claims depleting the budget.

Adhocism, the "work with what you have" attitude (Jencks 2013:105), denotes a method of design which is frugal yet innovative. It makes a case for improvisation, and promotes a "… general and loose approach to a problem rather than a tight and systematic one" (Jencks 2013:16). This quote describes the approach Levin and the team took with the design and construction of the JHGC. The design was flexible enough to be informed by the materials and skills at hand. Similarly, the completed building allows for a fluidity that Nates finds particularly interesting: "It allows us to continually change the way we function as an Institute" (Nates 2020).

A visit to the building allows one to understand the narrative depth and propositional density inherent in the edifice. Visitors' comments and the impressions of the Centre's staff are testament to the fact that the building succeeds in fostering relationships with its users. Sapire (2020) mentions that, even prior to the completion of the exhibition, "people just [came] to see the building". The architecture makes it a destination worth visiting.

Lewis Levin's handling of the Johannesburg Genocide and Holocaust Centre project illustrates how constraints can be met with creativity through an ad hoc 'Boer maak 'n plan' attitude. The capacity for "allowing approximate solutions rather than perfect ones" (Silver 2013:169), without compromising on the narrative of the building and its propositional density, is integral to the open-ended nature of explorative divergence.

Levin is a fellow South African architectural practitioner and it is worth reflecting on the way his work cast a new light on my own divergencies. In terms of curation, it is evident in the sophisticated exhibition strategy of the JGHC that Levin worked closely with the client, ensuring flexibility to accommodate future exhibitions which require curatorial insight. This is similar to the approach we followed in designing the Javett: UP. In addition, it should be pointed out that Levin (as project manager) had to carefully curate and choreograph his team. The impact of this aspect of praxis on the work of MAAA will be discussed in more detail in Chapter 4. Sculpturally, the JGHC utilises formgiving, materials and textures to further and deepen the narrative depth of the building. Cinematic architectural choreography is evident not only in the way spaces flow out from the massive central foyer, which acts as an orientational device linking the gallery platforms, but also in the intentional exploitation of light, again deepening the narrative depth of the design.

3.4.5. Summary: Like-minded contemporaries

As students of architecture, we looked up to the previous generation and their work remains an inspiration to this day. Our contemporaries provide another type of reference: from them it is possible to understand the process of design and the thinking behind buildings. They also grapple with situations similar to ours, and studying them yields ways of approaching our own work. From the discussion of these contemporaries we can summarise key characteristics of the E-D practice.

The E-D practice flourishes in cross-disciplinary situations offering opportunities for cross-pollination; thereby bringing more dimension to architectural design projects. It welcomes contamination and uncertainty and doesn't view architecture as an autonomous discipline. Instead, it relies heavily on building networks and forming relationships with people outside the discipline of architecture.

A focus on making, experimentation and discovery, as opposed to perfectionist planning, especially in the conceptual phase, is a crucial outlook in the E-D practice. E-D practice favours an open-ended design approach which allows the process to develop and the end product to emerge gradually.

E-D is contextual: it uses what is readily available to inform the architectural approach to a given problem. In this sense it may be seen as a form of adhocism – frugal yet innovative. E-D practice is able to anticipate the unpredictable nature of construction, and enables designing for flexibility and imperfections, which makes it especially suited to the construction industry of the Third World.

Another way in which the E-D practice takes an ad hoc approach is in its dealings and manoeuvres with committees and the law to get things done, often in guerrilla fashion. The E-D practitioner is a hustler and is able to assume multiple roles, venture outside their traditional scope of work, and go the extra mile to get things done.

Due to the nature of the E-D process, products and projects from the E-D practice are imbued with metaphor and encourage multivalent readings. Architectural elements are often practical on the surface, yet rich in meaning and narrative.

In summary, the E-D process is multidisciplinary, open-ended and ad hoc in its use of resources – whether material or relational – while attempting to imbue meaning by using elements with propositional density. Its aim is to create a built environment with narrative depth and, ultimately, edifices that people can relate to.

3.5. Theoretical premise

> Architecture as a projective and creative aesthetic practice can never be both solidly and safely guided by critical theory which is retrospective by definition. The projection of architectural thought into a building and its prospectively hoped-for aesthetic effects will always be an **uncertain stab in the dark** (Graafland in Sykes 2010:474).

Arie Graafland, architecture professor and thinker, aptly states that architecture isn't easily led by theory and that theory is, more often than not, reflexive in nature. In Chapter 2, I defined my architectural concern (my 'why') as an endeavour to create architecture to which people can relate. From my experience, spatial experiences are strengthened through places and elements with a high propositional density and narrative depth. Obtaining high propositional density and narrative depth is made possible through E-D tactics. This section will summarise these concepts and provide a retrospective theoretical underpinning for the thesis.

The impact of secondary theoretical positions like Dualism and Adhocism on the work of MAAA will be explained in the following chapters, in light of the influences from my upbringing as laid out in Chapter 2. These theoretical positions will not be formally discussed but will be used to buttress E-D as a mode of practice and contribute to the main theoretical stance where applicable.

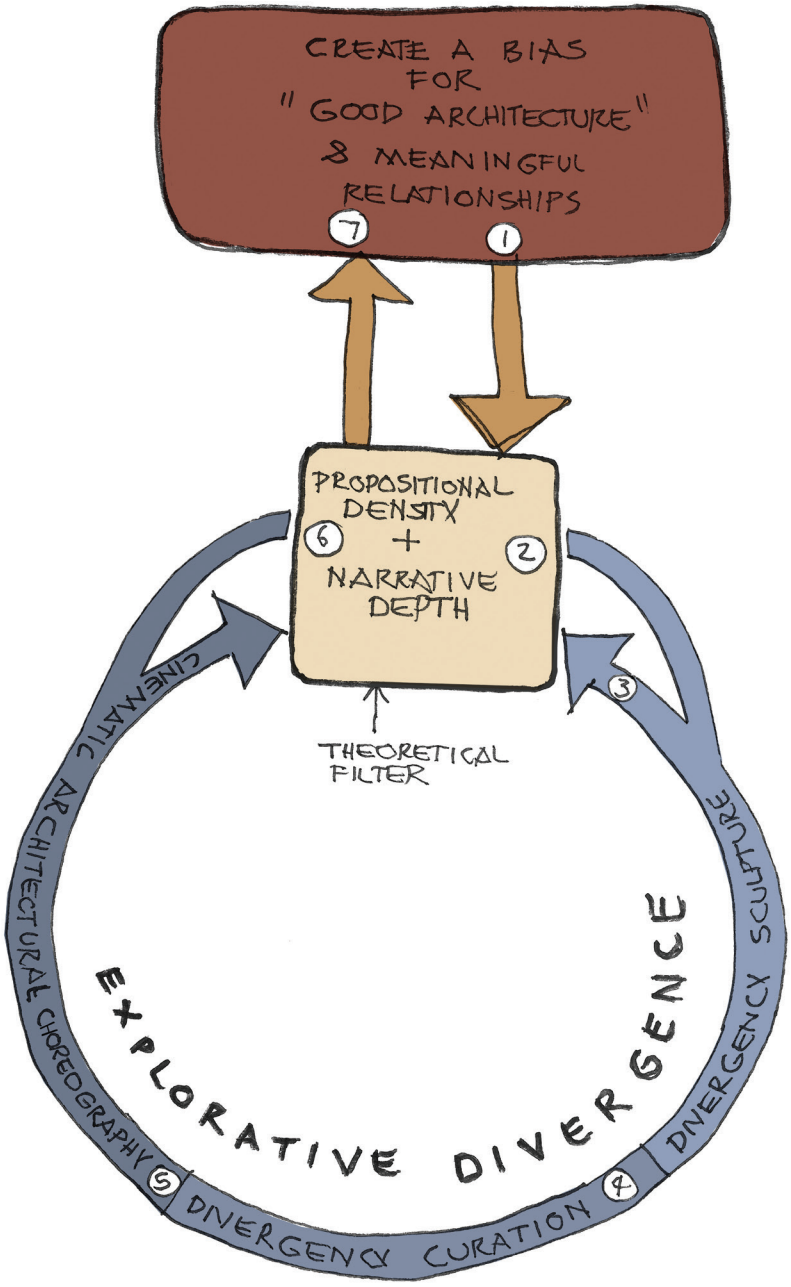


Figure 154 Visual representation explorative divergence (Author 2022)

3.5.1. Propositional density

I stumbled across the theory of propositional density when I was commissioned to design a logo for a multinational company. Graphic design educator and researcher, William Lidwell, defines propositional density as "… the relationship between elements of a design and the meaning they can convey" (Lidwell *et al.* 2003:190), which holds that a design is more interesting a nd memorable when its elements have layered meanings (Figure 155).

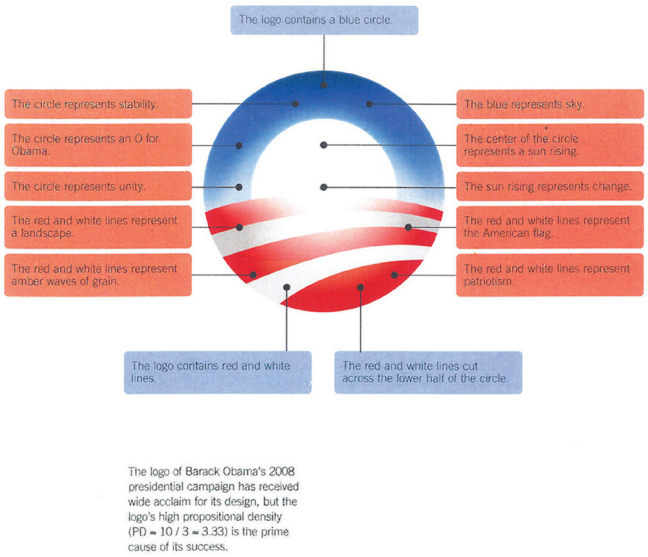


Figure 155 Diagram explaining the propositional density of the logo for the Obama presidential campaign (Lidwell *et al*. 2003:191)

In architecture, and in this thesis, I adapt Lidwell's concept of propositional density and define it as ***the complexity (density) of the meanings (propositions) of an architectural element or elements***. Propositions can be further distinguished as being surface propositions – the multifunctionality of architectural elements, or deep propositions – the underlying sculptural and cinematic propositions of these elements.

I have found that applying this theory to the discipline of architecture gives architects a tool with which to assess their own designs, forcing them to think and to question design on various levels. As an example, consider the escalators of the Centre Pompidou discussed earlier in this chapter:



Figure 156 The author on the escalator at the Centre Pompidou (Mathews A. 2005)

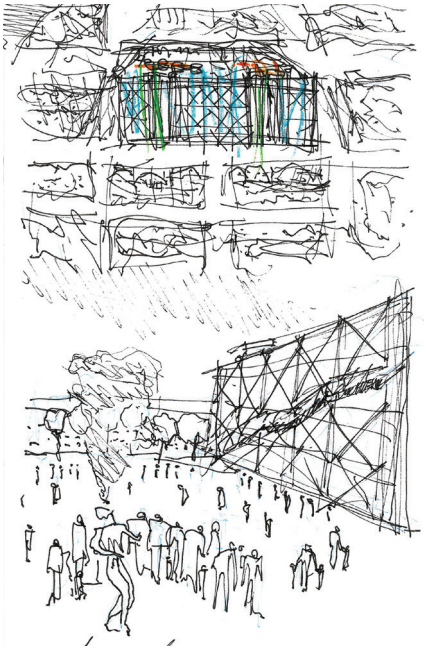


Figure 157 Journal entry on a visit to the Centre Pompidou (Author 1989)



Figure 158 Journal entry on a visit to the Centre Pompidou (Author 1989)

The escalators can be reduced to two main elements: a stair and a glass tube (Figure 156-158). They have two main functions (or surface propositions), namely to move people up and down and to offer views over the city. With regards to their deep propositions, one can read them as ribbons on the facade of the building, futuristic funiculars, or snaking creatures.

In this study I will argue and provide evidence for the fact that buildings with high propositional density are more engaging, and that they enrich the experience of space as a result of the multiplicity of readings that can be taken. I will argue that E-D methods and thinking aid the development of designs with propositional density.

"Propositional density" holds that a design is more interesting and memorable when its elements have layered meanings. In this thesis it can be defined as the complexity (density) of the meanings (propositions) of an architectural element or elements. Propositions can be distinguished as being surface propositions – the multifunctionality of architectural elements – or deep propositions – the underlying sculptural and cinematic propositions of these elements (Lidwell et al. 2003:190). For instance, the use of a single architectural element for multiple purposes is a strategy that can increase propositional density, as the same architectural element can have different meanings and functions depending on how it is used and in what context.

One of the key insights of this strategy lies in the way it allows architectural elements to be designed to be flexible and adaptable to multiple uses, while simultaneously increasing the interpretive content available to the deep reading of said elements. For example, a retaining wall can also serve as a planter, seating, podium, platform, viewpoint or stair. In addition, this approach can be applied to spaces where a room is designed to serve multiple functions such as a living room, office or a guest room, by using movable partitions. Furthermore, such physical or surface propositions can be augmented with deep propositions that derive from latent associations and interpretive connections. In this study the focus will be on deep propositions sprouting from sculptural, curatorial and cinematic architectural choreographic concerns. An example is where the functioning of a retaining wall is augmented through sculptural sensibilities by bending and curving in a way that recalls themes latent in the rest of the design, or when it is curated to lead the eye to a specific focal point.

The main difference between Propositional density and Narrative depth lies in the fact that the former can be applied to any building or element of a building. It is therefore not necessarily site or culture specific.

In summary, it is argued that the use of a single architectural element (surface proposition) for multiple purposes, coupled with the augmentative deep propositions made accessible by being open to the creative capacity inherent in the core divergencies of this study, would not only increase the potential for the deep reading of an element or space but will ultimately contribute to the experiential richness of a building, as it allows for different interpretations and meanings to be assigned to the space on a deeper level.

3.5.2. Narrative depth

"Narrative depth" refers to the complexity of a story and its themes. In this thesis, narrative depth refers to architecture that attempts to reveal the associated narratives of sites and cultures by conveying stories through architectural elements. One can differentiate between visible and unseen narratives. Visible, or seen narratives, are direct references or representations of the narratives associated with the site. Unseen narratives refer to those representations that can only be understood if the viewer has specific insight.

Narrative depth thus refers to the idea that a building can be designed to tell a story or convey a specific message through its design, layout, and use of materials. The design can be used to create a narrative or symbolic experience for the user, rather than simply fulfilling a functional or aesthetic purpose.

One of the key insights of narrative depth is that the design can be used to create a sense of meaning, place, and identity. Additionally, it suggests that the design can be used to evoke a sense of the past, present, and future, by using historical references, contemporary elements, and futuristic elements. This is where narrative depth differs from propositional density as it is embedded in the situation, the culture or the site.

I distinguish between the seen and unseen or obvious and deep narratives. The obvious reveals itself, for example, using the same brick colour to acknowledge an adjacent heritage building, whereas a deeper or latent narrative needs revealing. In order to achieve Narrative depth the designer may resort to symbolism, metaphor, or analogy to create a narrative that resonates with the user on a deeper level.

An example of this deeper level of narrative depth is a screen I designed as a focal point for the AHS Art Campus; I found an old version of the school song, had it translated into braille and scaled up, with the resulting 'graphic' being cut from steel. This deeper level has to be revealed through various strategies at the disposal of an E-D practitioner such as social and conventional media, plaques, unveilings etc. I revealed the deeper meaning of the screen in a school talk, the printed media and with an information plaque.

Narrative depth is related to other theories of architecture such as phenomenology, which emphasises the user's perception of the building. For instance, the idea that it is equally important to 'read' the content of a site as it is to 'analyse' it. Narrative depth is also a key assumption incorporated in the notion of symbolic architecture, which is focused on the use of symbols and signs in architecture. Besides ascribing certain values or content to specific elements, the designer also assumes that others will be able to access the latent meanings implied in the design.

3.5.3. Public Experience

Both narrative depth and propositional density can be determined or guided by the E-D practitioner. The richness of the work is dependent on the E-D methods employed by the designer and the ways in which they draw on the gifts of their preferred divergencies.

Works of architecture which are propositionally dense and convey deep narratives enrich the public's experience of place. The E-D practitioner can, however, not control these experiences. What the public will experience depends on the associations, interpretations and imagination of each individual.
The catalyst for public experience is created by the E-D practitioner, but the level of engagement and understanding is completely open-ended. The diagram in Figure 159 illustrates the relationship between these concepts visually.

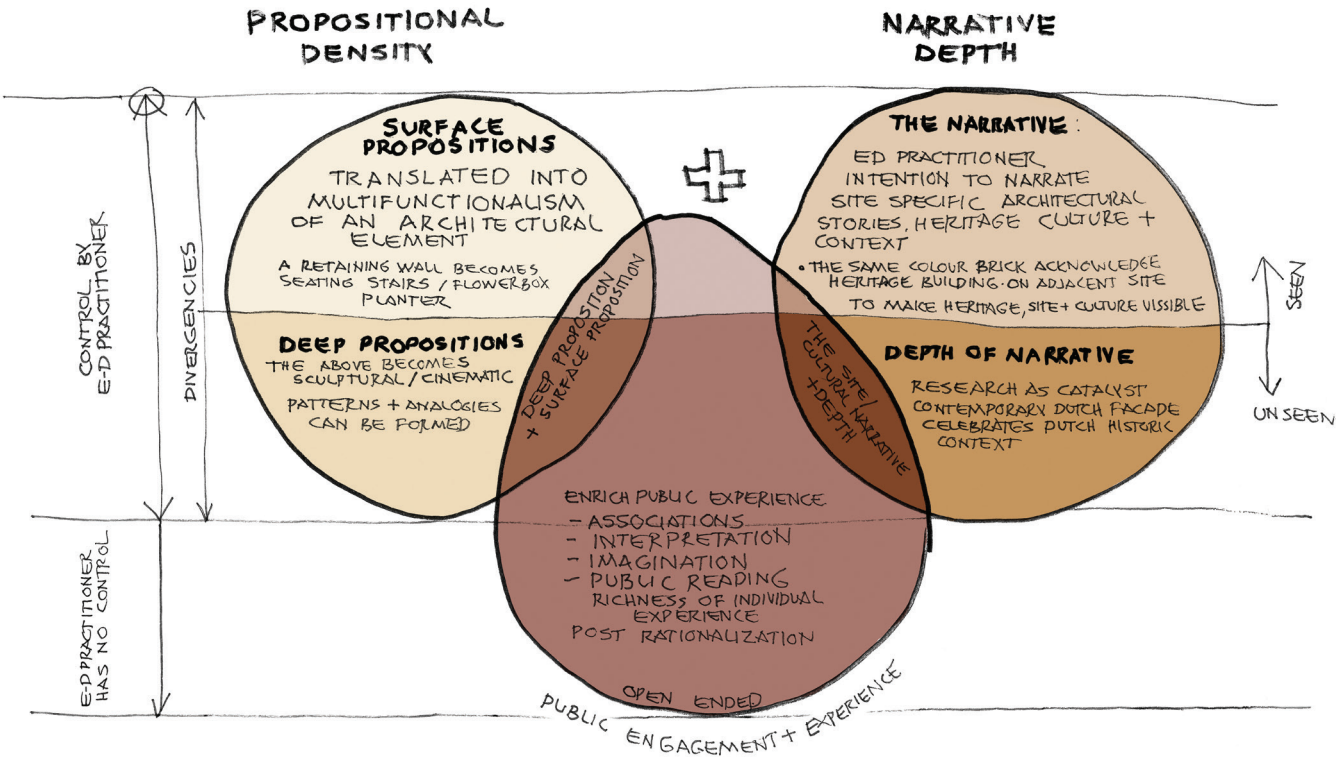


Figure 159 Diagram representing the theoretical concepts discussed in this thesis (Author 2022)

3.6. E-D methods

In this chapter, some characteristics of E-D as a means of practice were discussed and identified. This was done through reflecting on an overview of my web of influences, work of contemporaries and various study tours that formed and inspired my design sensibilities and E-D mentality. The main argument is that the E-D approach contributes substantially to creating propositional density and narrative depth in works of architecture. The E-D methods discussed can be summarised broadly under the following categories:

- E-D enables ad hoc use of materials and resources: i.e. use of what is readily available to inform the architectural approach to a given problem.
- The E-D practitioner is able to anticipate the unpredictable nature of construction and designs for flexibility and imperfections, which makes E-D especially suited to the construction industry of the Third World.
- The E-D practitioner is a hustler and is able to assume multiple roles, venture outside their traditional scope of work, and go the extra mile to get things done. E-D challenges the status quo.
- E-D encourages intuitive making, experimentation and discovery, which are facilitated by an open-ended explorative mindset. This allows processes to develop over time and end products to emerge gradually.
- The E-D practice looks to other disciplines and encourages the creative process to be contaminated by outside influences (including site constraints and the inputs of other disciplines). It relies heavily on building networks and forming relationships with people outside the discipline of architecture.
- Due to the nature of the E-D process, products and projects from the E-D practice are imbued with metaphor and encourage multivalent readings.

When carefully incorporated, this kind of explorative-divergent process offers various advantages when compared to the 'urge towards specialisation' – that so often characterises the construction industry – and opens the way toward rich spatial narratives and stimulating open-ended experiences. Therefore, this kind of process opens the door towards the possibility of a wealth of public readings and engagements to emerge.

Chapter 4 will discuss the characteristics of E-D in order to expand and further clarify the gifts of E-D as a form of architectural practice and a driver of the design process.

4

EXPLORATIVE-DIVERGENCE IN PRAXIS AND DESIGN PROCESS

In Chapter 3, contemporaries and personal influences were looked into to illustrate and define the general characteristics of an explorative-divergent (E-D) approach. Chapter 4 builds on the understanding gained by investigating how E-D manifests in the practice of Mathews and Associates Architects (MAAA). In this chapter, the specific gifts and culture associated with an E-D practice are defined and clarified by delving into the E-D practice model and the E-D design process that it supports. The process of a project will be followed – from its inception to through the design process and its final implementation – to demonstrate and reflect on specific manifestations of E-D. The culture of the office will be highlighted to show what it entails and how it supports the design process. This unique office culture of the E-D practice is rooted in my autoethnographic background, as discussed in Chapter 2, but will reveal aspects that can be generalised and that encourage an E-D approach. Chapter 4 will also touch lightly on the workplace, investigating the effect of the physical environment on the E-D practice.

The chapter is not intended as a guidebook for E-D, but rather contains an attempt to show how E-D thrives as a form of design within an environment that is conducive to its methods. This reflective exercise aims to discover the latent strengths and tacit knowledge of the practice itself and to reinforce our understanding of our praxis. Insight into our practice and design methods will equip the reader to understand the case-study projects which will be discussed in the next chapter.

4.1. An explorative-divergent practice

MAAA is an E-D practice. Our architectural oeuvre covers 13 different typologies, from transport architecture to educational buildings and private homes. In addition to practicing architecture, we also engage in other arts by organizing and curating exhibitions, designing logos and furniture, and publishing books (Figure 56, 57, 161, 162). We also excel in the fields of logistics, town planning and in organising events. We encourage creative activities in the office too, from an internal cake-baking project (Figure 164) to mask making. The photo collage provides visual proof of our divergent activities (Figure 160). More important than what we do, is our approach. To demonstrate that we are more than an office offering a wide range of services, I hope to show that the way we approach our activities is governed by an E-D mindset. Many of these unrelated ad hoc office activities sparked ideas in other fields and resurfaced in later designs and projects.



Figure 160 MAAA praxis collage (Booyens 2020)



Figure 161 Cover of the *Cool Capital Biennale* catalogue, published by Visual Books (2014)



Figure 162 Cover of the second *Cool Capital Guerrilla Design Magazine*, published by Visual Books (2017)



Figure 163 Polystyrene mould for the Nelson Mandela profile bench (Unknown 2016)



Figure 164 The author with a cake he baked in the shape of the Mapungubwe concrete structure at the Javett: UP (Spies 2019)

4.2. Marketing and E-D: the end of one project is the beginning of the next

Practices, especially new ones, are always wondering where the next job will come from. Paradoxically, it is the energy that is put into the conclusion of one project that leads to new work opportunities: one needs to make an effort to take good photos, publish one's work and present it to the public in order to get the next job.

Social and digital media have made the image of architecture just as important as the architectural edifice itself. Graafland (2010:466) notes that architecture has been expanded by the likes of Rem Koolhaas to include writing about architecture, publishing "… critical articles, and [combining] a surplus of photographic material with an ingenious way of presenting". This type of "aesthetic reflexivity" has assumed an important place in the "production and consumption of the culture industries" (Graafland 2010:466). Books, magazines and online publications are components of the mechanism. Given the all-important presence of media in contemporary architectural production, writing and marketing form a significant part of the output of our office.

Marketing is a highly disciplined activity; it is somewhat counterintuitive to the open-endedness one would expect from explorative divergence. I am not sensitive to critics and believe that one should

explore all avenues to reach a target market. I prefer the concept of scalpel marketing, which targets the right audience, instead of a shotgun approach, which aims marketing activities in all directions, hoping that a target will somehow be hit.

In our practice, a publication package is compiled for each completed project. It comprises of edited text, photos complying with print-media requirements, drawings that can communicate the project to the public, and links to any videos or external references. Throughout the phases of a project, progress is documented photographically and photos are tagged with the project name, photographer and a description to ensure we can easily find them in the future. These publication packages are referred to time and again when we need to send out information in a matter of minutes. We don't wait for the media to contact us, but take a proactive approach by generating content and sending it to as many relevant platforms as possible. Over the years we have built up a good reputation, and many editors know they can contact us at the last minute when they are in need of content. Hit some, miss some, but always keep the pantry stocked.

The nature of the publication or media platform determines how we decide to best present a body of work. Entries for regional and national merit awards focus on the architectural merits of a project. Newspaper articles often focus on the benefits of a development for the city and its inhabitants and provide practical information on how it can be accessed. Digital and print media showcase unique features of a design and paint a visual picture. Instagram and Facebook are platforms which allow us to share snippets of information on a regular basis (Figure 166). Live and recorded interviews are used to portray the stories behind the building and give a glimpse of the embodied experience of the place. Our website is ultimately a marketing tool, which provides links to all of the other platforms and paints a holistic picture of each project and of the practice as a whole.

Curation is thus an important skill when it comes to publishing architecture. Advertising has a tendency to irritate audiences, rather than bringing across the message it intends to share. I stand by three principles when it comes to marketing: (1) no paid advertising; (2) only editorials (no advertorials); and (3) promote the team by giving credit where it's due. High tides raise all boats. If a project is marketed, it should benefit all who participated in its production.



Figure 165 Covers of magazines with articles on the work of Mathews and Associates Architects (MAAA 2021)

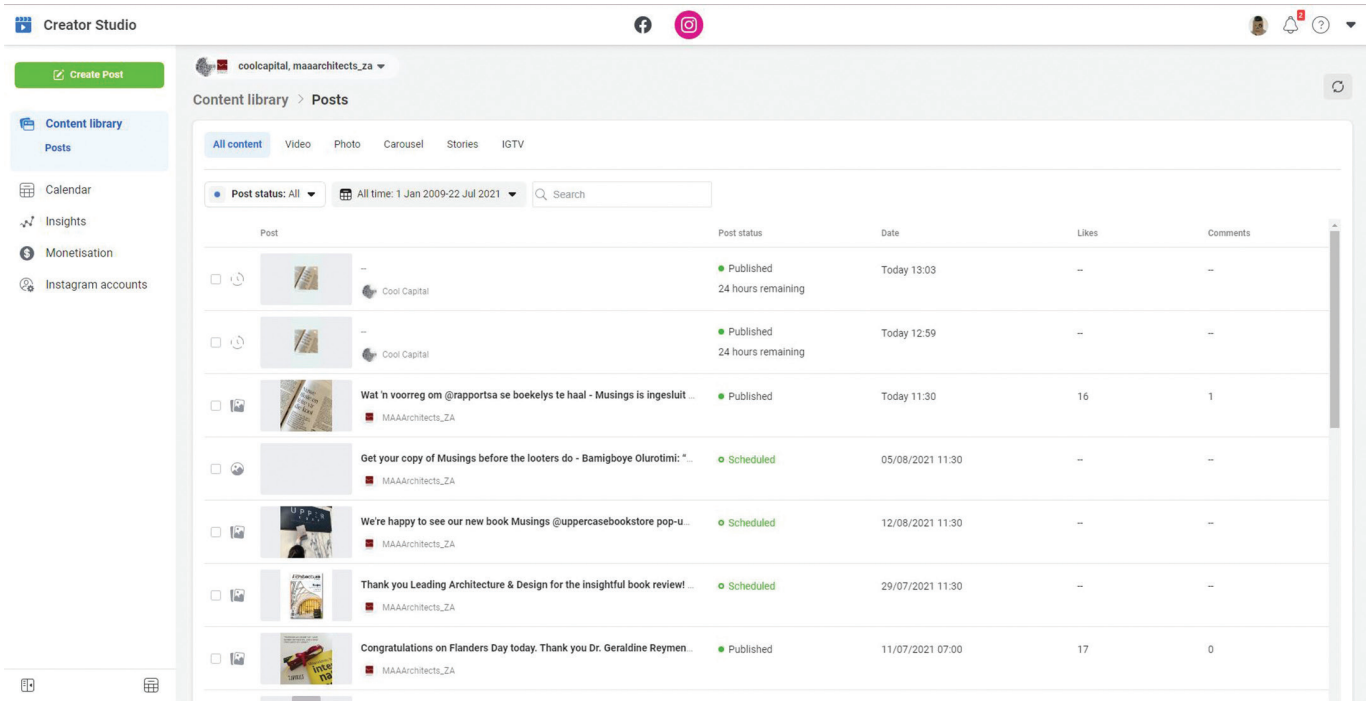


Figure 166 Scheduling social media posts (Booyens 2021)

4.3. Selecting the right projects

Despite our efforts to get our work out into the public domain, we are very selective about the projects we take on. One cannot accept all work and, moreover, not all projects are beneficial for the studio. Architecture, as other art forms, remains a personal endeavour. The studio, by extension, is therefore a domain that should remain healthy if it is to function effectively. To this end, projects are carefully selected and I only take on work that meets the requirements of certain 'screening filters'. In my opinion there is value in what the illustrator and writer Frank Chimero writes: "Saying no beforehand allows yes to be said unequivocally while working" (Chimero 2012:42).

In the process of selecting a project, I will typically consider its potential payoff, the commitment of the client, and my personal interest in the proposed project. The intention is to choose work which offers maximum benefit while keeping risk to a minimum. My subconscious is continuously weighing up the pros and cons: how will a project address our concerns for the community and city, push our agenda for architecture, and create meaningful experiences for users while guaranteeing an income?

It seems ironic that a practice based on open-ended explorative design principles should exercise strict gatekeeping, but I believe it is precisely this strict discipline that is conducive to explorative divergence. Selecting the 'right' projects is key to creating a safe space in which creativity can flourish. Many architects are fooled by the carrot of 'risk', but I prefer not to entertain and please every potential client. We prefer to spend our time on endeavours from which we will gain, rather than wasting time on pie-in-the-sky ideas. We answer all enquiries with a letter explaining our fee structure and the conditions of appointment. For smaller undertakings and residential work, we require a deposit to be paid upfront – a so-called 'acid test'. In this manner we ensure that prospective clients understand the terms and are truly committed to a project before we start working on it. Contrary to what might be expected from an explorative-divergent practice, I value proper paperwork and a clear agreement at the early stages of a project.

4.3.1. Remuneration makes E-D possible

I was fortunate to attend various Design Indabas, and what I found interesting every single year was that the speakers spoke mainly about their avant-garde projects that weren't necessarily generating their main income. What we know and see of well-known architects are their glamour projects, but behind the scenes a large volume of other work is done to pay the bills. A sound financial position is the safety net of any practice. A financially stable practice sets people free from the financial stresses which often inhibit architects from experimenting and thinking creatively.

MAAA were kept afloat by low-cost housing schemes while we did two Cool Capital biennales and all their associated fun projects. These schemes weren't published, but they were our bread and butter. I always tell the office, "First work on paying projects"; there will be time later for the rest. Sometimes you have to take on assignments you don't necessarily like, precisely so that you can do the work you do like.

Yet, these bread-and-butter projects need not be devoid of E-D zest. One such project was the design and placement of houses for Impala Village, a new town development near Rustenburg to house the workers of the platinum mines. Our brief was to design a few prototype houses, place the homes on the erven, and obtain municipal approval. This kind of project brief is not something that architects get excited about, and often the bare minimum is done. I saw an opportunity to apply explorative-divergent thought to the affordable housing market.

Town developments often become monotonous landscapes, but we countered this issue by specifying a palette of various standard colours and painting alternative walls in different shades of colour palettes. We convinced the developer to put some funds aside to landscape the entrance and important nodes within the development. A few large trees helped to make the neighbourhood appear established. We launched a very popular gardening competition amongst the inhabitants that saw neighbours beautifying their stands and encouraging others to do the same. For the property boundaries, I decided to use all the variations of ugly fibrecrete precast wall panels presented in the catalogue. These designs are condemned by architects, but I saw an opportunity to create subtle variety in the neighbourhood.



Figure 167 Impala Platinum Village (Author 2020)



Figure 168 The author at the concrete sculpture made for the entrance gate to Impala Platinum Village (Unknown 2012)

The entrance to the town was treated like that of an estate; we even designed and modelled three concrete sculptures in the form of Impalas (Figure 168). Affordable housing does not need to be devoid of landmarks and personalisation. At the official opening I thought to myself, "This looks like an established neighbourhood." The representative of the Association of Mineworkers and Construction Union (AMCU) thanked me for contributing and demonstrating what affordable housing could look like. Even the so-called 'cash cow' projects deserve the necessary care and creative input that contribute positively to communities. In fact, it is exactly in the most constrained situations where the E-D mindset is most potent. It finds ways to unlock latent value as well as creative opportunities. Good design can "… speak the tongue of art with the force of commerce" (Chimero 2012:64), because design exists in the streets where people live and forms part of everyday life. E-D is not elitist or fanciful. It is ad hoc in recognising the gifts of the situation, and open-ended in exploring latent possibilities and letting new narratives emerge by

focusing on the process (rather than the product). It embraces pluralism and revels in cross-disciplinary contamination, all for the sake of choreographing richer narratives and eking out more venturesome forms of propositional density. It is a design sensibility which shows its true relevance when faced with a potentially stifling brief.

4.3.2. Pro bono work

Another form of remuneration is what I like to term the 'currency of exposure': projects in the public eye with high social impact 'pay' in the attention that the firm gets as a result of the work. Chimero (2012:63) summarises it simply: "Design finds itself in the middle of art and commerce." The dual nature of design implies that its value cannot be determined by commercial standards only. "Design seeks to create experiences in addition to being profitable, so the price and profit of the work represent only part of its value" (Chimero 2012:111).

I am convinced that it is important to evaluate a project from the following three perspectives, and to understand that a certain project which lands on one's desk may not have immediate financial benefits, but that it may give personal joy and that the exposure will pay forward. Oftentimes this is not an objective analysis, but one which relies heavily on intuition. However, we do strictly analyse the prospective client and confirm that

- the client/organisation has access to funding to make the project happen;
- our publishing rights are settled in advance; and that
- appointment letters and paperwork are put in place to ensure that the work cannot be passed on to other architects so as to mitigate further risk.

Risk work does not form part of the vocabulary of my practice. During the time that Jacques Gerber and I ran Mathews & Gerber Architects I learnt that risk is disproportionately expensive. Entertaining uncommitted patrons, clients and developers is just not worth it. I think many architects fall in the trap of trying to land every job and please every potential client. Their goodwill, or perhaps greed, leads to them spoiling uncommitted clients with precious talent and creativity. The Pretoria Institute for Architects (PIA) hosted a debate regarding risk work and I had to debate the counter argument. My standpoint has always been that it is cheaper to take one's office for movies and popcorn than to spend money on salaries, printing, plotting and glossy books for a developer who is just testing an idea or obtaining visuals to sell unprofitable land.

At any given time, projects in the office cross-subsidize one another. We shy away from over-specialization, believing that it is not advisable to place all one's eggs in one basket. A specialised practice is more vulnerable to the shock of sudden change (the COVID-19 pandemic being a prime example). Divergent activities increase the reach of the safety net. A project with good exposure value will offer the opportunity to build new networks, test ideas, create marketing opportunities, expose one to a new client pool, and allow interdisciplinary practises to influence one's thinking. Above all it should be enjoyable too.

4.3.3. Summary: Project selection in the E-D practice

The inlet filters or criteria that help us to decide whether to take on a project are crucial to the way our practice functions and were an important discovery made during this study. Paradoxically, strict criteria in the selection of work allow us to practice in an E-D fashion. The focused pro bono work often leads to monetary paid work in the long run. This dualistic approach to taking on projects is reminiscent of the dualism in my upbringing: my mother grounding us in realism and my father encouraging us to take chances.

4.4. The design process

In the previous subsection it was proposed that the freedom associated with explorative-divergent design goes hand in hand with structured discipline. Beyond project selection, this balancing act also holds true for the design process. The American psychologist Howard Gardner (2006:121) points out that: "Undisciplined creativity is creativity undermined." Structure provides freedom. According to Chimero, "[r]ules need to be set before starting so the work has a more focused direction to travel … These limitations are the fuel for improvisation, becoming the barriers that hold the sand in the sandbox so that we can play" (Chimero 2012:42).

4.4.1. Building an armature from constraints: open-ended pragmatism

As a concept architect, I usually start in a relatively conventional manner: visiting the site, considering the constraints and opportunities, clarifying the brief, and making the client aware of the possibilities. Back at the office, I start by plotting out all the constraints with a pencil and felt-tip pen on grid paper at scale 1:200. Designing at this scale helps me to remain cognisant of the whole. It allows me to see how the arrangement of spaces will work, how spaces will connect, and how they will impact one another. In this way I solve the pragmatic aspects and create a basis to design from. In sculpture, the armature is the metal frame that sets the guidelines around which the sculpture is created. The pragmatic design phase is, for me, the armature of the architectural design process. My sculpture lecturer, Sybrand Wiechers, remarked that an armature is not pretentious; it just has to fulfil its function and that is that. This pragmatic approach to solving planning constraints stem from my architectural education at Boukunde where planning and the mantra "form follows function" were held in high regard.

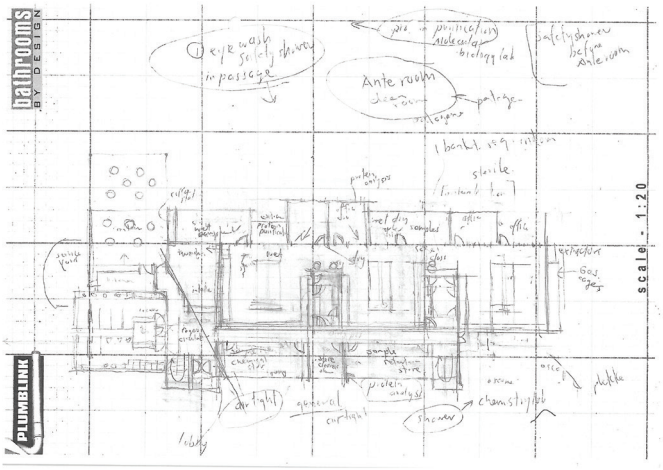


Figure 169 Establishing parameters on grid paper (Author n.d.)

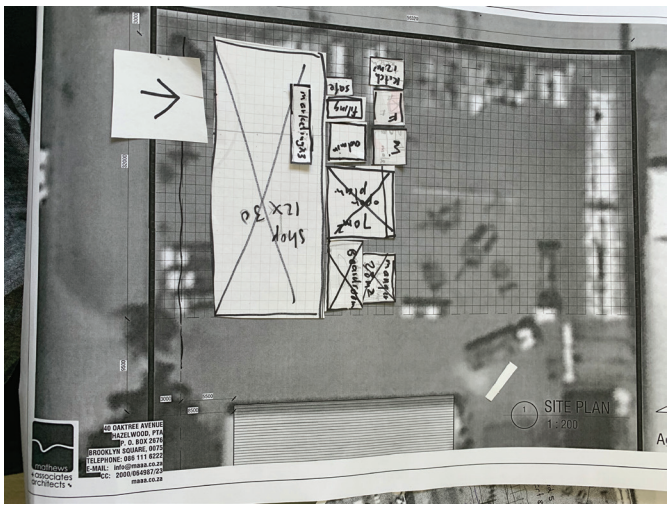


Figure 170 Space planning (Author 2020)

Once the brief has been solved pragmatically and functionally, I can rest assured that everything is in place and focus on design opportunities that address my concerns for the project. I call this 'open-ended pragmatism': once the project has been roughly resolved on a practical level, I can begin experimenting. However, before that can happen, I need to get the client's buy-in. The design is discussed with the client on the hand of freehand drawings. The benefit of using freehand drawings during the first discussion is that they don't seem final; the client tends to participate more in the design process and feels free to make decisions regarding the layout and the spaces. I don't attach much value to these initial sketches. They are mostly done on bumf and, after being traced, the bumf heads to the recycling bin.

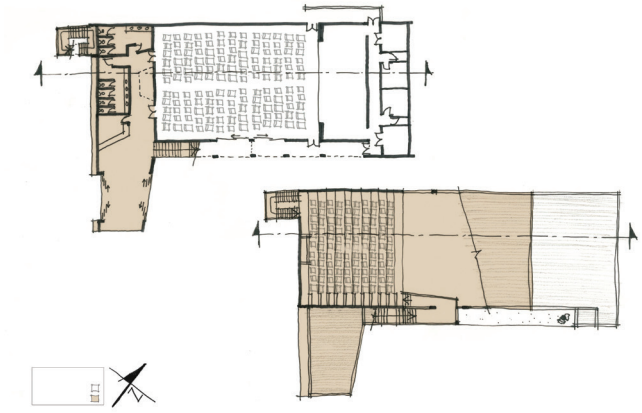


Figure 170 Concept plans for the AHMP school hall (Author 2011)

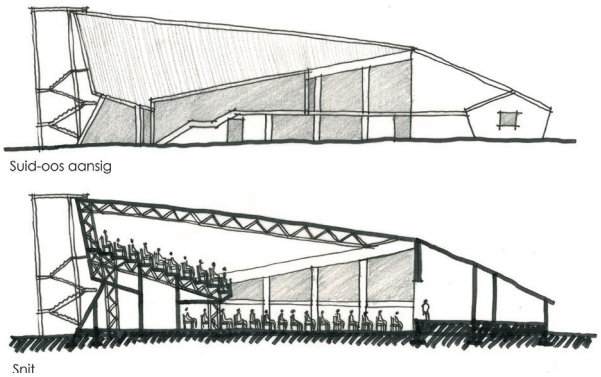


Figure 172 The AHMP school hall: initial concepts (Author 2011)

As with the inlet filters, this initial design step is highly pragmatic: sorting out the functions of the brief and ensuring that the project complies with statutory requirements. Establishing an armature stems from my mother's grounding hand in childhood. The pragmatic requirements ground the project. Once they are in place, the minimum that is expected of an architect has been achieved. After solving the pragmatic aspects, most firms will assign the project to a draughts person who will usually start to prepare technical documentation. For us, however, it is only a start so that the proverbial right hand can take flight.

4.4.2. Deconstructing the armature

At this stage in the design process the pragmatic freehand concept is deconstructed and assessed to see where my concerns can be addressed and the propositional density of elements can be increased to add narrative depth. This stage is highly creative and explorative. The team and I now start to look for gaps, design opportunities, and ways to incorporate our divergencies and use our tactics.
Like Kentridge's working method, it is a process of discovery through making. The late British architect and lecturer Michael Brawne explains that "[d]esigning is not a linear experience, in which you have an idea, put it down on paper, then carry it out and that's that. Rather it is a circular process: your idea is drawn up, tried out, reconsidered, and reworked, coming back again and again to the same point" (Brawne 2003:78). The conceptual approach differs for each project and building. Each project is approached in a manner that is appropriate to the conditions of the project.

A. Sketching

The American architect Samuel Mockbee (2010:125) states that: "The sketch is always out front … The initial sketch is always an emotion, not a concept" and "[i]t's a mark that suggests the possibility of an idea and an ideal" (Mockbee 1998:119). Brawne defines architecture as "the thoughtful manipulation of materials on the basis of ideas" (Brawne 2003:12). Sketching is the first attempt to give voice to those ideas. The interaction between the concerns and constraints of a project starts to manifest once ink is put on paper. The constraints of the project are manifested in my first grid-paper sketch. Layers of bumf become investigations into how the forms can be manipulated to address the concerns. Associate Professor of Architecture at the University of Wisconsin-Milwaukee, Kyle Talbott, aptly says that drawing is "both a process of discovery and evaluation" (Talbott 2004:268) (Figure 173-185).

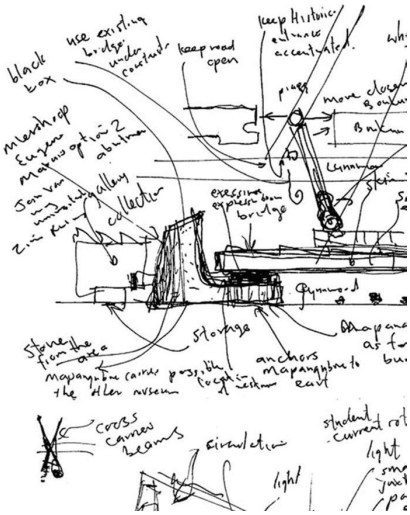


Figure 173 Initial concept sketch for the Javett: UP (Author 2012)

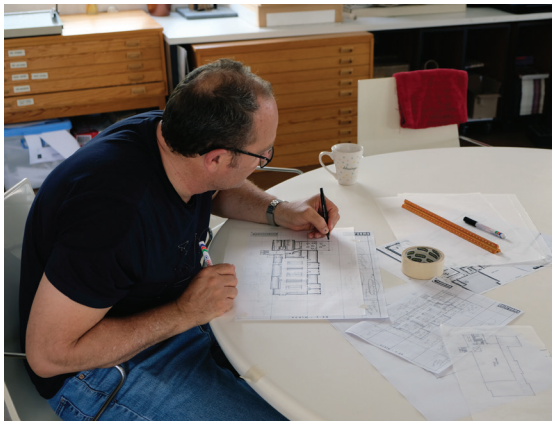


Figure 174 Working on concept drawings (Booyens 2021)

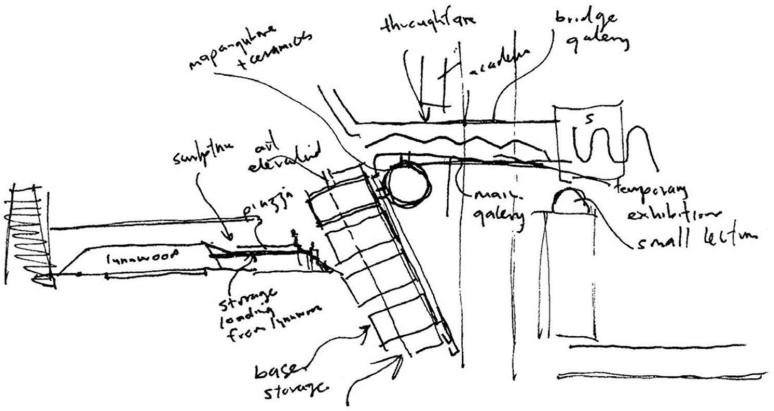


Figure 175 Initial concept sketch for the Javett: UP (Author 2012)

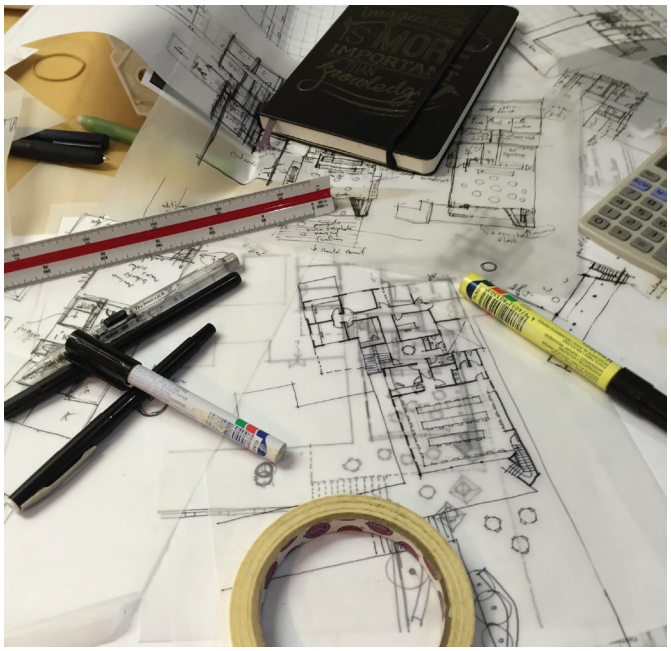


Figure 176 The design process (Author 2015)

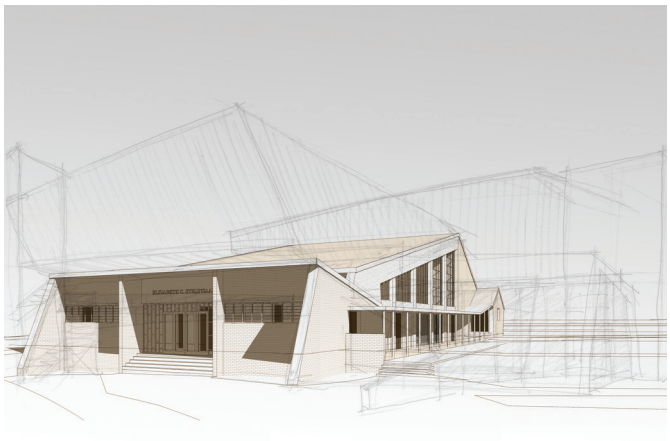


Figure 177 Concept drawing for the AHMP school hall overlaid on the historical perspective (Author 2011)

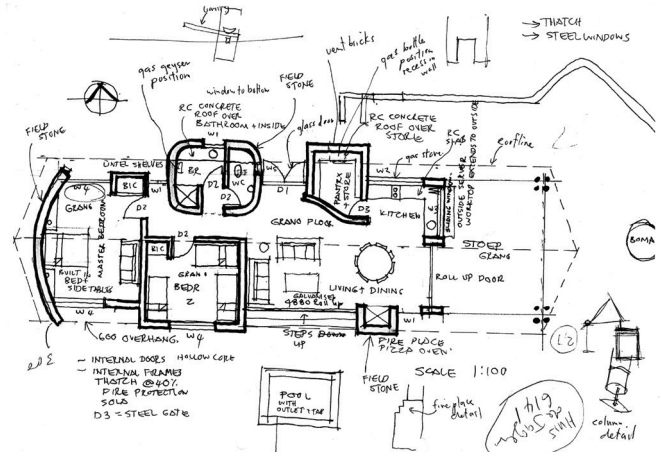


Figure 178 A concept plan (Author n.d.)

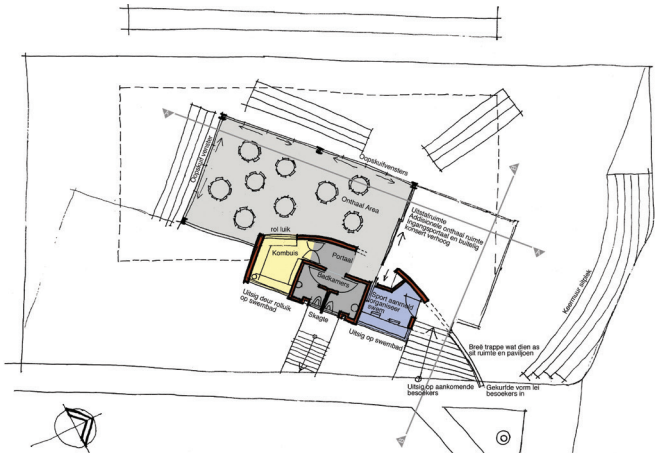


Figure 179 Concept plan for the AHMP sports complex (Author 2011)

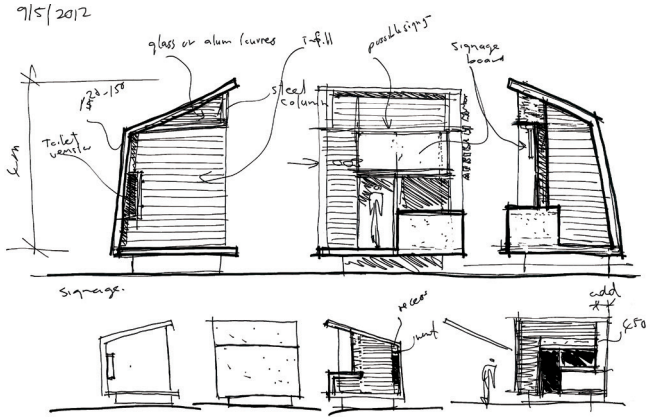


Figure 180 Concept sketch of the AHMP guardhouse (Author 2012)

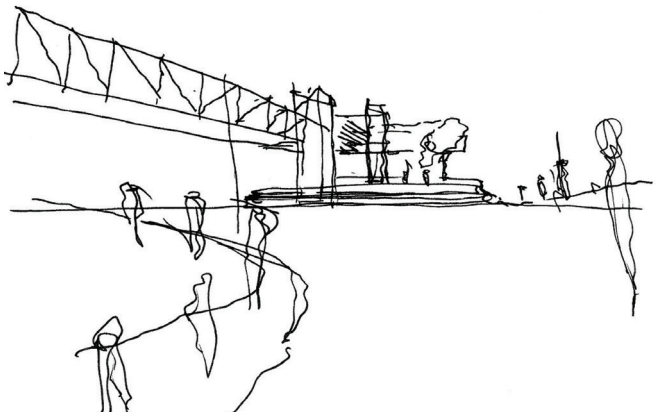


Figure 181 Concept sketch for the Wonderboom Intermodal Interchange (Author n.d.)

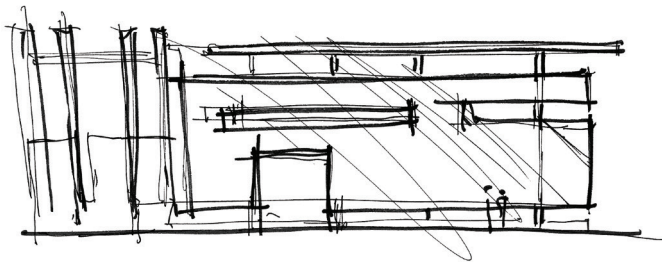


Figure 182 Façade concept for Kee Enterprises (Author n.d.)

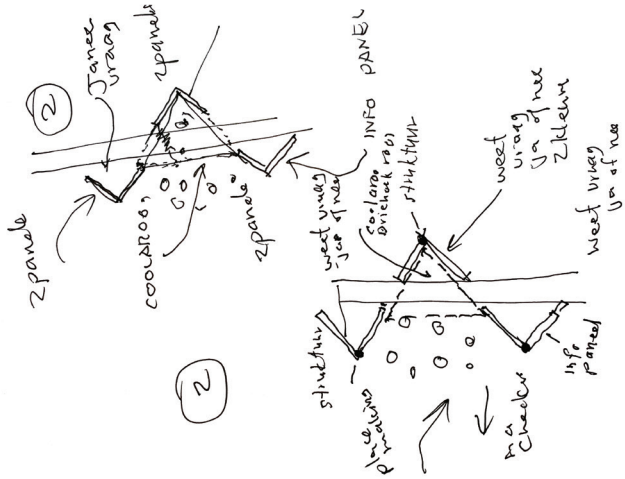


Figure 183 Concept sketch for the Braak Pavilion (Author 2019)

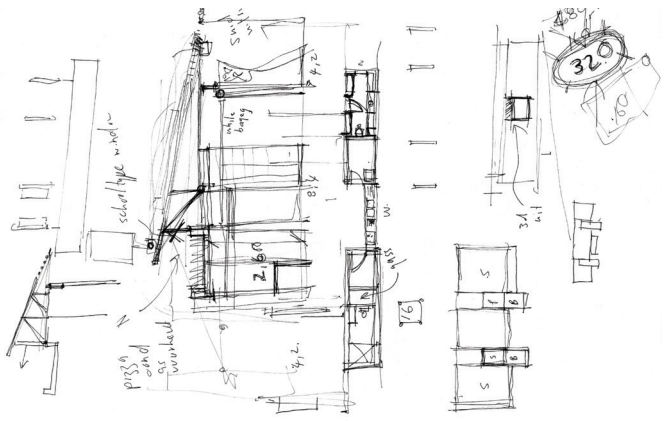


Figure 184 Rough concept sketch (Author n.d.)

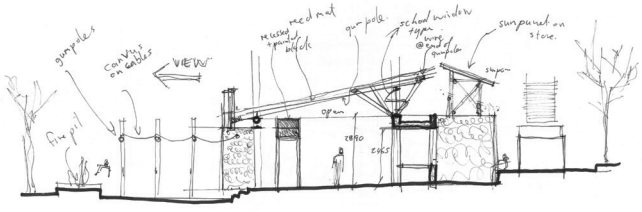


Figure 185 Concept sketch for a residential project (Author n.d.)

B. Model exploration

As with sketching, which allows us to focus on details within the context of the whole, model building is another way to focus the designer's thoughts (Talbott 2004:247). Three-dimensional methods provide an effective tool to understand space, communicate intentions, and visualise a building form within a landscape. Sennett (2018:246) says that "… in physically constructing a built object you know it more intimately than you do when the computer constructs it for you".
The building of models is also a means to use "imagination and perception together" (Talbott 204:266), because it allows one to observe while creating and giving form to one's imagination. "The direct perception of the model allows a visual examination to roam freely across relationships only vaguely formed in imagination" (Talbott 2004:267).

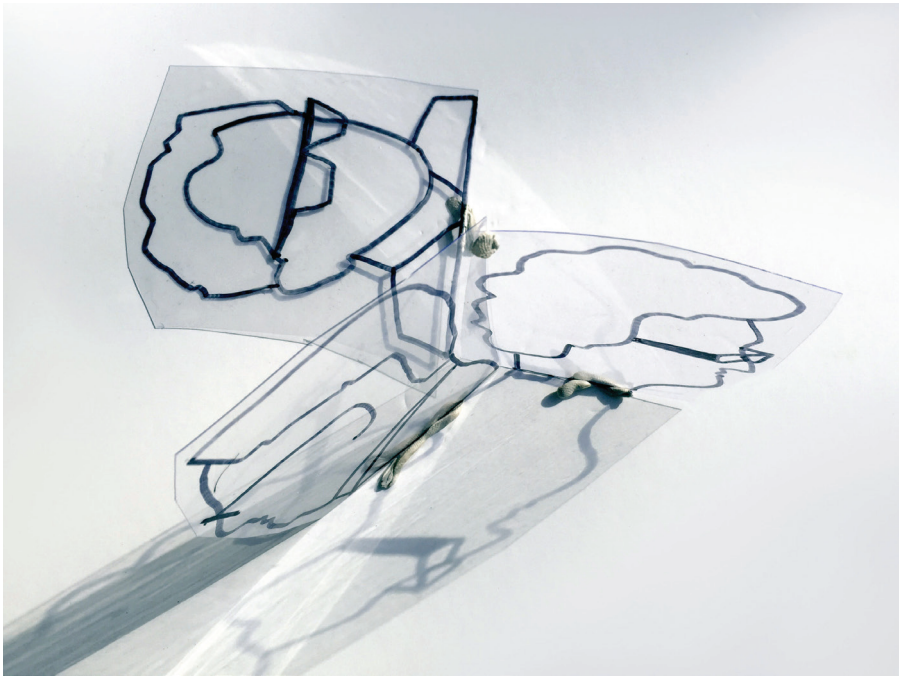


Figure 186 Acetate maquette for the Stand van Poësie bicycle stand (Author 2017)

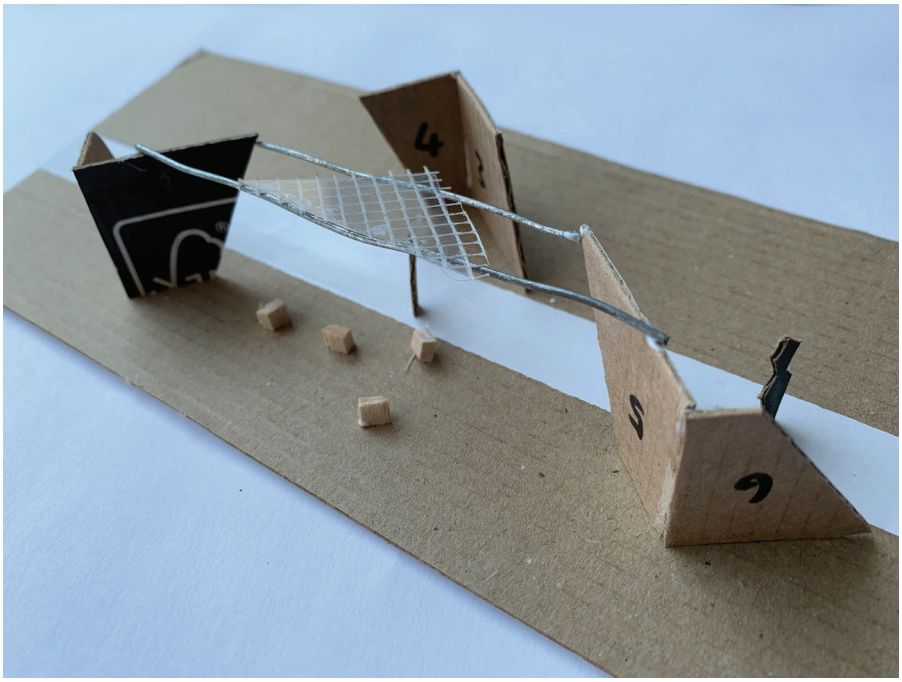


Figure 187 Concept maquette for the Braak Pavilion (MAAA 2019)

'Making' during this phase is playful. I experiment with materials at hand and various options start to present themselves (Figure 186-190). Many of the techniques I use in architectural conceptualisation were learnt in my sculpture classes with Sybrand Wiechers. I use various materials and tools for conceptual models: from balsa wood (AHMP Guard House), to cellophane (*Stand van Poësie*) and pieces of scrap cardboard stuck together with Prestik (Braak Pavilion). The modelling process is truly ad hoc; usually I use whatever is at hand to investigate possibilities and give form to ideas. I fully concur with Talbott (2004:271), who believes that conceptual models need not be perfect as they are experiments in form: "When beginning to build, a designer has only a rough idea of what he wants to construct, and he remains receptive to other possibilities, which arise as he builds." A design model which is constructed step-by-step, by hand, represents multiple possible buildings or partial buildings throughout the process of making the model (Talbott 2004:275). Often the partial building gives clues as to something which is more interesting than the originally imagined building, and sends the design on a new trajectory. Talbott calls this a "process of implicit option generation [which is] explorative, not merely descriptive" (Talbott 2004:271).

A relation exists between the personal experiences of the designer and the process of model making, because "[t]he particular implicit pattern or patterns that come to mind depends on the memory-stored experiences of the individual designer" (Talbott 2004:276). The alternatives that we visualise during the design and model construction process are often associations of memories of places we have visited and experienced. I have also seen that projects have a way of influencing one another. In the research for this thesis I came across old models and sculptures that bear a striking resemblance to later projects, for example the guardhouse at AHMP resembles the Mapungubwe structure at the Javett Art Centre in form. Perhaps the guardhouse was a study (though unconscious) for the Javett's Mapungubwe mount (O'Toole 2019).

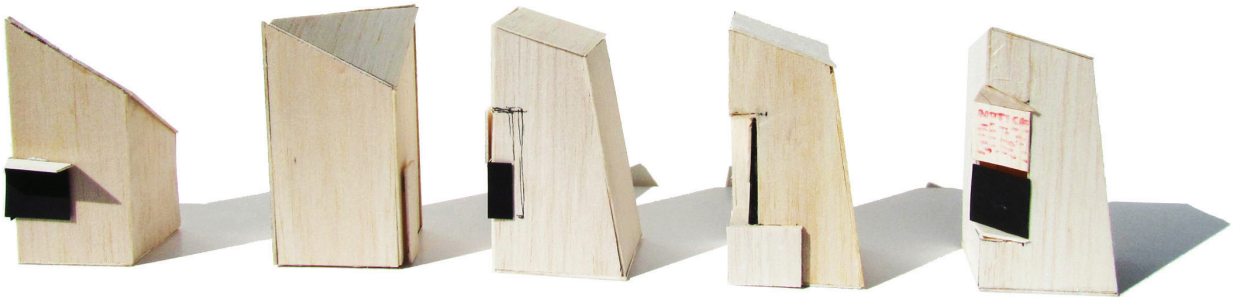


Figure 188 Concept models for the AHMP guardhouse (Author 2012)

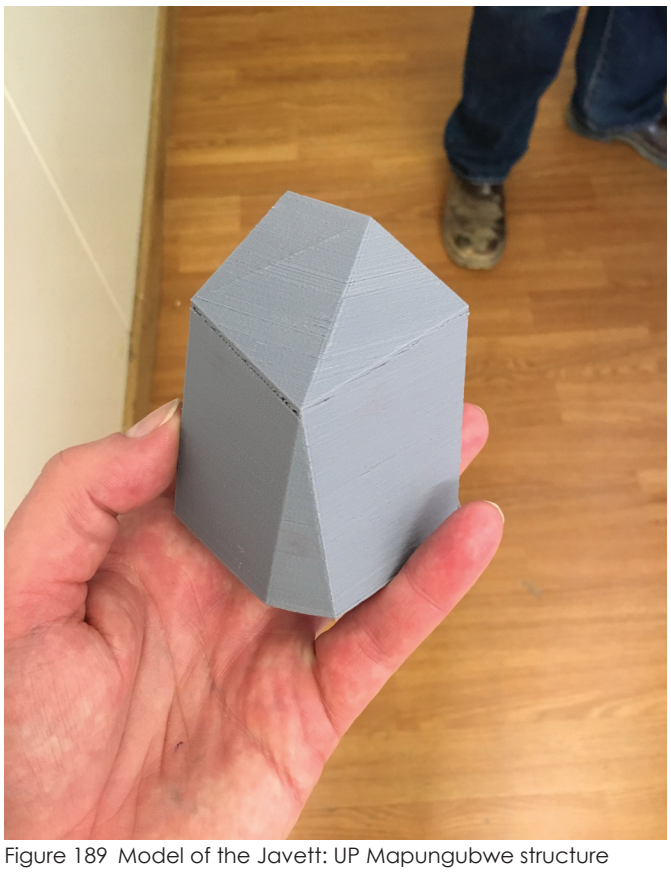


Figure 189 Model of the Javett: UP Mapungubwe structure (Purnell 2017)



Figure 190 Building maquettes for the AHMP guardhouse and sports complex (Crafford 2012)

B.1. Understanding a building in its context

Model building is influential in the initial planning stages, especially in the planning of campuses and in investigating how buildings relate to their contexts. Building a rough model of the AHMP school campus, for example, resulted in us discarding the existing master plan that had previously been drawn up for the school. For the Javett: UP too, a rough context was built to better understand and define the envelope into which the building would be inserted, and to simulate the cinematic experience of the building during the conceptual phase (Figure 191-192).

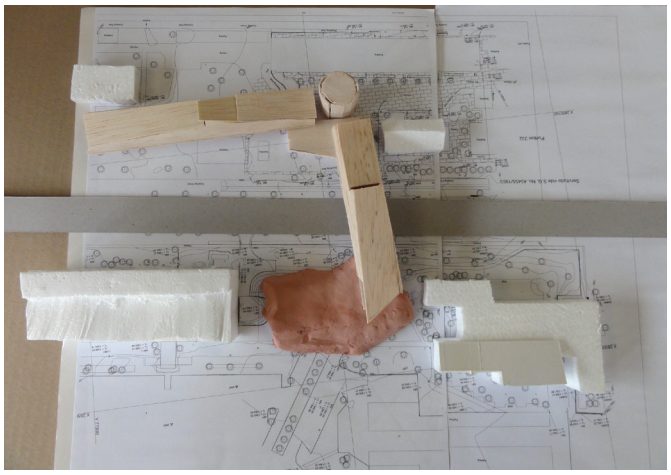


Figure 191 Javett: UP: model to investigate the concept (Author 2013)

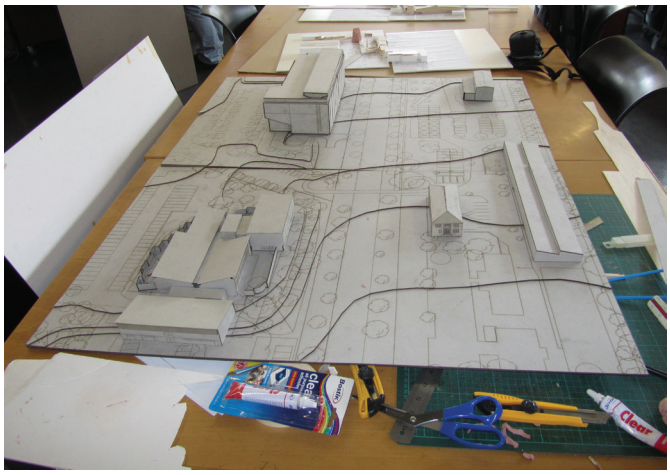


Figure 192 Javett: UP: model of the site constraints (Author 2013)

B.2. The object structure

Object structures usually have a less complex programme, which leaves more room for exploration of form. Examples of these buildings include the Hand Bridge in Musina and the Nellmapius Bridge over the N1 in Centurion. These structures would also be experienced in motion – either by driving underneath them, or by passing over them. The cinematic experience from the two vantage points was thus very important. Physical models, which require a competency in sculpture, proved the best solution to observe the forms and the effect of changing light on them.

The Musina Hand Bridge came alive with quick concepts carved from polystyrene packaging lying around in the office (Figure 197). We commissioned Angus Taylor to sculpt realistic, scaled hands for the final bridge concepts (Figure 199). The massive 7 m high hands unfortunately seemed too realistic, and due to budgetary constraints an alternative solution had to be found. We scrapped the idea of a sculpted form, and instead stylised the hands with the help of balsa-wood models until they were reduced to five odd-shaped columns representing the fingers (Figure 193-195). On the bill of quantities, the items were merely listed as special reinforced concrete columns (a tactic frequently used to advance E-D in practice and design).

Samples of the fingers were constructed further on in the process. The result is that the fingers rising from the roadside form part of the narrative, and provide clues to the hands that will be seen ahead (Figure 399, 400, 402). The bridge was completed in August 2022.

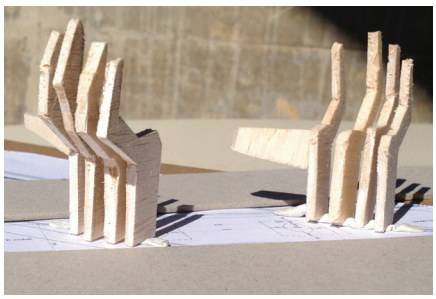


Figure 193 Balsa-wood maquette of the Musina Hand Bridge (Author 2013)

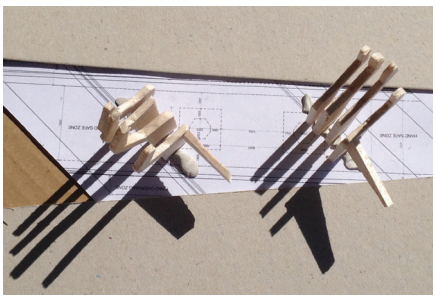


Figure 194 Balsa-wood maquette of the Musina Hand Bridge (Author 2013)



Figure 195 Balsa-wood maquette of the Musina Hand Bridge (Author 2013)

Looking at photos of the sculpture course I attended under Sybrand Wiechers, I came across photographs of the first project – a clay sculpture of my hand that bears a resemblance to the first crude models of the hand bridge.



Figure 196 *Modelled Hand* by the author for the Form, Scrap and Order exhibition (Pretoria Association of Arts 2008)



Figure 197 Crude polystyrene concept model for the Musina Hand Bridge (Author 2011)



Figure 198 3D-printed maquette of the Musina Hand Bridge (Unknown n.d.)



Figure 199 Concept hand maquette by Angus Taylor for the Musina Hand Bridge (Unknown n.d.)



Figure 200 The Musina Hand Bridge under construction (Raubex Construction 2020)

The balustrade of the Nellmapius Bridge was designed not as an integral part of the bridge, but as an 'afterfix'. The CEO of SANRAL contacted me on a weekend to ask if we could assist with a signature bridge that would mark the entrance to Tshwane as part of the Gauteng Freeway Improvement Project. The bridge deck had already been cast; therefore all we could do was to design the balustrade. It was thus important to design the balustrade and lighting as an afterfix, rather than to make it seem as an integral part of the original design. The idea of the folded origami shapes came from my son: he requested an origami book to keep him busy during a rainy holiday and, as I helped him to fold paper, I thought that this same technique would be perfect for the balustrade (Figure 201, 202). Many commuters have commented that this gateway is a sign that they are close to home. The facets act both as sound barriers for pedestrians on the bridge and as protection for cars on the freeway from objects hurled from above (something which is not that uncommon on South Africa's roads). Folding paper to create multi-faceted objects would later inform many other projects in our oeuvre, such as the AHMP Guardhouse (Figure 203) and the Mapungubwe structure at the Javett Art Centre at UP (Figure 204).



Figure 201 Model of the Nellmapius Bridge (Crafford 2010)

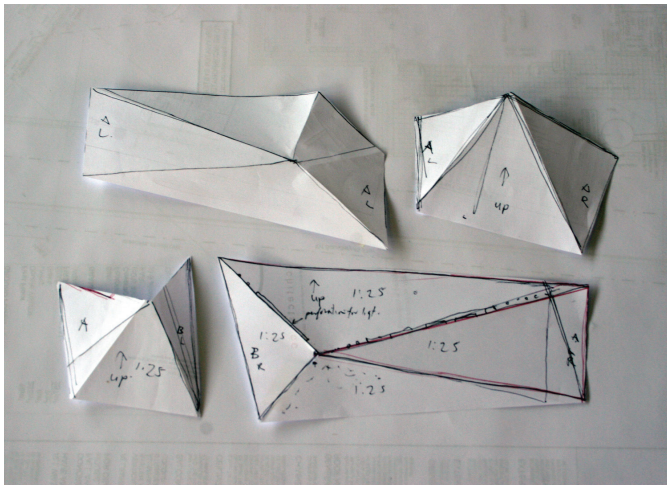


Figure 202 Origami concept development for the Nellmapius Bridge (Author 2009)



Figure 203 Conceptual maquette of the AHMP guardhouse superimposed onto a photo (MAAA n.d.)



Figure 204 Javett: UP: contractors discussing the model of the Mapungubwe structure (Spies 2018)

B.3. Conceptualising with modular elements

Modular building types call for conceptualisation with modular elements. For the headquarters of the SamQuarz silica mine in Delmas, we needed to design an office complex that could easily be moved if, in the future, they wanted to mine the area below the new location of the office. I conceptualised a container office complex which could be relocated and reconfigured without difficulty. We represented the containers with red Lego blocks to explore different configurations and to present the concept to the client (Figure 205). We ignored conventional scale in this instance in order to quickly and effectively communicate ideas. The Lego blocks were composed on the site plan to maximise views and to create courtyard spaces lined with walkways between the offices. Despite working with containers, the interior spaces were well considered to create pleasant working environments. Each container was custom fitted with windows that framed horizontal views to make the spaces feel less restrictive. A cellphone was used to capture the Lego model, to simulate the experience of the layout, and to make design decisions.

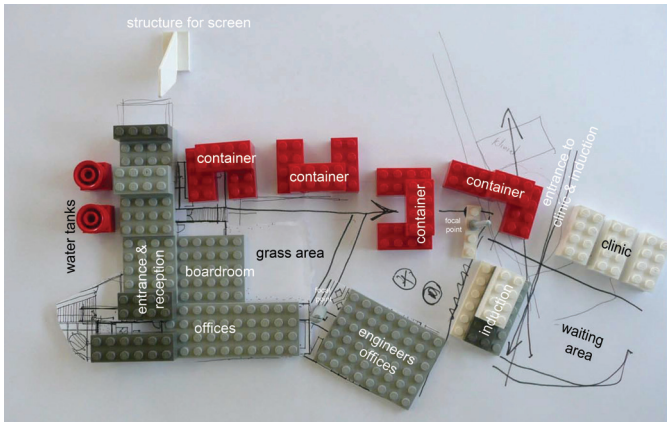
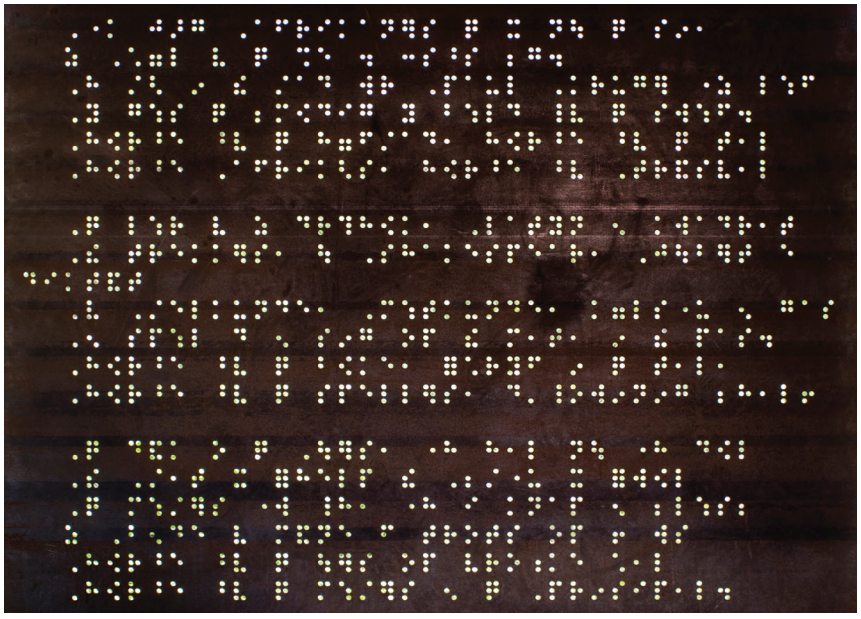


Figure 205 Lego concept for Samquarz (Author 2010)


Figure 206 The Samquarz offices nearing completion (Author 2011)

C. Research

Another important aspect of my explorative-divergent process is the research I undertake to understand the context of the building I am designing. In some instances I visit archives to find stories to enrich the narratives of the design. One example of such an instance is the old AHS school song which I came across in the school's archives. I had it translated into braille, enlarged and laser cut on a steel screen (Figure 207, 208). The random dots are intriguing while subtly narrating a story, and they cast beautiful patterns during high summer.


Figure 207 The braille screen at the AHS Arts Campus (Author 2017)

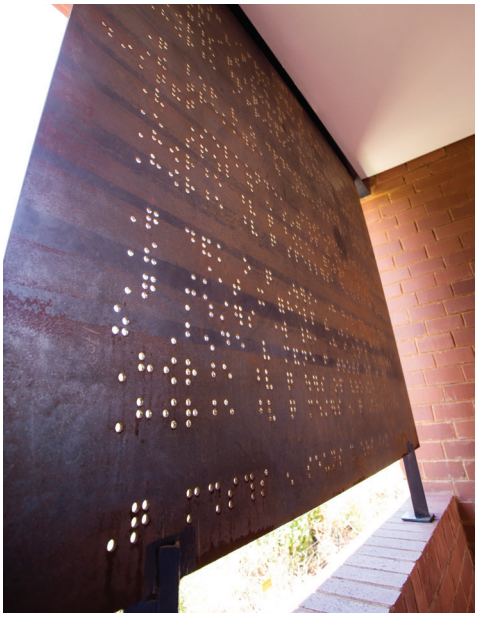

Figure 208 The braille screen at the AHS Arts Campus (Author 2017)



Figure 209 Storyboard for the opening of the AHMP school hall (MAAA n.d.)



Figure 210 Storyboard for the opening of the AHMP school hall (MAAA n.d.)

4.4.3. Entering the realm of the studio

A. Taking the concept to the team

Once the parameters for a project have been established, I use the initial conceptual sketches and maquettes to brief the office and assemble a team to proceed with the work. The concepts touch on the aims I hold for the project and lay out the difficulties posed by the conditions. We sit together and discuss the possibilities, and the team then plays around with the idea and develops it into a coherent design. This seems like a relatively straightforward process, but in reality the process is more a series of feedback loops – back and forth between choices and sometimes even starting anew.

Sennett (2018:193) observes that "… ambiguity [of initial ideas] invites collaborative exchange; clarity invites competitive exchange". The concept does not need to be completely defined when it enters the realm of the studio; rather, it should be a suggestion of a vision that is to be developed collectively. I believe that it is important to give people freedom to develop ideas and come up with their own contributions. This allows our oeuvre to continually evolve, rather than degenerate into a brand with architecture that always looks the 'same'. The design process is not a top-down process in which staff members merely execute my ideas. This sort of "… episodic and robotic labour [has] denied people priding themselves as workers" and undermines creativity (Sennett 2018:13). Architecture is an endeavour which "… proceed[s] via propositional thinking … where proposals can be changed and evolved rather than having top-down decisions imposed" (Sennett 2018:70).

B. The collective brain

Howard Gardner (2006:114) acknowledges the increasing importance of thinking collectively, stating that we need to reconsider "… ideas about creativity … to take into account the increasing number of projects and realms where the individual contribution seems less critical, [and] the group mind more crucial". The collective brain – or group mind – considers a problem from various angles, each group member working from their own strengths and contributing towards achieving the best possible outcome (Figure 211).



Figure 211 A collective brain session (Booyens 2018)



Figure 212 A collective brain session (Booyens 2018)

The collective brain should be differentiated from 'groupthink', or what is sometimes termed 'design-by-committee' in our industry. Popular science author Adam Grant defines groupthink as "the tendency to seek consensus instead of fostering dissent", and views this as "… the enemy of originality [because] people feel pressured to conform to the dominant, default views instead of championing diversity of thought" (Grant 2016:176).

The collective brain values an egalitarian evaluation process in which colleagues are encouraged to distance themselves from ideas and to criticize them openly, regardless of who came up with a proposal (Figure 212). This allows us to overcome the bias of overconfidence in one's own creative ideas which often fall too close to our own tastes to be evaluated accurately (Grant 2016:33). By considering the idea as collective property, it can be criticized without fear of offending an individual.

As much as "[c]riticism has a crucial role [to play] in the creative process, its rigor should match the heartiness of the ideas". Ideas are fragile, especially when first uttered. The more real the idea, the more criticism it can withstand (Chimero 2012:42). A fine balance has to be achieved to keep spontaneity alive. When an idea has been sufficiently developed, I call on the 'peanut gallery' – an informal gathering behind someone's desk – to discuss the validity of the idea and ensure that we are on the right track.

C. Assembling a team

"The world's most innovative companies prosper by capitalizing on the divergent associations of their founders, executives, and employees." This is the observation of Jeffrey Dyer, a leading scholar in business strategy, in an article for the *Harvard Business Review* (Dyer 2009:63). As a 'conductor', or team manager, it is important to assemble a team that will be able to produce and execute a project.
In a discipline where group work is so important, it is necessary to have "… the abilities to come to know individuals quickly, to forge a working relationship, to handle issues of conflict and credit, take on added importance. Brainstorming and improvisation come to the fore; personal glory recedes" (Gardner 2006:114).

As principal, I should match individuals in the practice with projects and teams and assign roles to each person. There are no secrets in the office and everyone is aware of what is going on in other projects at all times, but someone has to assume responsibility for the job. Some are great with presentation and marketing, some know how to handle contractual matters, and others can resolve a project technically and think on their feet during site discussions. Gardner describes the manager as the one who synthesizes, one who has a "360-degree searchlight mind". He states: "The manager must consider the job to be done, the various workers on hand, their current assignments and skills, and how best to execute the current priority and move on to the next one" (Gardner 2006:15).

D. Interdisciplinary work

Fully mastering every skill related to design and construction is unattainable. It is better to admit defeat and embrace the idea of working with people who have complementary strengths and different skill sets. Sennett differentiates between "systems of prescription [which are] insulated from outside influences", and "systems of coordination [which] are hermeneutic or interpretive" (Sennett 2018:166). Gardner builds on this idea when he says that, although some problems can be well handled by small intimate groups who have experience working together, others are better solved by putting together teams of experts on an ad hoc basis. This option "… permits the commissioning of individuals who have the precise talent that is needed, fosters diverse views, and militates against groupthink or falling into a rut" (Gardner 2006:116).

A good example of the advantages of an interdisciplinary approach is our competition entry for the Tshwane Rapid Transport bus stations. We started with an in-house competition in which each staff member had to come up with notions to establish a divergent framework to work from. Thereafter we invited a sculptor, an architectural academic, a historian and a philosopher to spend a morning to workshop our ideas. This multidisciplinary approach assisted in successfully integrating and paying homage to the city's history in a contemporary manner and ensured that we were awarded the heritage aspect of the project. The success of multidisciplinary work depends on genuinely integrating the disciplines concerned, rather than merely juxtaposing them. According to Gardner (2006:69), "[s]uch an integration should yield understanding that could not have been achieved solely within either of the parent disciplines". The Rivonia Trial Station, one of the four Memory Box Stations, was the successful result of this committed multi-disciplinary methodology. An interdisciplinary approach is vital to explorative divergence in our practice. Collaborative work often leads to the most innovative solutions.

4.4.4. E-D problem-solving on site

It often happens that you arrive on site and the building does not look as you intended; the contractor misunderstood, or there was a portion that was never fully resolved. This is where thinking on your feet, E-D's ad hoc approach, comes into play. As a practitioner on site, you have to be hands-on and make do with what you have.

In one instance I came to site just before a concrete wall next to a staircase of a residential project needed to be cast. I realised there and then that we had not made provision for a light in the stairwell. Thinking quickly, I grabbed a paint bucket in which the labourers were boiling water and had it fixed to the formwork to create a recess for the light fitting.

This ad hoc approach also characterised the construction of the AHMP hall. While pouring the concrete for the new gallery, the soffit shutters kicked in, ruining the smooth soffit we had envisioned for the lobby. We had planned a curved wall in the foyer, and decided that the mishap might be mitigated by constructing a rectangular bulkhead above the curved wall to hide the bulging concrete (Figure 215). The juxtaposition between the curved wall and the straight bulkhead fixed to the angular soffit has since been identified as a recurring sculptural tactic and theme in our work. The rest of the soffit retains an off-shutter finish. I believe the bulkhead actually adds to the character of the space, and the directional curve ushers people toward the door. The relieved structural engineer remarked: "Thank heavens you can turn a f*ck-up into a feature."



Figure 213 A textured wall at Kee Enterprises (Author 2008)



Figure 214 The foyer of the AHMP school hall under construction, with the defect covered (Author 2012)

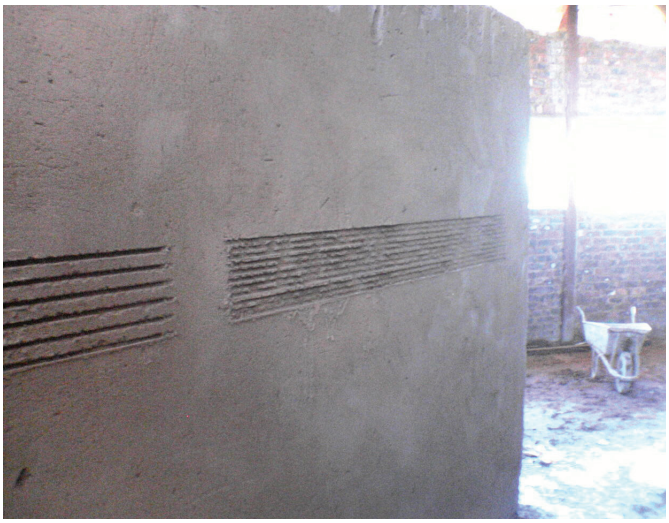


Figure 215 Samples of plaster textures at Kee Enterprises (Author 2007)

4.4.5. Summary: The explorative-divergent design process

The explorative-divergent (E-D) design process assumed by MAAA illustrates the characteristics of E-D in the architectural practice, as summarised in the conclusion of Chapter 3. The conceptual design phase relies heavily on 'making', first in a disciplined manner to understand the constraints, and then in an open-ended, free and intuitive manner. Conceptualisation is not restricted to the individual. The process is 'contaminated' by the members of the studio (and by implication their outlooks), and on occasion by other creatives. The collective design process is flexible and cyclical. Design does not conclude in the studio, but is an ongoing activity when the building goes to site. Due to the nature of the building site and activities, decisions made on site are mostly ad hoc, making the best of what is available and relying on one's intuition in the moment. An interesting theme which comes to the fore here is the balance between discipline/structure and the freedom that it facilitates. This dualism is evident throughout the design process.

4.5. The studio culture as informed by my upbringing

In the previous two subsections the importance and unexpected gifts of the balancing act between freedom and discipline within the E-D practice were highlighted. What does this imply for the studio culture of an E-D practice, where the characteristics of explorative-divergent thinking have the capacity to shape the studio (as a collaborative space) as the wellspring for the practice? It would be absurd to 'fake' explorative-divergent practices for very long if these were not rooted in an explorative-divergent studio culture.

4.5.1. A creative physical environment

The physical office environment plays an important role in creativity. A drab space is not known to inspire great thoughts (Hunt 2009:104-105). John Hunt, the creative chair of the international advertising agency TBWA (Hunt 2009:22) writes that: "Great ideas often come from quiet people who take stimuli from their surroundings …" The office should be a space that stimulates creativity and gives people the freedom to process their thoughts.

I have always had a conservative approach to changing offices, preferring not to waste money on a glamorous workspace. The four main offices I have worked in were all located close to my home. When I first started a practice with Jacques Gerber, we had no financial backing. We rented a semi-detached house with two bedrooms and a bathroom, originally constructed for a lower-income family in Nieuw Muckleneuk. The entire team was squeezed into the two bedrooms. Our first piece of equipment was a redundant photocopier that we traded for a six-pack of beers. Our boardroom, wittily described by journalist Heather Dugmore in *Business Day* (see Chapter 2), was the patio shaded by a large tree (Dugmore 1999). It was so informal and homely that a client once felt comfortable enough to breastfeed her baby under the tree! The young candidate architects who didn't yet have children were mortified. I still think it was the best boardroom I ever had.

To grow out of the trap that 'building-on-a-budget' eventually became (we had produced great work in the housing and alterations segment), we had to move to a more commercially lucrative office space. At this time the post office building in Waterkloof became vacant. All the shop fittings had been removed, but we could rent the space. We furnished it on a shoestring budget and were left with a 200 m^2 vacant shop front which we converted into an interior design shop featuring the best contemporary design on offer. Annemarie Meintjes for *Visi* and Lientjie Wessels for *Elle* used the space as a studio to shoot interiors for Plascon. Through this network of influential creatives the place was always painted in the fashionable colours of the season – a win-win situation.

The architectural staff all had the opportunity to design furniture pieces for the shop. If these were sold, the profit would be theirs. I found that this cross-disciplinary work stimulated the design team. Not only was it a platform for them to gain exposure, build their portfolios and make some extra money, it was also an opportunity to learn about materials. This, in turn, benefited our designs in general and explorative-divergent practice in particular.

We received a commission in 2010 for a small office block for a mining company and the International Monetary Fund on a prominent corner site near Brooklyn Circle. The site was a blank canvas and the client trusted us. I saw the project as having immense potential. It would make a statement (Figure 216, 218). I asked if we could move into the building once it was done. With a vested interest in the Kee Enterprises property, we chose the first-floor corner as our studio space (Figure 219). I was excited to design our own offices from scratch. It was important that the studio should have a high, lofty volume. I've always opted for high-ceilinged studio spaces, complemented by lower ceilings in the boardrooms (Figure 217). The so-called 'cathedral effect' refers to the effect of perceived high-volume spaces on people's creativity and ability to think in an abstract way. On the other hand, lowered ceilings encourage focus and detail-orientated thinking (Lidwell *et al.* 2003:38). I brought pieces from my personal art collection to the office and integrated them with the design of the interior. The boardroom had large glass windows facing the existing trees – perhaps a reference to our first boardroom under the tree. The Kee Enterprises office space made a great impression on Stephan Welz, Anthony Melck and Michael Javett when they visited MAAA in 2013. Looking back, I think this got us onto the list of potential architects to design the Javett Art Centre at the University of Pretoria. Perceptology is important – sometimes one needs to show and not tell.



Figure 216 Kee Enterprises, the previous offices of MAAA (Author 2008)


Figure 217 Dappled light in the boardroom at Kee Enterprises (Author 2008)


Figure 218 Kee Enterprises: an artwork for the city (Author 2008)


Figure 219 The MAAA studio at Kee Enterprises (Author 2008)

When the rent became too costly, we decided to move to Hazelwood, which at the time was just starting to be transformed into a commercial hub. We purchased a dilapidated house and remodelled it completely. I returned to the roots of our practice: building on a budget. The entire project reflects a hands-on approach. We used what was available from the old house. The office has a public reception area below and a sculptural staircase leading to the studios above. Various break-away spaces (courtyards and a balcony) give people the option to take a private phone call, or to think or read a book during lunch hours (Figure 223).

In our Oaktree studio, a couch and an old carpet lend a sense of warmth and informality. Each individual has the freedom to transform their work space and make it comfortable as they prefer, personalising it with postcards, museum entrance tickets, potted creepers and orchids. Artworks and sculptures can be seen on every surface and I believe this, too, stimulates divergent thinking (Figure 220). The boardroom in our Oaktree studio, as in the Kee Enterprises building, links with the garden outside. The biophilia effect, coined by Erich Fromm and popularised by Edward Wilson, states that: "Environments rich in nature views and imagery reduce stress and enhance focus and concentration" (Lidwell *et al.* 2003:36). The soffit of the boardroom provided a surface for exploring concrete as a medium: truly ad hoc, I saw an opportunity for a team-building and learning exercise during the casting of the slab. We used laser-cut cardboard off-cuts as a shuttering detail which we sprayed with Spray and Cook as a release agent (Figure 221). The result is a quirky feature that often serves as a conversation starter. If clients request team meetings in your boardroom, we know that our design intentions have been achieved.

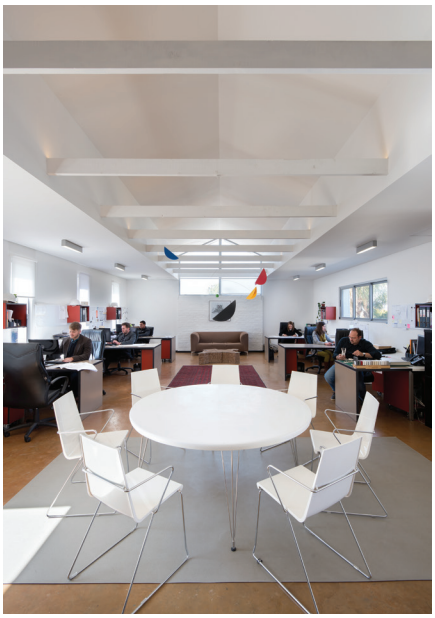


Figure 220 Oaktree Studio (Dook 2017)



Figure 221 MAAA staff placing artworks on the shutter boards before the soffit of the Oaktree Studio boardroom is cast (Author 2015)



Figure 222 Staircase of the Oaktree Studio (JS Design Consultancy 2017)



Figure 223 The Oaktree Studio courtyard (Author 2017)

4.5.2. Setting the tone: studio culture

> The most talented organizations are those that can restructure themselves ad hoc with each new problem that arises, rather than have to strain the unique situation through the same old hierarchy (Jencks & Silver 1972:20).

Flexibility is key to establishing an explorative-divergent practice. American-British scientist and theoretical physicist David Bohm writes that: "If you get stuck in a mechanical repetitious order, then it will degenerate" (Bohm 1996:133). In order to stimulate creativity, a degree of freedom to work independently, but also fluidity in the hierarchical structure of the practice, is paramount. We have no secretary, marketing manager, human resources director or IT department – each person should be adaptable and fill the role that is necessary at the specific moment. We have all made coffee for clients, washed dishes and answered phone calls from sales representatives.

The principal of the studio plays a fundamental role in the establishment of the culture of the practice and the flexibility that designers experience within the workplace structure. This role can be likened to that of a film director or a choreographer. He doesn't necessarily act at every stage, but is required to supervise activities and needs to make strategic decisions based on his overview of the entirety of the situation. Projects need to be selected, risks should be assessed, and the correct person needs to be assigned to the job. In Chapter 1 the autoethnographic study hinted at the manner in which Mathews and Associates Architects is run. The roots of the practice methods and my general approach to business, I believe, lie in my upbringing, personal influences and interests.

Many bosses believe in keeping tabs on employees. I don't. I think my father's example of leaving us money in the house to purchase what we needed, when we needed it, rubbed off on me. I always say, "If you can't trust someone you shouldn't have employed them." I don't like unnecessary bureaucracy. We work on the system of trust my father modelled and implemented during my childhood. If someone wants to take leave, they simply write their name next to the applicable dates on a calendar which is stuck to the inside of the safe door. There are no time sheets, no leave forms. The calendar is merely a system which keeps everyone up to date with staff members' holiday plans. I have never revoked or declined leave in my 25 years of running a practice. As long as your work is of exceptional quality you have total freedom.

I encourage employees to go on holiday when needed. Sometimes a long weekend away or a trip overseas is the best thing for the progress of a project. Hunt (2009:39) asserts that we can't expect people who stay in the same environment, day in and day out, to come up with anything new, and that hamsters in the same cage "at the very least need to be given a new wheel". The physical and recreational mental space of the designers is important if one expects work of a high quality. Simple activities, such as a *braai* on a Friday afternoon, can feel like a reset. During the course of the past year, we have attended lunch-hour concerts at the University of Pretoria, visited a building under construction, and undertook a trip to Eindhoven to experience Dutch Design Week. These sorts of experiences allow us to expand our pool of inspiration and help to generate creative ideas. As Hunt reiterates: "Minds automatically open as they adjust to absorb new stimuli" (Hunt 2009:71).

People need time to think things through and "work in solitude with their minds" (Hunt 2009:22). As a practice that encourages explorative-divergent thinking, I neither give precise deadlines, nor expect people to work according to strict timesheets because, as Talbott (2004:274) writes, "[a] designer should not be concerned with productive efficiency while in an exploratory frame of mind. He should allow himself to wander, investigating routes and methods of construction for their own sake, not for what he thinks they will efficiently produce." We do not measure the exact amount of hours spent on a project and we don't measure project processes according to hours spent working on a design, because "[t]he shortest route is not always the most creatively fruitful route" (Talbott 2004:274).

A no-blame culture exists in the office. The explorative-divergent practice works best when a culture of trust facilitates group work. To generate multiple ideas one has to create a safe space in which they can be uttered. Ideas have moods and "can't be bossed into existence" (Hunt 2009:32). Kentridge said, "The studio has to be a very safe space for uncertainty, doubt and for stupidity" (Kentridge 2020). Hunt (2009:33) confirms Kentridge's position, stating that "… nothing amputates thinking more completely than early ridicule". As it is, "[t]he recognition that one's ideas are false or on the wrong track (which is often crucial for making real progress) generally gives rise to extremely unpleasant feelings of disappointment

and failure" (Bohm 1996:2). The mantra that I instil in the office is that one can rather do something, even if it means making a mistake that needs to be fixed, than not do anything, waiting passively for instructions. I look for people who don't rely on computers, handbooks or directives, but who can think creatively and come up with alternatives.

Constant informal communication is of the best way of solving problems and understanding where we are heading (Bohm 1996:142). The first hour of our day is thus often spent sharing stories, showing each other videos, and musing about the world. Everyone in the office holds different views on politics, sustainability and religion. Hunt (2009:70) writes: "If you want something new to emerge, you want people in the room who don't think like you." The secret is to encourage lively debate that allows everyone to voice an opinion. The office has to be a safe space that encourages diverse beliefs and allows each individual to be critical and to throw ideas on the table, even if they have not been thought through. This broadens our perspective on and understanding of the world and, I think, boosts creative responses. Often, ideas for new social media campaigns or tactics to deal with a difficult client come up in these informal discussions. I find that rich ideas come more naturally if nobody is too serious. There is value in wasting an hour to speak 'nonsense' over a cup of coffee in the mornings. In an explorative-divergent practice, one might call this an hour of fertilizing, watering and pruning for future growth.

4.6. Conclusion: Freedom and structure in the E-D practice and its design process

Thus far, the explorative-divergent practice has been discussed as a practice which encourages interdisciplinary exploration, divergent thinking and crossover/cross-disciplinary interests; a wide scope of work; a collective-brain approach; and a flexible work environment based on trust that fosters creativity. The open-ended, non-prescriptive nature of E-D stands out as a means for being ready to notice, and act on, creative opportunities.

However, an important discovery was made in Chapter 4. On considering E-D in the praxis of MAAA, it became evident that E-D functions best when structures are in place. The dualism between discipline and freedom is an important and recurrent theme throughout Chapter 4. E-D does not merely advocate a 'free-for-all' attitude. The freedom that goes with E-D requires a safeguarding structure. We are disciplined about the work we take on in order to safeguard the practice, which allows us to work in a divergent manner on the work we do take on. In the design process, a disciplined analysis of the constraints of a project sets the framework for the more open-ended approaches which are required to discover solutions that will address the concerns of a project. In the studio, good relationships and trust are the structures that allow for a more flexible work environment.

This foundation – the underlying structures – cannot easily be understood about other practices through visiting or reading about their buildings. It is easy to assume that these structures do not exist. Therefore an important original contribution of this study can be claimed outside of the traditional design process, namely the business management of an E-D practice. This can become a core competency in its own right. However, in this study I focussed on how this practice environment allows more expressive competencies to materialise. In other words, many architects may have these or similar competencies, but because of the manner in which these practices are structured, they do not form part of an active business model and may have less of an impact on design outcomes.

This chapter is not intended as a guide for others about how to run a practice, but it should create awareness that structures should be in place to support the most visible 'fruits of the labours' of the practice. It was a revelation about our own practice, too, that reinforced the importance of discipline to establish an environment conducive to creative freedom. Each discovery highlighted the dual nature of the E-D practice. One can't appreciate creative freedom without the grit that makes it possible. The symbiosis between the grounding hand and the hand in flight is integral to our practice and our design thinking.

5

CASE STUDIES: THE MANIFESTATION OF THE DIVERGENCIES IN THE OEUVRE OF MAAA

The divergent interests introduced in Chapter 3, namely sculpture, curation and cinematography, have had a profound effect on the development of my architectural praxis. This chapter will explore how these three interests have been absorbed in my architectural process and how they have manifested in the work of Mathews and Associates Architects (MAAA). The integration of these divergent competencies into my architectural working methods, nurtured by the explorative-divergent (E-D) environment described in Chapter 4, have enriched our work by allowing us to create spaces with high propositional density and narrative depth which, in turn, offers a rich experience to the users of these spaces.

For the purposes of the discussion, anecdotal reflection on case-study projects will be grouped by divergency and compared to reveal how each divergency has influenced the underlying design decisions and eventual outcomes. A short introduction of key case-study projects which are relevant to each of the divergencies will place the reader in the context. Other case-study projects will only be discussed under the relevant divergency in order to clarify specific aspects/outcomes of the divergencies being discussed.

The intention with this chapter is to identify and explore how E-D practice, through the chosen divergencies, enriches MAAA's design process, thinking, and subsequent architectural outcomes. Chapter 6 will evaluate whether the E-D method of praxis is indeed successful in creating rich experiential architecture which allows people to identify with, and form relationships with, our oeuvre.

5.1. Introducing the main case studies

Selected projects from the oeuvre of MAAA will be discussed and compared to reveal the influences on and underlying decisions in our design process, and how these have contributed to the propositional density and narrative depth of the architecture. To orientate the reader, a short description of each project will be given. In addition to these case studies, other projects will be discussed where applicable.

5.1.1. The Afrikaanse Hoër Meisieskool Pretoria (AHMP) Campus

In 2012 the Afrikaanse Hoër Meisieskool Pretoria (AHMP) governing body commissioned us to design three structures on the existing school campus. The most significant of the projects was a renovation and enlargement of the Elizabeth C. Steijnsaal (the school hall). The other projects included the design of a sports centre and a small guardhouse at the main gate. In addition to their practical functions, the contemporary design of these new buildings was to establish the school as a forward-thinking institution of the 21st century. Following the successful completion of these three buildings, we were commissioned to also design a swimming-pool pavilion and a cafeteria.

A. The architecture of the school campus

The school campus contains an outstanding collection of buildings from the past century. These speak of the development of Pretoria since the 1920s and the architectural styles prevalent in the city in that time. Buildings from various eras sit comfortably together to form a relatively compact campus for a school of approximately 1200 learners. The Georgian-style main building was constructed in the 1920s from the red Kirkness face brick synonymous with Pretoria's architecture. The double-storey building has a red corrugated-iron roof and a formal garden leading up to the main entrance. To the south-west of the main building a girls' residence, which opened in 1940, was constructed in the Art Deco style. When the school hall of the Georgian building became too small, the principal at the time, Miss E.C. Steijn, embarked on a project to have a new hall built. Miss Steijn was forward-looking and the new hall had to reflect the school's progressive nature. The hall was designed by the Pretoria architectural firm Burg Lodge Burg in 1956 in the Late Modern style (Figure 224-226). Over the years, various other additions were made to the school.

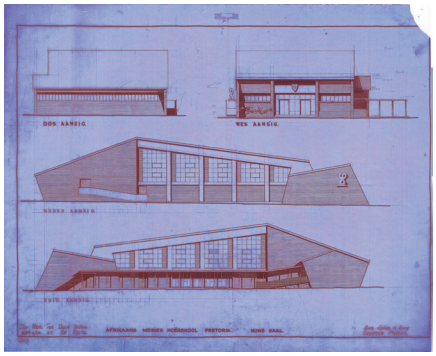


Figure 224 Original elevations of the AHMP school hall showing the Dombeya sculpture (Burg Lodge Burg 1956)

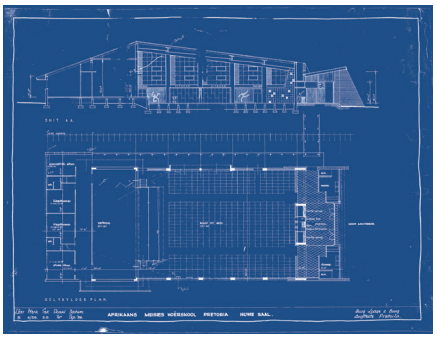


Figure 225 Original façade drawings used as catalyst for the addition of the AHMP school hall (Burg Lodge Burg 1956)



Figure 226 The AHMP school hall before our intervention (MAAA n.d.)

The surrounding urban fabric is also noteworthy: the school is situated opposite the Loftus Versfeld stadium, and a Byzantine-style Dutch Reformed church, designed by the architect Gerhard Moerdijk, is located on the same block.

B. MAAA's additions to the school campus

In her will, Miss E.C. Steijn bequeathed R10 million to AHMP. The school hall had once again become too cramped for the growing school, and the governing body decided to honour Miss Steijn and use her donation to renovate and enlarge the hall. The programme called for an extension to accommodate the entire matric class, and a new foyer and ablutions to allow for the increase the number of learners. With the additions to the hall, we wanted to continue in the bold tradition of contemporary architecture first instilled by Miss Steijn, and to maintain the visionary spirit of designing true to the contemporary architectural character while respecting, and drawing on, the values of the original building. The hall was enlarged with a lightweight gallery addition that 'clips' onto the existing structure. The architectural narrative celebrates the meeting of old and new (Figure 227-228). Throughout, natural and artificial light was used to highlight the connection between parts of the old structure and the new additions.



Figure 227 The AHMP school hall with additions, viewed from the south (Author 2012)

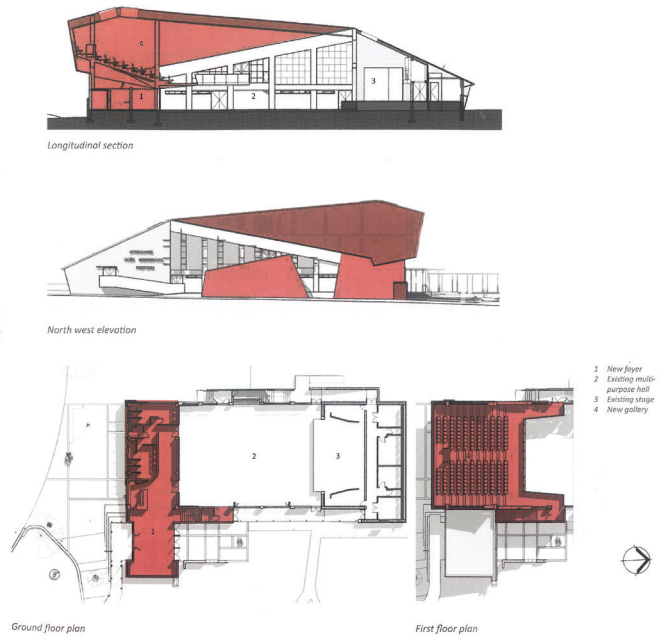


Figure 228 Plan, section and elevation of the AHMP school hall depicting the original hall and additions (Herholdt 2014:367)

The second building commissioned was a sports pavilion with a viewing deck that offered a vantage point over various sports fields: the hockey Astroturf, tennis courts, softball fields and swimming pool (Figure 229-230). Situated within the school's sports precinct, away from the main building, the sports complex provided an opportunity to create a prominent structure to welcome visiting teams in an area of the school campus otherwise devoid of landmarks. The brief required a sports facility that housed a tuck shop, dressing rooms and ablutions, and an entertainment area with viewing platform. "The building can be reduced into three main parts: the service spaces inside the curvilinear bricked form, the boldly clad roof structure and the surrounding negative/open spaces which the building addresses" (Artefacts 2013b).



Figure 229 The AHMP sports complex (Jonsson 2013)



Figure 230 The AHMP sports complex (Crafford 2013)

The third intervention to be discussed is a sculptural guardhouse at the main entrance to the school that creates a sense of arrival and provides facilities for the guard on duty (Figure 231-232).
The guardhouse faces the Modernist school hall across the semi-circular lawn in front of the Edwardian main building.
To form a counterpart to the school hall, the guardhouse pavilion enters into dialogue with the hall by mimicking its form and alluding to the same mid-century modern language. A concrete shell folds over to become roof, wall, floor and desk. The rest is filled in with the same red face brick that characterizes the rest of the campus. This small concrete-and-masonry structure is similar in form to the Mapungubwe mount of the Javett: UP.



Figure 231 The AHMP guardhouse (Crafford 2013)



Figure 232 The AHMP guardhouse (Author 2020)

The Pretoria Institute for Architecture awards panel for 2014 praised the additions to the school as "[grounding] the school campus in this millennium and the context of today where resources are protected and re-appropriated. This lightweight addition [to the school hall], together with the other Mathews and Associates-designed sports pavilion/complex and entrance gatehouse, adds a new layer to the history of the prestigious school" (Greyvensteyn 2014).

5.1.2. The Afrikaanse Hoër Seunskool (AHS) Arts Campus

The Afrikaanse Hoër Seunskool (AHS), AHMP's brother school, is situated across from it on Lynnwood Road. This school, too, had developed immensely over the years. A new arts campus that could accommodate the school's large music academy was required (Figure 233-234). However, the only available space was a leftover triangular parcel between the back of the school hall and the railway tracks. The brief asked for a small auditorium, classrooms and individual practice rooms that could link with the art classrooms to create an arts hub on the school campus.



Figure 233 The administration entrance to the AHS Arts Campus seen from the piazza, with the signage and sculpture in the foreground (Pretorius 2018)



Figure 234 The courtyard space at the AHS Arts Campus (Author 2016)

5.1.3. The Javett Art Centre at the University of Pretoria

The Javett Art Centre at the University of Pretoria was commissioned by the Javett Foundation (a private family trust) and the University of Pretoria. The gallery includes a permanent exhibition of the Mapungubwe Gold Collection, the donor's art collection, large gallery spaces for temporary exhibitions, art restoration and storage spaces, and a restaurant. In this thesis I will frequently refer to the Mapungubwe structure, a prominent concrete form which is part of the building complex of the Javett: UP. This intentional urban focal structure has assumed an identity of its own. The Art Centre forms a large bridge which connects two parts of the campus divided by busy Lynnwood Road (Figure 235). A pedestrian walkway is situated alongside a prominent gallery space on the bridge.

The bridge touches down on the Hatfield Campus (northern campus) between the existing Visual Arts and Architecture buildings (Boukunde) (Figure 237). The raised platform which leads to the bridge provided the opportunity to incorporate underground learning spaces which link the two departments. The main gallery on the South Campus is accessible to the public (Figure 236). It had to be constructed between fully functional departments and research spaces on either side. The bridge is a feature which projects the Javett Art Centre at UP into the public realm and contributes to the city skyline.



Figure 235 The Javett: UP viewed from Lynnwood Road (Southwood 2020)



Figure 236 The interior of the main gallery of the Javett: UP (Southwood 2020)



Figure 237 The Javett: UP viewed from the main campus (Southwood 2020)



Figure 238 The Javett: UP Town Square on the south campus (Southwood 2020)

The discussion of the Javett Art Centre at UP will focus on campus design (curation), innovation and the cinematic experience of architecture.

5.1.4. The Memory Box: the Rivonia Trial BRT station

The A Re Yeng Bus Rapid Transit (BRT) project aims to connect Pretoria's scattered outskirts and townships with the city centre and other important business nodes. An invitation-based architectural design competition for the stations of this system was launched by SANRAL (South African National Road Agency SOC Ltd), who implemented the project on behalf of the City of Tshwane. The competition called for two designs: one that would be suitable for sensitive heritage sites in the inner city, and a second type for suburban locations. Our Memory Box station was selected for the heritage sites, while the Retro Tram submission by Mashabane Rose Architects would serve the other locations.

The Memory Box station typology consists of a simple rectangular structure designed to be subordinate to its historically important surroundings. The intention is for it to become a 'non-building'; or as Jencks and Silver describe it, a "silent butler": a building which is "toned down to better support the whole" (Jencks & Silver 2013). The Memory Box can be seen as architectural acupuncture – a building intended to reinvigorate the context in which it is placed. "The design of new bus stations for the Tshwane Rapid Transit System blends the historic significance of buildings in the capital with needs for a modern transport system" (SANRAL 2015b). For the purpose of this thesis, I will focus on one of the four Memory Box stations, the Rivonia Trial Station located opposite the Old Synagogue in Paul Kruger Street.



Figure 239 Nelson Mandela leaving the Old Synagogue after the Rivonia Trial (Schadeberg 1964)



Figure 240 The current neglected state of the Old Synagogue (Author, n.d.)

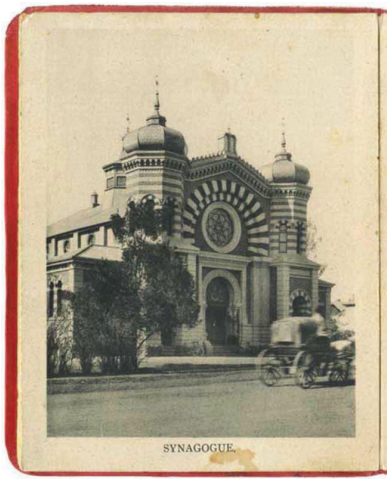


Figure 241 Postcard of c. 1903 featuring the Old Synagogue (Artefacts 2022)

The Old Synagogue was the first religious home of the minority Jewish community of late 19th century Pretoria. The original synagogue was constructed in a Byzantine style. In 1958, the Apartheid Government acquired the synagogue and converted it to accommodate an annex to the Supreme Court. "The most important of the Struggle Movement trials of the Apartheid era took place on [this] disrespectfully adapted site," as architectural historians Nicholas Clarke and Marieke Kuipers (2015:74) rightly observe in a research piece on Dutch-influenced South African heritage architecture in the capital city (Figure 239). The inquest into the death of Steve Biko in 1977 concluded the judicial activities at the Old Synagogue (Clarke & Kuipers 2015:74), whereafter it was converted into storage for the then National Cultural History Museum and then mothballed. Despite its historical significance, the synagogue is in a dire state of neglect (Figure 240), with no attempt being made to preserve the important tangible and intangible histories associated with it. The reflective nature of the façade of the Memory Box station highlights the appalling condition of heritage structures such as the Old Synagogue in South Africa (Figure 243). For this reason, architecture journalist Graham Wood refers to the Rivonia Trial Memory Box station's "outward orientation, which directs commuters' attention away, towards the former Old Synagogue, [as] an element of design activism" (Wood 2017:20).



Figure 242 Interior of the Rivonia Trial Station featuring the undulating ceilings (Author 2015)



Figure 243 Exterior of the Rivonia Trial Station (Eloff 2015)

5.1.5. The Diamond Hill Toll Plaza

The Diamond Hill Toll Plaza, designed in association with Karlien Thomashoff, is Tshwane's eastern gateway (Figure 244). The main tollgate and supporting office building, as well as the smaller ramp plazas, reference the agricultural structures of the surroundings. The name of the toll plaza is derived from the famous diamond mines of Cullinan, where the largest diamond in the world was mined in 1905. The focus of the design was to create a cinematic experience for road users.



Figure 244 The Diamond Hill Toll Plaza (Cronje 2015)

5.1.6. The Nellmapius Bridge facade

The Nellmapius Bridge was commissioned as part of the Gauteng Freeway Improvement Project. The CEO of SANRAL at the time, Mr Nazir Ali, wanted an architectural intervention at the busy Midrand interchange. I advised him against it, as any intervention in that location would have to be large enough to be a beacon amidst the myriad roads and overpasses. We decided on an intervention at the Nellmapius Bridge (Figure 245). Construction of the deck was already in progress at the time and, as such, we had to work on a facade intervention for the parapets. It was decided that the parapets and facade of the bridge should make a visual impact, as the bridge would serve as a gateway to Pretoria. Unlike tollgates, a bridge offers two conditions of movement: passing over the bridge or underneath the bridge.



Figure 245 The Nellmapius Bridge (Kromhout 2012)

5.2. Three divergent competencies

In Chapter Two, three divergent interests were identified, investigated and discussed. These hobbies have developed over the years alongside my architectural practice. Upon reflection, however, it has become clear that the skills and insights learnt have influenced my architectural thinking and practice methods. This section will investigate how these three core competencies have played a role in my architectural practice by dissecting and comparing them in the selected architectural projects. Where required, additional projects from our oeuvre will also be discussed to articulate certain aspects of the core competencies and to illuminate the divergency more clearly.

5.2.1. Curation as a core divergent competency

Curation refers to the selection of objects and content to form part of a collection (Cambridge University Press, 2021). Juhani Pallasmaa (Nesbitt 1996:449) states that the "meanings of an artistic work are born out of the whole, from a vision that integrates the parts". Curation can be seen as the selection of those parts and the decisions around 'putting them together'. Curation is the means by which parts and elements are combined to form a holistic whole.

I have employed many different tactics or strategies to successfully curate architecture, campuses and facades which are propositionally dense and narratively deep. With regards to the AHMP campus, I purposefully visited the school at different times of the day to really understand how spaces were used. For example, visiting the school during class time with a few learners meandering about, stood in stark contrast to break times when 1300 girls are expelled from the classrooms. Utilising this tactic I understood the spaces and user interaction well enough to determine that the proposed site lacked spill-out and social gathering spaces. In our master planning of the campus I proposed to add a gallery onto the existing hall instead of expanding the footprint of the building. This ensured that precious social space was retained.

Another example of curation on a campus happened as part of one of our latest projects, the new student annex at AHS. This building is located between the main building and the student centre and will serve as the new main entrance, while allowing visitors access to the popular sport fields. Located just off the new student annex, in the line of sight from the entrance towards the sport fields was an old tuck shop. The building could no longer function as originally intended because of the growth of the school and was now used as an office for the facilities manager. We proposed that the building be demolished and the memory of the building be captured elsewhere. It was a difficult decision to demolish the structure ingrained in the school's history but by doing so the social and circulation spaces between the main building, new student annex and student centre would be unhindered. While it was unfortunate to demolish the old building, our curation also offered an opportunity to increase the narrative depth of the new student annex as bricks from the demolished building were retained and embedded in the new staircase, creating a point of conversation and nostalgia.

As I know the value that art can bring to a space, I have developed tactics to hide artworks in the bill of quantities. Items labelled 'artwork' or 'sculpture' are usually the first to be scrapped in order to save costs. However, clients don't usually question the terms 'sundry steel' or 'samples'. I have utilised this tactic to reserve funds for artworks or commissions for specific spaces. Another example is discussed in section 5.2.3.

In this section, I will consider how the act of curation as one of my core divergent competencies enriches the architectural design process. This will be done by looking at the ways in which buildings are curated on an urban scale, and how facades, focal points and art collections are curated at building scale in order to increase both propositional density and narrative depth. Case studies will be discussed in terms of specific instances in which this core competency has illustrated the value of an E-D mindset.

A. Curation on an urban scale

I have been aware of urban design theories throughout my career, but it was only after a 2015 trip to the Vitra Design Museum at Weil am Rhein in Germany that I realised that a collection of buildings could be 'curated' to form an overall spatial experience (Figure 246-248).

Sennett (2018:211) believes that "[t]he holy grail in urban design is to create places which have a particular character. An open system has parts which cannot be substituted for one another." Sennett takes a novel approach by likening urban design principles to punctuation marks. The urban landscape is read much like a text; if there are no markers it is difficult to read the meaning. In the built environment, markers tell us when to stop, when to move and when a place is important. This message should be well curated and ordered, otherwise all buildings (or perhaps none of the buildings) will seem important. The point is that, before focusing on the detailed designs, the architect should interpret the urban context, curate the existing, and decide which type of insertion (new building) will be best on the scale of the city.



Figure 246 The Vitra Design Museum (1989) by Frank Gehry (Author 2013)


Figure 247 The Vitra Fire Station (1993) by Zaha Hadid (Author 2013)


Figure 248 The Vitra campus (Author 2013)

A.1. Master planning: the AHMP Campus Framework

The general approach to urban planning is master planning. A master plan lays out the template and pattern for future growth in order to create a cohesive spatial experience for the inhabitants. However, the functioning or success of the master plan often depends on the plan being fully implemented. Countless instances exist where plans fall short because all the parts of the master plan have not been realised. Richard Sennett advocates an alternative approach which he calls "seed planning" (Sennett 2018:237). Seed planning "seeks to create 'pockets of order'" in contrast to master planning, which tries to structure the whole. These 'seedling' interventions establish spatial experiences which enhance the overall structure, whether a master plan is implemented or not. This idea relates to architect and theorist Stan Allen's view, referred to by Sykes (2010:138), that "local relationships are more important than overall form", because in this manner form is generated by the "sequence of events" rather than by a singular, formal composition. Sennett confirms that seed planning is a better way through which to consider how "form relates to function", as it "leaves room for maximum variation and innovation" (Sennett 2018:237). Our approach to the AHMP campus is a good example of how seed planning was implemented in lieu of the master plan.

When we were appointed to design additional buildings on the AHMP campus, the brief was aligned with the requirements of an urban design framework which had been compiled for the school grounds by Holm Jordaan Holm (the firm with whom I received my practical training). I visited the school on various occasions and was prompted to recommend some changes to the existing urban design framework. According to Sennett (2018:116), one of the great dilemmas for contemporary urbanism and architecture lies in understanding "how to connect to the past … without turning the city into a museum". We reconsidered the framework and took an approach of curation in the form of seed planning. Seed planning on the AHMP campus afforded us the opportunity to reveal the narrative of each space/ micro-context, rather than to try and deal with the campus as an overall heritage site. I believe that seed planning should be encouraged as a curation method in E-D practice in lieu of drawing-board master planning.



Figure 249 The AHMP school hall against the backdrop of Loftus Versveld Stadium (Author 2013)

In the framework, Holm Jordaan Holm suggested that a sports complex be constructed on the north-western corner of the school grounds and that the school hall be expanded to the south to increase its capacity (Figure 250). The plan also made provision for a swimming pool on the southern part of the campus and additions to the hostels.

During my visits, I observed that the open space amongst the classrooms, where the students sit on the lawn during their lunch breaks, was already severely constrained. I felt that it would not be wise to expand the hall to the south, as we would lose a large stretch of lawn. We decided that it would be best to place a new gallery on top of the existing structure. In this manner we could save space and maintain the existing façades to a large extent. We reverted to a 'strap-on' concept, inspired by Herzog and de Meuron's CaixaForum in Madrid, where the new is added on top of the old. Choosing to go up was also informed by the scale of the iconic Loftus Versfeld stadium opposite the school. "The light corrugation blends with the pavilion buildings of Loftus Versfeld across the street" (Greyvensteyn 2014).

Furthermore, I recommended that we consider placing the sports complex in the centre of the sports facilities, facing the swimming pool, tennis courts and hockey fields, as opposed to pushing it to the boundary as per the original master plan. This would require demolishing one tennis court, but I argued that it would be worthwhile in the long run. Another deviation from the master plan was the decision to place the after-school cafeteria building on the perimeter of the school grounds, next to the memorial garden and the entrance where parents waited to pick up their daughters. The location also facilitated deliveries.

My approach to the curation of the campus was the opposite of Holm Jordaan Holm's master plan, because it considered the impact of individual structures to influence and inform the use of the rest of the campus (Figure 251). Many of the design decisions were informed by visiting the school personally during breaks to observe flow, pedestrian movement and social gathering patterns. Our initial interventions led to further commissions and alternative solutions to the growth of the ever-expanding school.

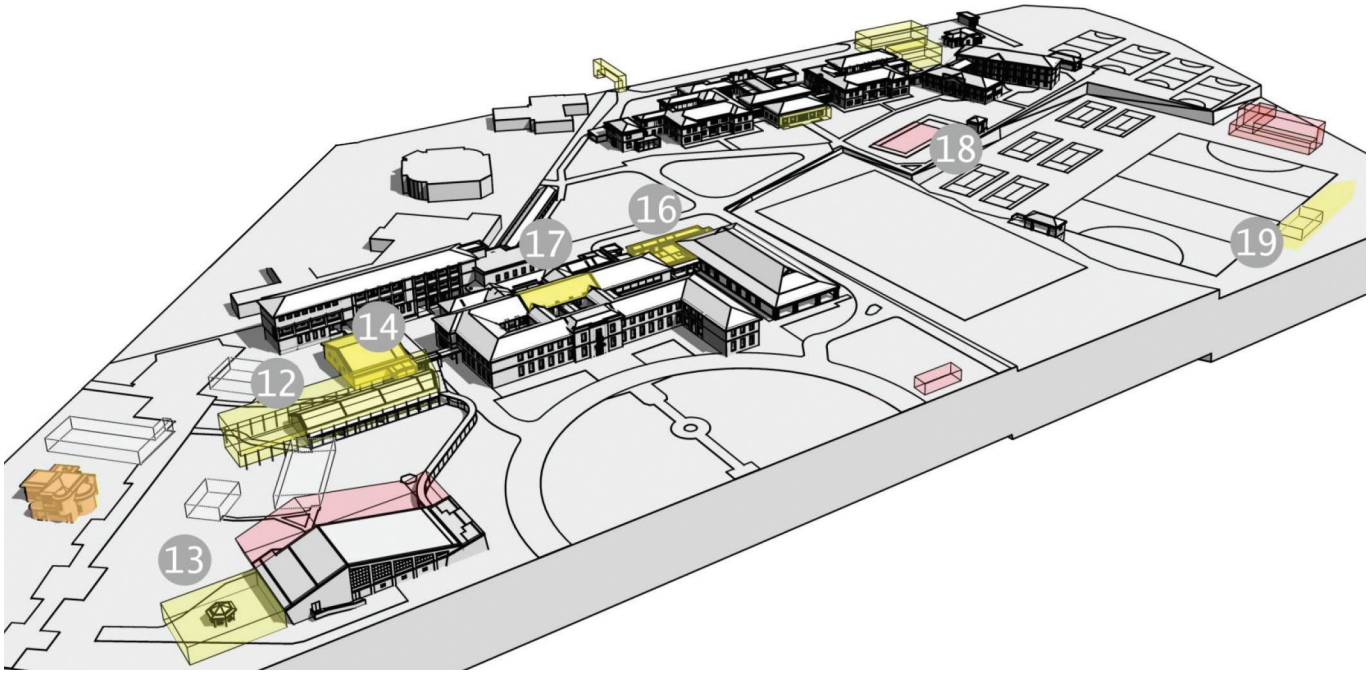


Figure 250 Medium-term campus planning for the AHMP by Holm Jordaan Holm (Holm Jordaan n.d.)

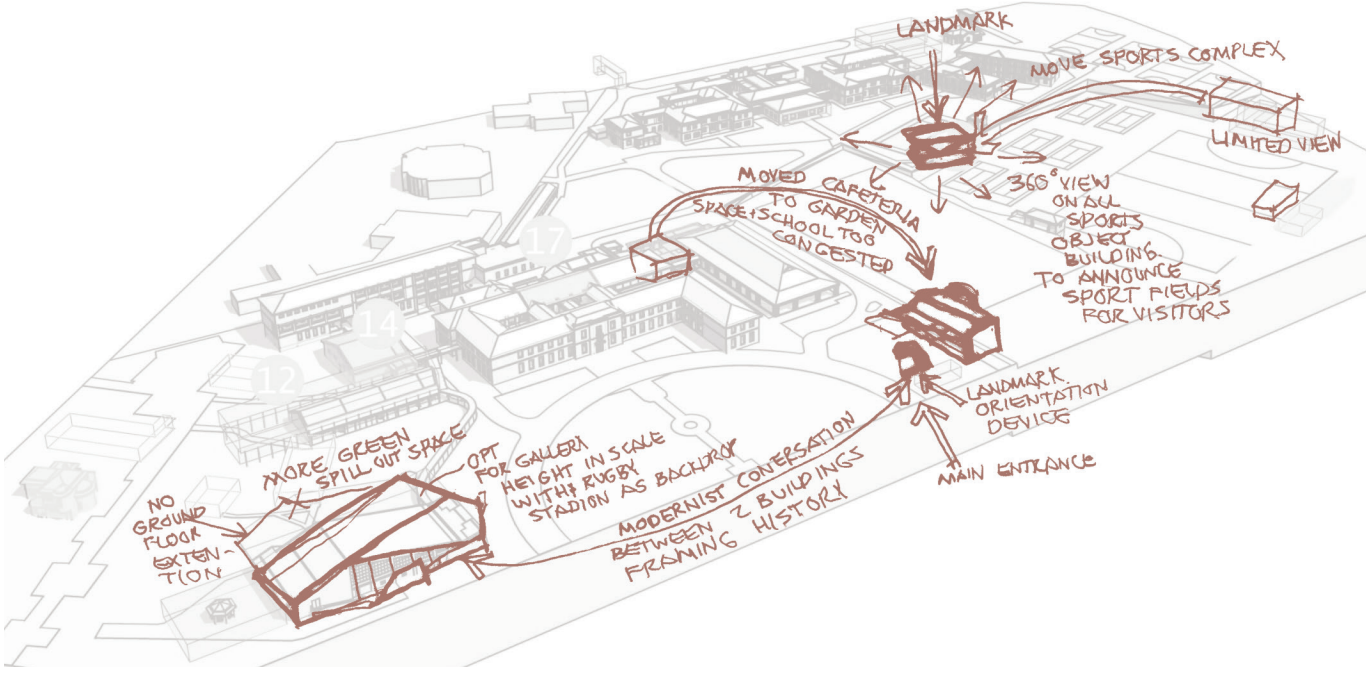


Figure 251 MAAA's framework proposal deviates from the original Holm Jordaan proposal (MAAA 2022)

A.2. Object buildings curated as focal points

Architect and urban designer, Mathew Frederick, and scholar of urban design, Vikas Mehta, (2018:13) observe that "if every building is a landmark, there is no landmark". However, in a landscape devoid of recognisable forms, a landmark is perhaps exactly what is needed. Buildings like these assist in wayfinding, creating narratives of place and increasing public reading of and interaction with architecture. We have various examples of object buildings in our oeuvre, but I have chosen to focus on three. Each illustrates a different approach to object buildings, which makes them suitable for a specific context. The object-building theme overlaps with the divergency of sculpture, and will also be discussed extensively under the sections on curation and sculpture.

A.2.1. The AHMP Sports Pavilion

The school board of the AHMP appointed us to design a sports complex/pavilion that would welcome visiting teams to the school's sports precinct. The school's existing master plan proposed a pavilion in the north-western corner of the school grounds but, following my own observations and analysis, I proposed that we demolish a tennis court in the centre of the sports grounds to construct a pavilion in its place. The complex had to be the heart of sport activities on the school campus and, as such, had to be visible and offer views from and in all directions. I envisioned the sports complex as an urban sculpture, visually accessible to the public from the street.



Figure 252 The recognizable form of the AHMP sports complex makes it a landmark on the campus (Author 2020)



Figure 253 A landmark building (Author 2013)

The pavilion was treated as an object building for two reasons: firstly, visiting teams from guest schools never knew where to go amongst the myriad sports fields and, secondly, no other buildings in the vicinity gave character to the space (Figure 252-253). The problem could be solved by an object building, especially one with narrative depth that would intrigue and attract people to it. The building was positioned diagonally over the footprint of the old tennis court for maximum impact. Its position deviates from the otherwise orthogonal grid layout of the rest of the school and sports fields. Frederick and Mehta (2018:55) believe that "[j]udicious deviations in a grid can relieve tedium, improve wayfinding, and produce unique sites for special public spaces". The position of the sports complex on the site forms pockets of social space around its perimeter, defined by meandering sculptural brick retaining walls which double as seating and stairs.

The complex assumes a simple form. It rests on a stereotomic plinth which houses the majority of the services. A lightweight steel structure above supports a large projecting roof, forming the viewing platform and main gathering space (Figure 254). The *kappie* [bonnet] that Voortrekker women wore served as inspiration for this building's floating roof, which shields the podium from the sun without blocking the views towards the fields and courts. All four sides of the roof project outward, emphasizing the manner in which it floats above the podium of the complex. The south facade contrasts with the overall angular structure. A curved masonry wall hugs the large staircase which doubles as a small pavilion for the swimming pool (Figure 255).



Figure 254 The AHMP sports complex was built on an existing tennis court (Jonsson 2013)



Figure 255 The AHMP sports complex (Jonsson 2013)

The structure opens up towards the east, in the direction of the school and the entrance gate, to welcome visitors and students alike. Although its style is contemporary, the sports-complex building relates to its historical setting by framing the church tower of Moerdijk's historic Ooskerk (Figure 257)and the Art Deco-style girls' residences.



Figure 256 The AHMP sports complex in proximity to the sports fields (Author 2020)



Figure 257 The historic Ooskerk framed by the AHMP sports complex (Author 2013)

A.2.2. Kee Enterprises: urban sculpture

The Kee Enterprises office building, in which our studio was situated for seven years, is located in a prominent urban precinct. The South African architectural academic Iain Low comments on the location and importance of the site: "The eastern corner of the site marks the transition from residential properties to the north and commercial properties to the south" (Louw 2009:61). We saw this as an opportunity to establish a unique identity for the building (Figure 258). Its scale is respectful of the surroundings, but the southern corner of the building, according to journalist Sarah Buitendach, "… proudly juts out into the surrounding suburb of Nieuw Muckleneuk, and boasts an impressive use of raw concrete" (Buitendach 2009 32).
This southern wall was treated as an urban artwork: a graphic rendered in concrete to mark the transitory space of the neighbourhood.



Figure 258 Kee Enterprises, the previous offices of MAAA (Author 2008)

A.2.3. Memory Box as object building

The Memory Box BRT station typology works within the constraints of the generic requirements for BRT stations, but adapts these parameters to create a building that assumes a subordinate role to its surroundings in order to highlight specific historically important sites in the Pretoria CBD. In the instance of the Rivonia Trial Station, a longer 'dual station' had to be designed to accommodate the high number of passengers expected during peak hours. We opted to divide the station into two smaller pavilions separated by a courtyard. The main reason for this decision was to preserve the view of the façade of the Old Synagogue from the opposite side of the road. It is the view portrayed in photographer Jürgen Schadeberg's iconic photograph of Nelson Mandela victoriously leaving the Synagogue, following his acquittal during the Treason Trial in 1956 (McSweeney 2020).



Figure 259 The courtyard of the Rivonia Trial Station frames the Old Synagogue (Author 2015)

Visually, the two station modules read as a simple glass cube standing subtly lower than the standard BRT stations. To achieve this form, the roof and gutters are concealed behind the façades. Downpipes are installed within the structural columns. The glass façades are the main feature of the station. Instead of focusing on the transparent nature of the material, the station's glazing was chosen for its reflective potential (SANRAL 2015a). Architects Roger Fisher and Nicholas Clarke refer to "[l]arge glazed areas [which] reflect the façades of historic buildings during the day and frame them from the inside at night" (Fischer & Clarke 2014:111). In this manner, architecture becomes both "object viewed and frame for viewing", as described by the architectural historian Mitchell Schwarzer (Lamster 2000:275).



Figure 262 Exterior of the Rivonia Trial Station (Crafford 2015)



Figure 260 Exterior of the Rivonia Trial Station (Unknown 2015)



Figure 261 Exterior of the Rivonia Trial Station (Author 2015)

A.2.4. Conclusion: Object buildings as curatorial devices

In his book *Anti-object* (2013), Japanese architect Kengo Kuma differentiates between buildings in which object and subject are understood simultaneously, and buildings which highlight the dichotomy between object and subject. Kuma explains the difference in terms of perspective: object buildings such as "[n]eoclassical buildings were typically designed to be viewed from a distance, thus avoiding the distortion inherent in perspective" (Kuma 2013:8). In buildings experienced up close – and in interiors – perspective becomes distorted and the subject and object merge. Object buildings are designed to be understood as a whole. In our work, these buildings can easily be identified as highly recognizable icons. Their forms are clear representations of the actual structures and stand out from their surroundings.

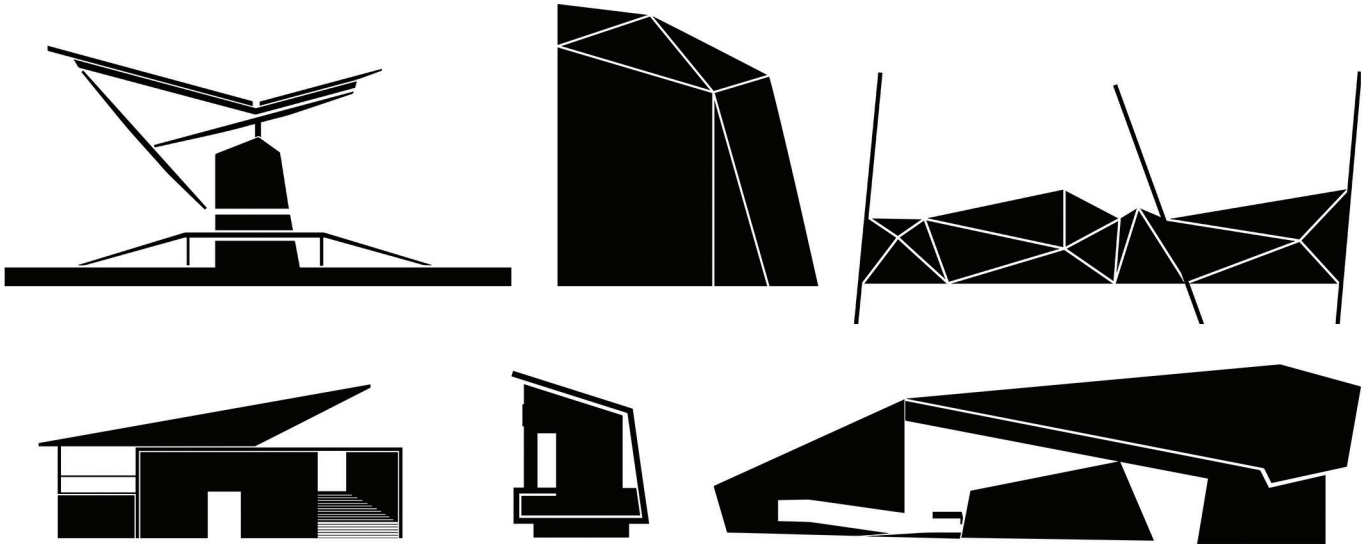


Figure 263 Icons of MAAA's object buildings (MAAA 2022)

When used in the right contexts, these buildings activate space, serve as landmarks, and provide order in the urban text. The AHMP Sports Pavilion is a prominent object building in an open space. It becomes the landmark feature of its precinct. Kee Enterprises is situated in a built-up urban precinct, with buildings of various styles and sizes competing with each other. As an object building, Kee provides order to a haphazard urban environment by serving as a transition between commercial and residential areas. Its bold, stark form is easily recognizable. The Memory Box typology takes the opposite approach: rather than drawing attention to itself, it is an object which takes on its surroundings by reflecting them.

Object buildings can thus fulfil various roles on the urban scale. As architectural curator, the task is to decide what the applicable role should be in the given context.

A.3. Curating the in-between spaces

"Form matters, but not so much the forms of things as the forms between things"
– Stan Allen (Sykes 2010:128).

The antithesis of the object building is the composite building – the building complex – which gives as much importance to the in-between spaces as the forms themselves. These cannot easily be reduced to icons or understood from their elevations, as it is not their forms that are distinctive: it is the curation of the experiences of the in-between spaces that is of value.

A.3.1. AHS Arts Campus

The AHS Arts Campus was fitted into a morsel of leftover land at the back of the school hall. An auditorium, a classroom block and a narrow building housing music practice rooms had to be arranged on the triangular site. Our solution was to arrange the internal volumes around a courtyard space that became a safe haven for the art and music students and improved the acoustic insulation of the internal spaces. Rather than focusing on the facades of the buildings, we focused on how they related to the existing buildings surrounding the complex (Figure 264-267). The strength of the Arts Campus does not lie in the form or design of individual buildings, but in the success of their composition and the resulting exterior spaces and the spatial experiences they offer.

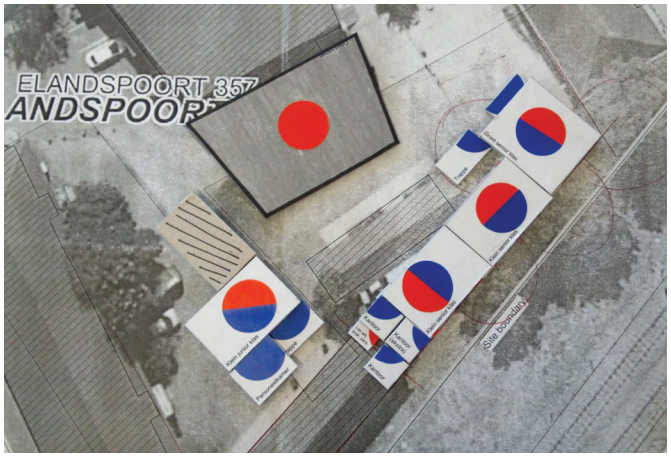
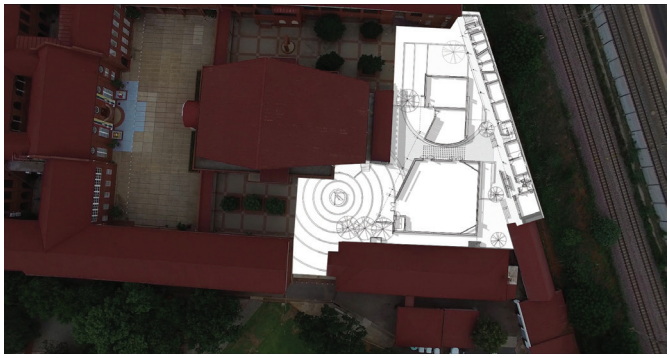


Figure 264 Spatial planning of the AHS Arts Campus (MAAA 2014)


Figure 265 Aerial view of the AHS Arts Campus under construction (Unknown n.d.)


Figure 266 Curating in-between spaces at the AHS Arts Campus (MAAA 2017)


Figure 267 Curating in-between spaces at the AHS Arts Campus (MAAA 2017)

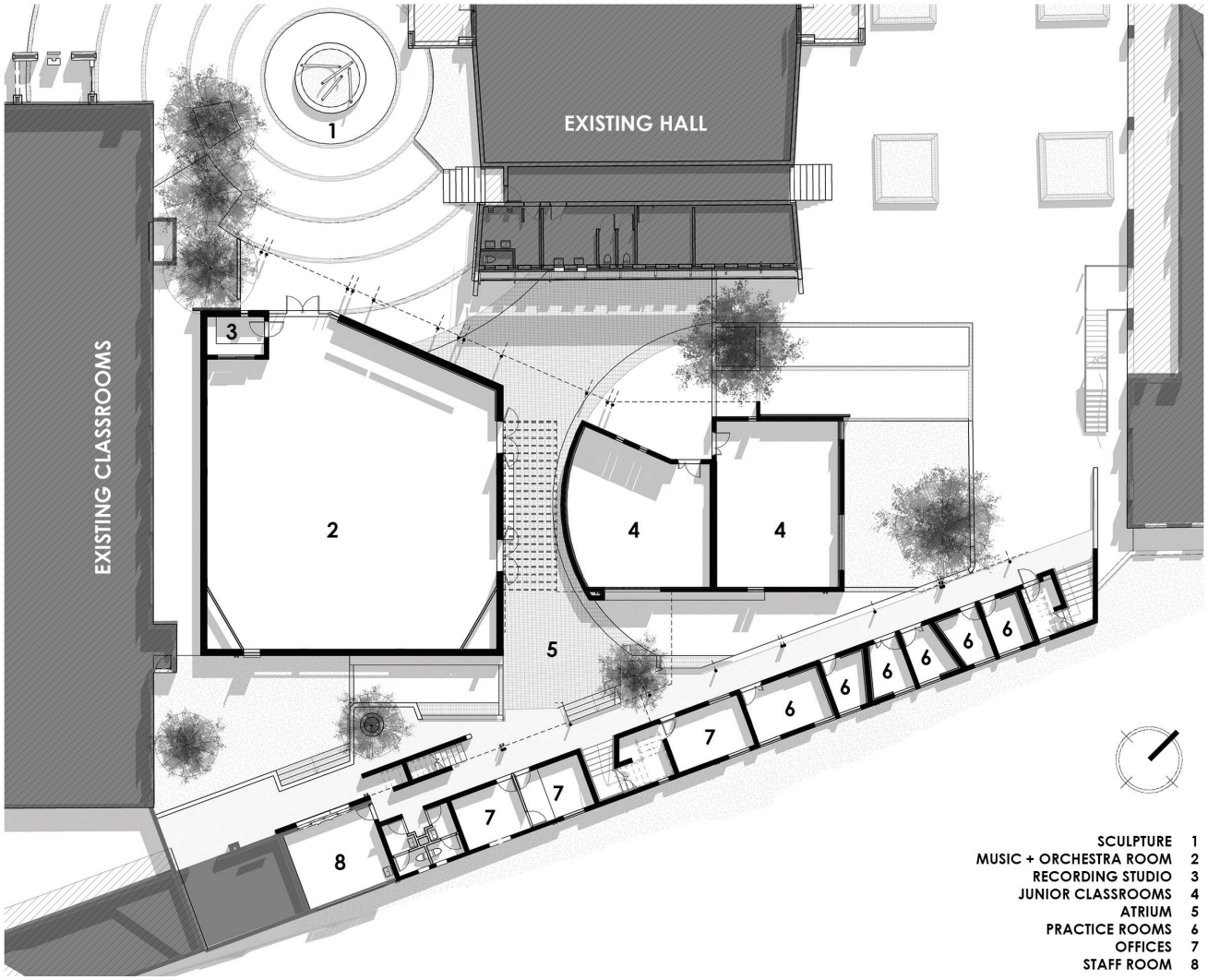


Figure 268 Ground-floor plan of the AHS Arts Campus (MAAA 2016)

To sell the scheme to the client, I likened the Arts Campus to an alley in Venice with its multitude of views, piazzas and gathering spaces and seating meandering between inner and outer courtyard spaces. Various types of external spaces offer a rich diversity of spatial experiences: the auditorium faces the main piazza which features a sculpture commissioned from Strijdom van der Merwe. This piazza gathers space between the new centre and the existing school buildings, leading to the entrance of the inner courtyard where most of the educational spaces are located. A walkway between the back of the school hall and the classrooms mimics a street, complete with culverts as seating and a canvas print to hide unsightly plumbing (Figure 270). Another alley, with a steel pergola, leads to the inner courtyard which connects all the teaching spaces. A long vista to the east terminates in a generous staircase which flares open to receive students on the other side of the centre. This serves as backdrop for the bell tower which plays an important part in the school's graduation tradition.


Figure 269 The AHS Arts Campus alleyway (Author 2016)


Figure 270 Exterior spaces with culverts as benches (Author 2016)

Architectural academic Edna Peres describes the aesthetic of the Arts Campus as responding to "… the clues set out by the existing Union-style architecture, with its corrugated sheeting and red brick gable facades, framing characteristic courtyards that defined the school typologies of the early 20th century" (Peres 2016:31). Although building on the tradition of the school courtyard typology, the courtyards of the Arts Campus provide distinctly different spatial experiences, informed by the "… technical requirements for sound isolation within the classrooms, practice rooms and auditorium". The angles required to reflect and absorb sound waves within the interior spaces are reflected on the exterior, resulting in unique "pockets of sheltered outdoor courtyards'' (Peres 2016:28).

A.3.2. The Javett: UP courtyards

The University of Pretoria had three potential sites available for an art gallery. When we were appointed, I was asked to choose a site and motivate my choice. The first option was an isolated parking lot further up Lynnwood Road; the second a prominent corner on the western boundary of the University's South Campus across from another iconic building by Brian Sandrock (nicknamed Die Skip – the ship); and the site that I eventually chose, which was the most complex of all.

The site of the Javett: UP is a conglomerate of leftover and in-between spaces on two parts of the campus divided by Lynnwood Road. It contains an existing Electromagnetism laboratory built in the 1960s on the easternmost part of the South Campus, and a heritage building from the 1930s housing the Department of Town and Regional Planning. The iconic Boukunde building is located on the opposite side of the road, along with the School of the Arts: Visual Arts building with its well-established sculpture 'forest' which had been planted over the years by alumni, staff and prominent artists. Wedged between Boukunde and the Visual Arts department, a functional steel pedestrian bridge with billboards linked the two parts of the campus (Figure 271-275). This bridge needed to be replaced, and air rights needed to be obtained to build over the Lynnwood Road reserve. I selected this specific site because I thought that this location offered an opportunity to stitch the two campuses together, expose the university community to the arts, and create a visually prominent building for the entire city. It had the added benefit of being close to the Visual Arts, Architecture and Music departments, thereby enabling the establishment (curation) of an arts hub or cultural route on campus. I believed that it was important to foster cross-disciplinary interaction to broaden students' understanding of the arts in general.

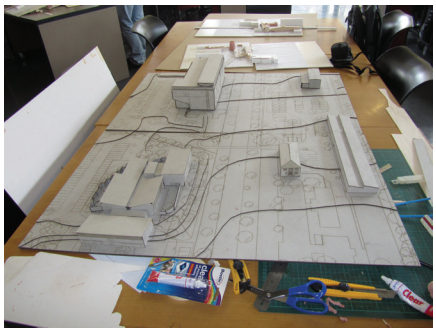


Figure 271 Javett: UP: model of the site constraints (Author 2013)

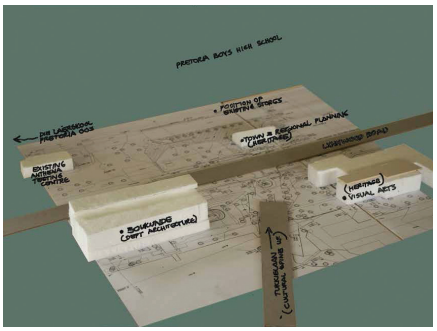


Figure 272 Javett: UP: model of the existing site conditions (Author 2013)

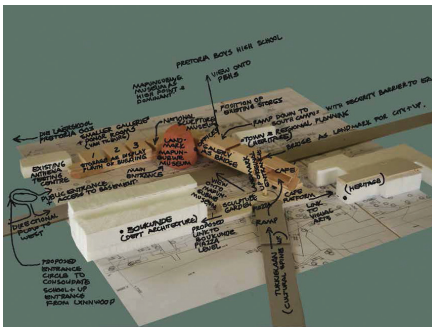


Figure 273 Initial concept model for the Javett: UP (Author 2013)

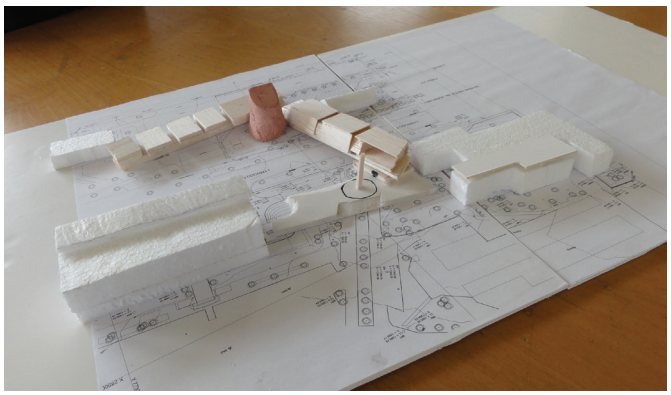


Figure 274 Concept maquette for the Javett: UP (Author 2013)

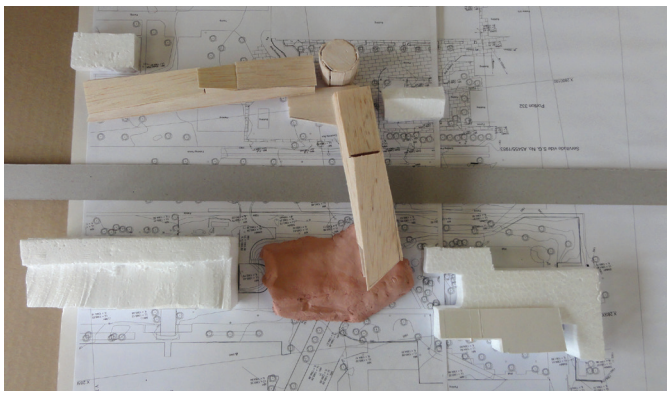


Figure 275 Concept maquette for the Javett: UP (Author 2013)

The building can be approached from three angles: a public entrance is situated on South Campus and a university or student entrance on the Hatfield Campus. A third entrance connects the gallery to the western portion of South Campus where the departments of Town and Regional Planning and Construction Economics as well as the university press and bindery are located.

The approach was similar to that of the AHS Arts Campus in that a building complex had to be accommodated amongst existing buildings, but the difference here is that this building is publicly orientated rather than inward facing. A series of outer courts formed between the Javett: UP and the existing campus buildings is the important feature here, especially in terms of the curation of the campus. The outer presence of the Javett: UP was also important inasmuch as it relates to the Pretoria cityscape.



Figure 276 The Art Square at the Javett: UP: entrance from the Hatfield main campus (Unknown n.d.)



Figure 277 The Art Square viewed from Tukkie Lane on the Hatfield main campus (Author 2019)

An important consideration was the approach to the bridge from Hatfield Campus. Situated between Boukunde and Visual Arts, the student entrance to the Javett: UP faces the Arts Square forecourt. National laws required that a pedestrian bridge must be 7 m above road level, and from experience I know how lazy people can be to climb a flight of stairs. To minimize the impact of a singular seven-metre flight of stairs, we decided to incorporate the landscape design and raise the platform of the square. This had the added benefit of being able to accommodate the Link Gallery below the surface of the Arts Square.

This subsurface gallery links to Boukunde's existing basement galleries and crit spaces. Landscaped steps alongside the University's internal Ring Road lead to the raised platform of the Arts Square. From this platform, students have the opportunity to take the staircase up towards the bridge, or descend a few steps to the Visual Arts department and its 'forest'. From the square one can also look down into the sunken courtyard of the Link Gallery with its rammed-earth feature wall (Figure 279). The raised platform of the Arts Square visually enlarges the Hatfield Campus by hiding Lynnwood Road from the perspective of Tukkie Lane – an example of how perspectives can intentionally be curated (Figure 277).



Figure 278 The Arts Forest has been integrated into the landscaping of the Javett: UP (Author 2019)



Figure 279 The Link Gallery courtyard next to Boukunde (Hattingh 2019)



Figure 280 The Art Square viewed from the Javett: UP bridge (Author 2019)

On its western side, the Javett: UP forms a square with existing buildings on the South Campus. The stairs descending on this campus have been modelled on the same principle as the Spanish Steps in Rome: platforms allow one to pause and view the activities on the Town Square below (Figure 282), and to see the surrounding historical buildings from different perspectives. A feature sculpture by Eduardo Villa acts as a landmark in the square and brings the gallery's activities out into the campus space (Figure 281). Sculpture is a means of activating campuses and urban spaces, and is an intrinsic part of curating on an urban scale.



Figure 281 Eduardo Villa's sculpture activates the Town Square, one of the adjacent exterior spaces of the Javett: UP (Author 2022)



Figure 282 The Town Square at the Javett: UP under construction (Unknown 2019)

Museum Square, the public entrance to the Javett: UP, is situated on the eastern side of the complex. It was chosen as the public entrance as it provides the vista that is visually the most prominent and is relatively separate from the campus activities. It is defined by the striking form of the Mapungubwe concrete mount. The Electromagnetic laboratory building (Figure 283), situated at the entrance to the centre, was planted with creepers to make it blend into the foliage of the parking area so that it would not compete with the main structure of the Art Centre.



Figure 283 The basement excavation for the Javett: UP. The existing Electromagnetism building clings to the edge (Unknown 2016)



Figure 284 Excavation of the Javett: UP basement alongside the Electromagnetism building in the background (Unknown 2016)



Figure 285 The Javett: UP parking deck (Author 2021)



Figure 286 East elevation of the Javett: UP (Author 2019)

Architectural historian and critic Anthony Vidler observes that: "'Landscape' emerges as a mode of envisaging the continuum of the built and the natural, the building and the city, the site and the territory, and 'sculpture' figures as a way of defining a new kind of monumentality" (Sykes 2010:374-375). This notion of 'landscape' as a link between building and site and building and city is evident in the Javett: UP. We worked closely with the landscape architects, GreenINC, to ensure that interior and exterior spaces complement one another. Sculptural elements, such as the Eduardo Villa sculpture, the Mapungubwe mount, and the angled roof of the bridge define monumentality within the continuum of the city and campus landscape.

A.3.3. Conclusion: Curating the in-between

The curation of in-between and leftover spaces becomes ever more important as greenfield sites are populated and urbanites look for plans to better utilise existing spaces. The two projects discussed illustrate different approaches to filling in these leftover spaces. The AHS Arts Campus turns inwards to define pleasant outdoor spaces that become the heart of the school's cultural activities. The nature of the outdoor spaces and the sequence of the resulting spatial experiences become more important than the external aesthetic and form of the buildings. A project like this is the absolute opposite of the object building. The Javett: UP also fills a leftover space, but it is still orientated outwards. The focus here is on forming relationships and new spaces with the existing built fabric. The complex is like a chameleon, changing its colours to suit its surroundings, thereby defining unique in-between spaces addressing the needs of the micro context. The building cannot be understood as a singular entity, as its shape shifts according to the nature of the external, in-between spaces.

B. Curation at building scale

The principles applicable to curation at an urban scale can also be applied to the scale of buildings. Just as object buildings define focal points in the urban environment, focal points need to be defined in the design of individual buildings. The composition of a facade defines these focal points. Another important aspect of our work is the curation of art in architecture: How do artworks strengthen spatial experience, and how does architecture strengthen the reading of an artwork? This relationship is a personal interest of mine that has developed over time.

B.1. Curating spaces that integrate art and architecture

Designing for art and incorporating art in architecture is an important feature of our work, encouraged by my personal passion for art. I believe that art can enhance the overall spatial experience of a building when curated with the building in mind. In this sense, art serves architecture to foster a meaningful relationship between building and user.

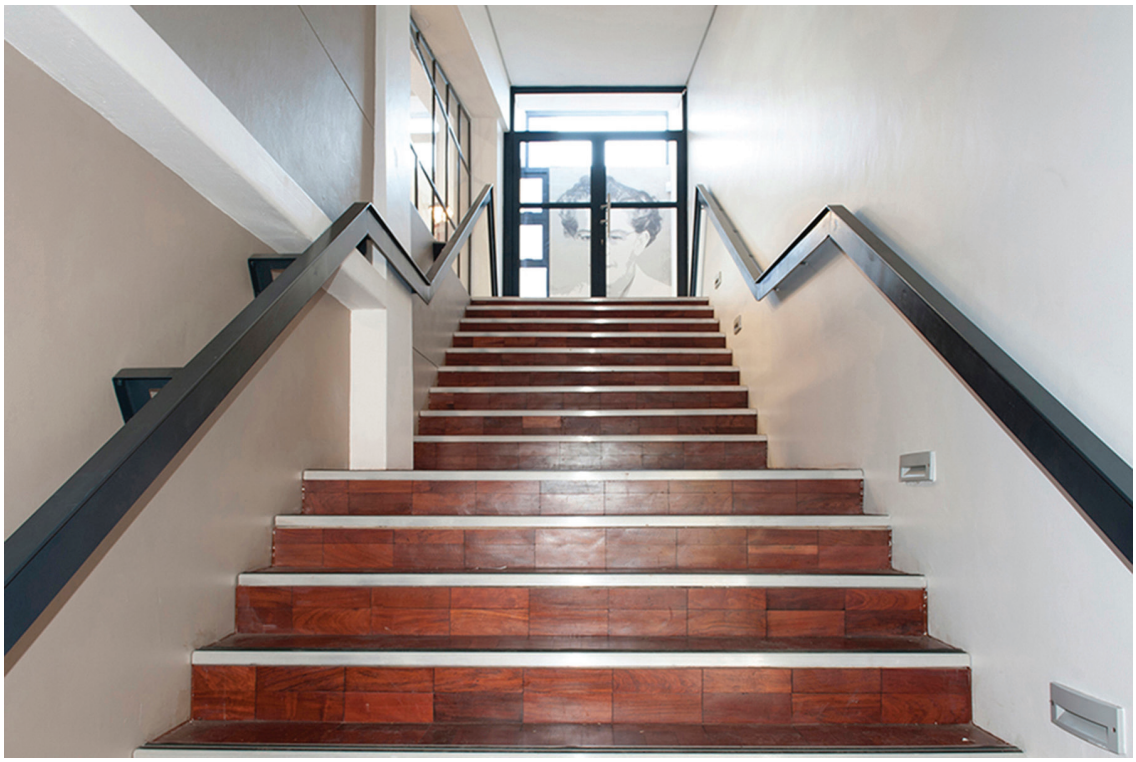


Figure 287 Architecture saying 'thank you' to the donor (Author 2013)

The sculptor Herbert George remarks:

> With place, our focus expands out from the object to the larger environment that surrounds it. The environment in which sculpture is situated is either active or passive. In the active sense the object's immediate environment plays a significant role in how we understand a particular sculpture. The two are so entwined that to remove one from the other is impossible without destroying the meaning of the total work. Sculptures in which place and object are one are often referred to as 'site-specific' works. A passive environment means that the place surrounding the object is secondary to it. But it does not mean place can be separated entirely from meaning. The same sculpture seen in a different environment may have its meaning altered (George 2014:22).

Architecture can be designed with specific oeuvres in mind, as was the case at AHMP's school hall. In such instances, architecture and art are curated together, with each one informing and strengthening the other. In other instances, architecture is designed to receive an unknown collection, such as at the Javett Art Centre at UP or in private homes. Here, the architect designs in anticipation of focal works. Flexibility is key. The next section will look at these two aspects of curating art and architecture.

AHMP boasts an impressive art collection, two sculptures of which formed part of the architecture of the original building. *Bokkie* [little buck] by Elly Holm was commissioned by the original architects and stood in front of the main entrance. A large sculpture, *Idealisme* [idealism], by Elza Dombeya, was mounted on a specially made podium on the north facade. This platform had to be replaced by the new fire escape. The two artworks had to find new homes during the upgrade of the hall (Figure 288-290).



Figure 288 The *Bokkie* in front of the AHMP school hall (Crafford 2013)

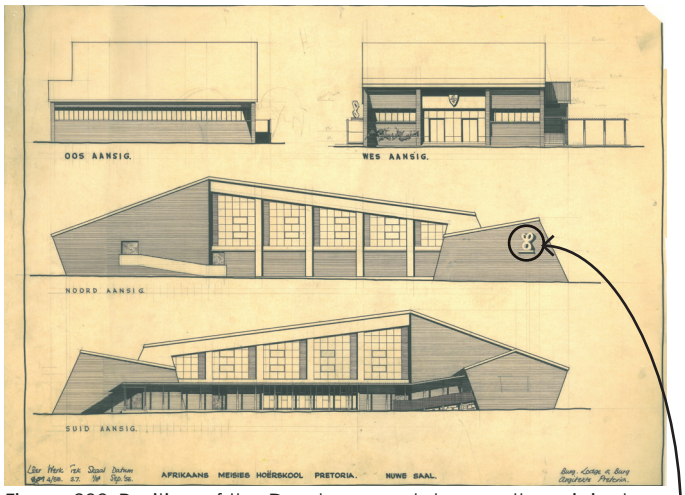


Figure 289 Position of the Dombeya sculpture on the original elevation (Burg Lodge Burg 1956)

As part of the conceptual phase of this project, I researched the school's artworks to understand the artists' intentions. The architect as curator needs to enhance the meaning of the work through the architecture, and allow the architecture and art to create a coherent narrative. The Musée Picasso, which I had visited as a student, had made a great impression on me. I followed its cue to design a building in which the architecture is informed by the narrative that the artworks create. It was important to showcase the school's existing collection, but also to acquire new artworks that would form part of the building. I was in a fortunate position to commission artworks and integrate them into the budget, as the contractor had been declared bankrupt and I had taken over his role, coordinating a team of subcontractors.


Figure 290 The AHMP school hall with the additions, viewed from the south (Johnson 2013)

Funds for the new additions and alterations to the hall were bequeathed to the school from the estate of former principal Elizabeth Steijn after whom the hall is named. I felt it necessary to honour her vision, preserving the legacy which she entrusted to us and future generations. I had her image, a black-and-white photograph, digitally altered in the manner of an Andy Warhol print. It was installed on the landing at the top of the stairs, where a skylight and side window cast a soft glow over her during the day (Figure 291). The effect is continued by artificial lighting at night. The underlying thought was that architecture can 'say thank you', adding to the narrative of the space and increasing its propositional density.


Figure 291 A visitor looks at the portrait of EC Steijn (Author n.d.)

The new foyer became the centre point through which everyone would pass upon entering or exiting the hall. Through my network of artist friends, I took the liberty of contacting Willem Boshoff to ask whether he would be willing to donate the intellectual property of his work *Wind Rose* to the school (Figure 293-294). The material and manufacturing costs would be included in the construction budget. *Wind Rose* consists of a simple compass made of various pieces of marble and granite, each placed in the direction of the location

from which they were sourced. This artwork has been wall mounted in various exhibition spaces around the world. I was open about our budget predicament, but also told him that it would be wonderful if we could translate the work into Afrikaans and install it in the floor of the foyer, where its meaning would come to fruition as befits the functionality of the compass. Boshoff visited the site and agreed that placing the work on the floor of the foyer, in line with the front door, would be symbolic of the direction each learner would have to take in her life upon leaving the school. The symbiosis of place and artwork increases the narrative depth of both: the artwork because its meaning as compass is better understood in the horizontal position, and the foyer space as mediator between the present and an unknown future. By translating the work into Afrikaans, it is grounded in the context of this prestigious Afrikaans school, the oldest in Pretoria. Willem Boshoff donated the work to the school because he felt "it feels just right" (Boshoff 2014). I think it feels right because it is effective as a propositionally dense work.



Figure 294 Kompasroos by Willem Boshoff (Crafford 2013)



Figure 292 Willem Boshoff visits the school-hall site (Unknown 2012)



Figure 293 Entrance hall of the AHMP school hall featuring Willem Boshoff's Kompasroos (Crafford 2013)

In addition to Boshoff's work, I also wanted to show off the work of some contemporary alumni. We had decided to reuse the hall's existing front door, and I asked the principal's permission to commission alumna and sculptor Sanna Swart to design new handles for the door to preserve collective memories. Pallasmaa (2005:61) states that the "… door pulls of a building can be inviting or courteous or forbidding and aggressive". Sanna Swart's door handles are a friendly handshake that invites one in (Figure 295-297). I gave her free reign and she took inspiration from the leaves of the gnarled old kiepersol that stood next to the building, and moulded them into sculptural handles for the old timber door. In this way, the door handles celebrate the narrative of the space, even though the kiepersol no longer stands. The front door is an example of adhocism in context: using what is available for a new function, whilst altering its meaning through innovative adaptation. The door is reminiscent of the old hall, yet is found in a new location. The handles extend a renewed invitation to enter the space, but are simultaneously an ode to the old kiepersol that stood in its place.



Figure 297 The handles on the front door of the AHMP school hall (Unknown 2013)



Figure 295 Kiepersol-inspired handles for the AHMP school hall (Unknown n.d.)



Figure 296 Sanna Swart sculpted the handles for the front door (Unknown n.d.)

The curved wall in the foyer boasts another art form: it features a poem by alumni poet, writer and philosopher, Fransi Phillips. She was teaching English in Russia when I approached her for permission to use her work. The poem, *Ontkenning 3* [Denial 3], was cut from black vinyl lettering and applied to the painted surface of the wall (Figure 298-299). It goes to show that inexpensive methods can produce striking results. The notion of patterning surfaces with text is a theme that recurs several times in our oeuvre, as at the signage for the AHS Arts Campus, the school song cast in concrete at Hoërskool Waterkloof, and the box signage installed on the corner of the AHMP guardhouse.



Figure 298 A poem by Fransi Philips in the AHMP school-hall foyer (Crafford 2013)

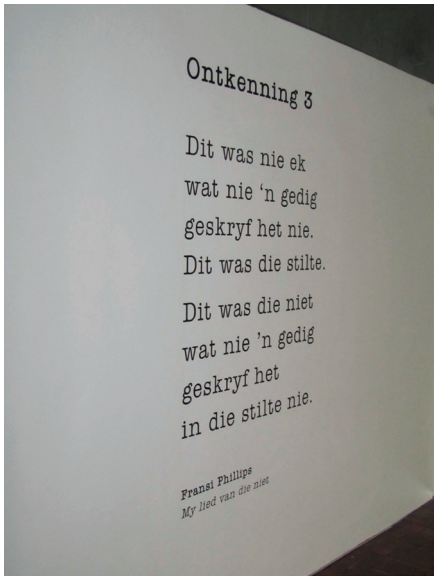


Figure 299 The poem "Ontkenning 3" by Fransi Phillips (Author 2013)

Elza Dombeya's *Idealisme* sculpture depicts a girl releasing a dove (Figure 301). This work, which was originally commissioned for the northern facade of the original design for the hall, was removed and placed on a specially constructed podium to the south of the hall, with the motion of the girl's body related to the angled forms of the building and the new foyer. The sculpture and podium now demarcate the hall's spill-out space and is visible from within the foyer, especially when standing on Willem Boshoff's *Wind Rose*. Elly Holm's *Bokkie* was restored, placed in the garden closest to the entrance, and fixed to a boulder that serves as a plinth: a natural pedestal in natural surroundings (Figure 288).A mould of the sculpture was made to safeguard the original, allowing it to be recast should it ever be stolen.



Figure 300 The AHMP emblem and the *Bokkie* (Author 2013)



Figure 301 A special plinth was constructed for Elza Dombeya's *Idealisme*, previously displayed on the northern façade of the hall (Author 2013)



Figure 302 The AHMP emblem on the western facade of the hall being painted white (Unknown 2013)

To the left of the entrance, on the west facade of the hall, a steel element traces the school's coat of arms, the *nooientjie* [girl] depicted in Anton van Wouw's sculpture *Nooientjie van die Onderveld*. The line drawing is made from flat steel bars and painted the same colour as the wall. It only comes alive when the sun casts shadows on the wall in the afternoon. The theme of using shadows to create a cinematic experience will be discussed in more detail under the section on cinematic architectural choreography.

The acoustic design of the school hall was an important part of the brief. An existing organ had to form an integral part of the new design. The keyboard was originally in the centre of the hall, right in front of the stage, with its pipes mounted above the stage (Figure 303). The keyboard had to be removed to create more space, and the pipes required a new location as we were increasing the opening of the stage for acoustic projection. The keyboard found a new home in an alcove under the new fire-escape staircase and the pipes, we decided, would form the backdrop of the stage. An acoustic panel was positioned at an angle above the stage and the organ pipes in order to further direct sound towards the audience.

As the pipes were being installed as the backdrop of the stage, we thought that they should be painted a charcoal colour to recede into the background rather than divert attention from the action taking place on stage (Figure 304). It was a first for the organ builders, who nicknamed the organ 'Phantom Lady'. The naming of the organ bestowed further significance on it for both the workmen and the school. Nicknames can be seen as proof of successful public engagement, and will be discussed in more detail in the next chapter.



Figure 303 The old organ in the AHMP school hall (Unknown n.d.)



Figure 304 The new stage of the AHMP school hall, with the charcoal-coloured organ disappearing against the background (Unknown 2015)

The AHMP hall is a model for the meeting of symbolism, tradition, ritual, art and architecture. It illustrates how the intersection of art and architecture can give meaning and a sense of purpose to space. Journalist Mila Crewe-Brown concludes: "At every opportunity local artists have been commissioned to make their mark in and around the space, ensuring a rich and thought-provoking outcome. The result is a cohesive meeting of the times, with the former 1960s facade partnering harmoniously with the distinctive streamlined addition" (Crewe-Brown 2013).



Figure 305 Using a temporary sculpture by Rina Stutzer to activate the space in front of the AHMP hall (Author 2014)



Figure 306 Photographs of the Cool Capital Kappie project (done under guidance of Rina Stutzer) displayed on the façade of the school hall (Unknown 2016)

B.1.2. Curating focal points with commissioned artworks

Sculpture can enrich any urban environment, create a focal or assembly point, and serve as a wayfinding and orientation device.

The AHS Arts Campus, situated at the back of the school hall, needed a focal point to announce and direct visitors to this part of the school campus. I commissioned Strijdom van der Merwe to sculpt a large work of steel (Figure 307-308). The budget did not allow for an artwork, so we resorted to 'hiding' a sum for the sculpture under "Sundry steel" in the bill of quantities – in true E-D guerrilla fashion. The result is Van der Merwe's *Kwartet* [quartet] of steel trumpets, which announces the Arts Campus and proudly positions it next to the academic campus and the rugby fields. The sculpture has become a popular meeting place and has established new rituals through its audible feature: a mouthpiece was installed for each trumpet!

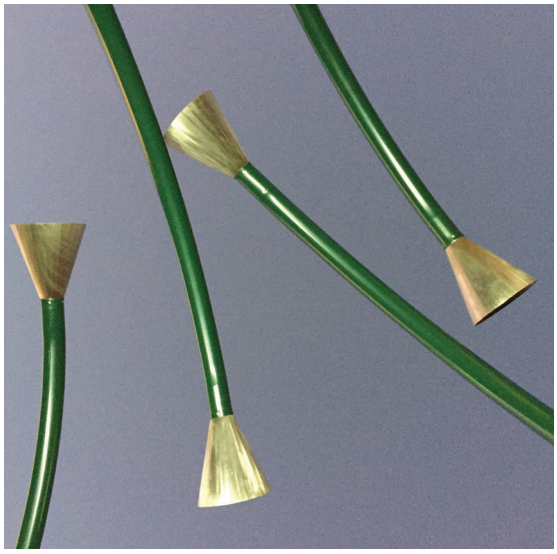


Figure 307 Detail of Kwartet by Strijdom van der Merwe (Author 2015)



Figure 308 Circular paving at the AHS Arts Campus (Author 2018)

The canopy of the Diamond Hill Toll Plaza was designed to receive a huge work of art, clipped to its underside like a billboard. The idea was to ask local nursery schools to participate and then to commission an artist to abstract and collage the children's art on a dark background. Unfortunately, I had the quantity surveyor list the artwork as an item in the bill of quantities, and the bureaucrats regarded the line item "Artwork" as an easy one to scrap when savings were required. In hindsight, I should have described it as a specialist ceiling installation. This was where I became aware that an E-D practitioner should make use of guerrilla tactics to achieve the desired outcomes.

To facilitate wayfinding around the BRT system, totem poles – much like those seen at fuel stations – were erected at each BRT station (Figure 309). The requirement was that the totems serve as signage and wayfinding devices. Together with Jeremy Rose, I convinced the client to use the totems as objects that could individuate the context of each BRT station by adorning them with artworks by local artists. "The art is presented on 11-metre totem poles, and makes up a huge urban art collection" (Mathews in Weale 2016). I was appointed by SANRAL to curate the artworks for the totem poles, as we knew local artists and had some experience in urban curation through Cool Capital. A narrative was written for each planned station, based on research of their surrounding areas. We identified artists that would best illustrate each specific narrative. We had a fixed budget per station approved by the quantity surveyor. We camouflaged the artworks in the original bill as a line item. They were called totems with a sub-frame and had a Prime Cost amount assigned for finishes. This is a tactic frequently used to ensure that provision is made in the budget for art. SANRAL later recognised the totems as "… distinguishing features of the new stations … that represent the culture and history of the immediate environment" (SANRAL 2015a) and that greatly contribute to the character of Pretoria's BRT system.



Figure 309 Collage of the TRT totem artworks (MAAA n.d.)

Marco Cianfanelli is the celebrated artist who created the iconic three-dimensional portrait of Mandela at the Nelson Mandela Capture Site, just outside Howick in Kwa-Zulu Natal. His sculpture for the Rivonia Trial Station visually links the Old Synagogue, where the Rivonia Trial took place, with the Palace of Justice, where the verdict was finally delivered. The artwork relates to the historic importance of the Old Synagogue, with the vertical element forming a timeline with markers showing all the significant events related to the Synagogue's function as annex to the Supreme Court (Figure 309-311). The inspiration for this artwork was South African poet Antjie Krog's open-ended referral to Bram Fischer in the account Country of my skull (1998):

> "He was so much braver than the rest of us, he paid so much more, his life seems to have touched the lives of so many people – even after his death" (Krog 1998:269).



Figure 310 The Rivonia Trial Station with its central courtyard (Author 2016)



Figure 311 BRT lanes in the Pretoria city centre (Author 2018)

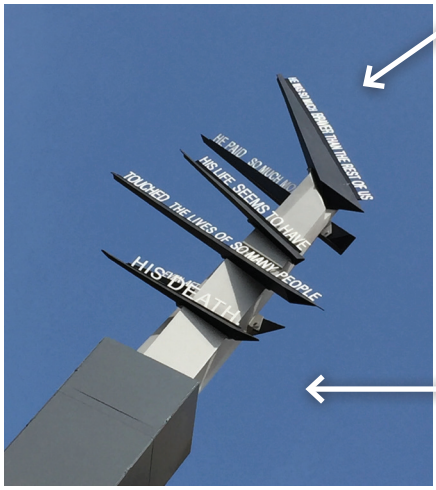


Figure 312 BRT artwork by Marco Cianfanelli (Author 2016)



Figure 313 Maquette of the Nelson Mandela Capture Site Memorial, exhibited at the Javett: UP (Booyens 2019)

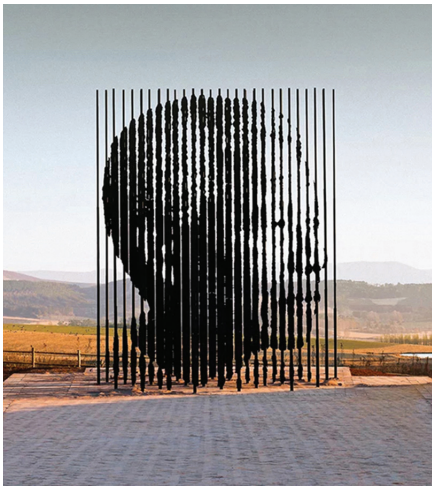


Figure 314 Sculpture by Marco Cianfanelli at the Nelson Mandela Capture Site Memorial (Burton n. d.)

As part of the 2016 Cool Capital endeavour, we partnered with Pretoria Portland Cement (PPC) for a second time to create and donate sculptural public benches to the city. I designed a bench which featured Madiba's profile. We arranged with the City of Tshwane to install the *Madiba* bench in the courtyard of the Rivonia Trial Station. Together with Cianfanelli's totem, the bench recounts the story of the site's political significance. Sennett (2018:215) believes that public benches are about "more than prettifying the city". They create spaces to pause and announce that something about their location is worth pausing for. The bench can be seen as having a high propositional density, as it is not only a functional item for seating, but also a sculpture and marker of historic significance.

B.1.3. Anticipating future exhibits: the Javett: UP

The layout and design of the interior of the Javett: UP was informed by the need to create possibilities for future exhibitions. A gallery interior requires flexibility for the space to be easily reconfigured for changing exhibitions. To date, three major exhibitions have been held, each illustrating a different interpretation of the space, with much room for individuation. I will rely on the experiences of Christopher Till, inaugural curator of the exhibition *101 Artworks*, and on that of Helene Smuts who curated Willem Boshoff's exhibition *Word Woes* to illustrate how the Javett: UP was designed to *receive* art.

Christopher Till describes the interior of the Javett: UP as "a series of platforms that presents possibilities" (Till 2019). Each space within the museum is different, but they are not experienced as individual 'boxes'; rather, "there is an experience of engaging one space with the other" (Till 2019). This multi-perspectival approach alters the way in which one experiences and engages with the artworks on display (Figure 315-316). Through the atrium one may see a glimpse of an artwork on the level above, or see flashes of what is to come through a hole punched in the staircase.

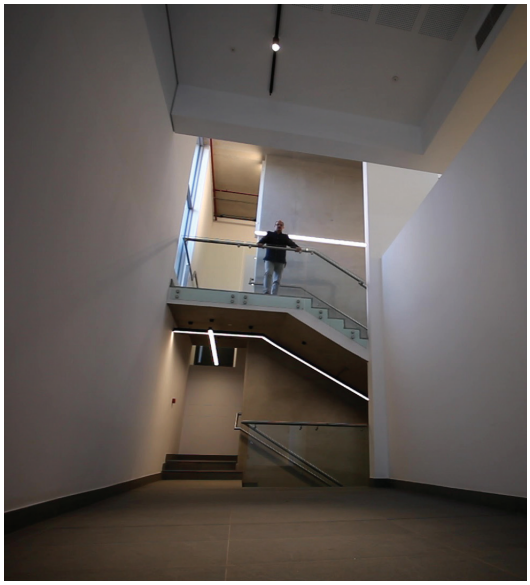


Figure 315 Linked spaces at the Javett: UP (Human 2019)



Figure 316 Glimpses of surrounding spaces in the Javett: UP (Pretorius 2019)

For Till, the effectiveness of the architecture is best illustrated by the atrium. For the inaugural exhibition, he suspended Wim Botha's Christ, carved from bibles, in the triple-volume atrium. "Wim Botha's work illustrated the use of the building and the potential power of the space to enhance the narrative of the piece" (Till 2019). Till's views are echoed in the writings of Herbert George:

How sculpture is exhibited will always, on some level, influence how the viewer understands it. The relationship between location, object and meaning is complex, and the many ways in which environment can influence meaning are not fully appreciated (George 2014:22).

Each space in the gallery lends itself to a different exhibition. Each work can be assigned a space that best supports its narrative, like the donor's collection in the southern wing. Vinyl parquet flooring contributes to a more classical interior. The Javett Foundation's collection of mainly mid century South African art "… is happy in this conventional classic space as it represents and is an outcome, or rather it comes out of that era " (Till 2019).

The versatility of the gallery was made evident by Willem Boshoff's exhibition, Word Woes, curated by Helene Smuts (Figure 318). Held in the bridge gallery, Smuts approached the space in a different manner than Christopher Till. Till created a focal point in the centre of the space with Mary Sibande's work. Smuts placed the focus on the wall surfaces.



Figure 317 The Javett: UP Bridge Gallery as curated by Christopher Till (Author 2020)



Figure 318 Willem Boshoff's *Word Woes* exhibition as curated by Helene Smuts at the Javett: UP (Author 2021)

During an interview I held with Smuts, she described how she had planned the exhibition with the help of the architectural layout plans. However, once in the space, a different understanding came about: "The proportions of the architecture informed the decision" (Smuts 2021). Smuts describes the sliding-glass smoke doors at the entrance to the bridge gallery as being very important. They define the threshold. She interpreted this in the layout of the exhibition. She placed *Blind Alphabet*, which only visually-impaired people can touch and engage with, in the open area linked to the gallery. When you enter through the glass doors, however, the first work that confronts you is *Touch*.

Smuts also realised that an aluminium artwork "snatched the soft light" coming through the vertical window slits. It is these sorts of clues that finally informed the exhibition. Boshoff's art requires that you stand in certain places in order to engage with the work. The final exhibition "… looks at you; it places you spatially. The architecture facilitated an experiential exhibition" (Smuts 2021). Architect Peter Rich confirmed: "Willem Boshoff's work sits sublimely in your gallery" (Rich 2021).

To facilitate the adaptability of the interior design, we drew on our network of contacts and suppliers and asked RAW Studios to collaborate on the design of lightweight walls for the museum interior. Reinforcing networks with suppliers and others in the creative and construction industry is crucial in the quest for E-D outcomes. The walls had to have the thickness of a thick masonry wall, yet be easy for museum assistants to assemble and move. These walls have become a seamless part of the interior that can easily be reconfigured. They consist of a concealed assembly system, with a hanging mechanism for artworks located at the top of the structure. This innovative, adaptable solution will ensure that future curators can transform and reimagine the gallery spaces to enhance their intended narratives. RAW Studios have since patented the system and I hope the exercise has the potential to help a small business.

In addition to the flexible spaces, certain permanent works had to be considered. The ground-floor gallery has a prominent wall and platform specifically designed with Alexis Preller's 3 m x 13 m long *Discovery* in mind. The work was originally commissioned for the Transvaal Provincial Administration (TPA) building in Pretoria. When the building was abandoned by the Gauteng Provincial Government, the artwork hung for years in a dust-filled room. I had long dreamt of moving it to a place where it could be restored and enjoyed and, to raise awareness of its plight, had even organised a guerrilla intervention with Diane Victor as part of the Cool Capital initiative. The ground-floor gallery at the Javett: UP was designed for this painting to be the most dominant work in the space and the first that visitors would see. The two staircases on either side of the wall allow the work to be experienced from various angles.

The Javett Art Centre also had to accommodate the Mapungubwe Gold Collection as a permanent attraction or anchor collection. The University of Pretoria archaeological department (now Department of Anthropology, Archaeology and Development Studies) was in charge of excavations since the discovery of the Golden Rhino, and have been the custodians thereof ever since (Smith 2015). This precious collection was never easily accessible, and many debates were held about whether the items it contains should be returned to their origins, be relocated to the recently constructed Mapungubwe

Interpretation Centre (by architect Peter Rich) in Limpopo, or remain in the custodianship of the University of Pretoria. From the first concept for the Javett: UP, the necessity to display the collection in a safe and controlled environment led to the decision to house it on the top mezzanine of a concrete vault structure. To see the treasures one has to ascend inside the 'mountain'. Conceptually, this references the stratification of the Mapungubwe Kingdom, while the exterior of the concrete vault references the Mapungubwe Hill.

In contrast to the white interiors of the rest of the gallery, that of the Mapungubwe exhibit is pitch-black. Minimal lighting allows the gold to glow, and acoustic panels absorb sound. I have observed that people tend to whisper when they enter the vault and walk up the steps of the Mapungubwe exhibit. The hushed sounds, the dark interior and the glowing gold artefacts seem to have a profound effect on visitors and their behaviour within the space. The interior is like a "tomb":

The Mapungubwe concrete vault has become a landmark from the outside, but a sacred, quiet experience on the inside. Dual meanings and ambiguity are often present in the oeuvre of MAAA as a result of our attempts to increase narrative depth and propositional density.

C. Curating the facade

When I start working on the first rough concepts of a building, I determine which spaces require light, ventilation and services. These elements will all have an impact on the design of the façade, a process that I describe as the curation of these necessary elements. Designing a facade is in essence deciding where to place these components: when to group them or when to divide an element into parts in order to create a holistic composition. This is both an intuitive and a pragmatic process.

C.1. The Memory Box facade

The glass façades of the Memory Box station are its main feature. Instead of focusing on the transparent nature of glass, the glazing of the station was considered for its reflective potential (SANRAL 2015a). The façade design took inspiration from the strong Dutch influence on the historic architecture of Pretoria's inner city. The De Stijl movement served as a reference for the station's façade design – a monochromatic Mondrian 'painting' made up of three colours of glass. Simple planes and orthogonal lines juxtapose the often ornate façades of the surrounding historic buildings. This novel connection to modern Dutch architecture deepens the narrative of the architectural tradition in the inner-city context: the government of the Zuid-Afrikaansche Republiek (ZAR, 1887–1899) had employed Dutch architects. "Randomly curated opaque white glass panels positioned off the main façade refer to buildings and significant places which have been lost to neglect and the changing patterns of urban use" (Artefacts 2015). The smaller glass panes have the added benefit of being more robust and easily replaceable in the event of damage to the building.



Figure 319 The author at Gerrit Rietveld's Schröder House in Utrecht (Mathews A. 2013)



Figure 320 The Rivonia Trial Station against the backdrop of the Old Synagogue (Author 2015)

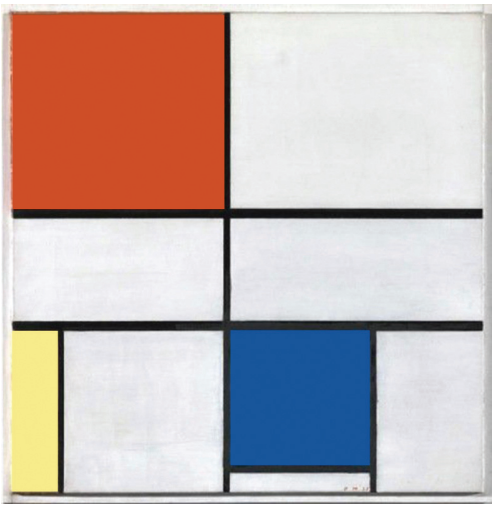


Figure 321 Composition No. 3 by Piet Mondrian (Unknown n.d.)



Figure 322 The Nederlandsche Bank building on Church Square, Pretoria. A prime example of the Dutch influence on Pretoria's architecture (Crafford 2010)

The building had many technical requirements, specifically related to the electronic communication system of the busses. The channels which divide the station facade double as reticulation channels. The curation of the facades from the interior also had to be considered from the perspective of commuters walking at a slower pace inside the stations.

The branding department of the City of Tshwane wanted to blast the façade with exaggerated diagonal vinyl decals that were in complete opposition to the understated and simple intentions of the Memory Box design. The branding would completely negate the reflection of the historic buildings that we wanted to highlight. It took us a year of negotiating to convince the client not to apply this branding. We designed a more appropriate branding strategy and had it priced proactively to convince the client that our proposal would be cheaper.

C.2. Kee Enterprises: facade artwork

Artworks proposed as part of the design of a building are often left out at the end of the project due to budgetary constraints. However, by incorporating art into the building's fabric and structure, an integral artwork can be guaranteed, as we did with Kee Enterprises. Daniel van der Merwe (2009), architect and design liaison officer for PPC, states that: "Modernism's commitment to public art and the way that art should be integrated into architecture is certainly celebrated in a bold way in [the Kee Enterprises building]" (Van der Merwe 2009).

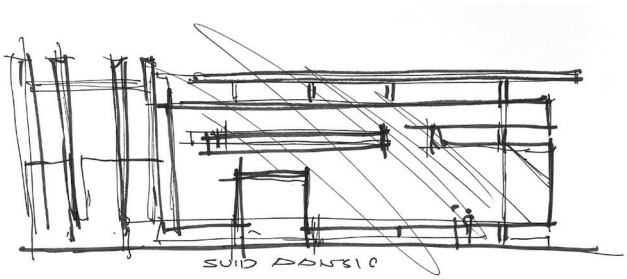


Figure 323 Kee Enterprises: concept sketch (Author 2009)

The design of the main southern facade was approached as a sculptural artwork. Toying with the idea of a huge canvas, the words "*Suidaansig Skaal 1:1*" [South Elevation Scale 1:1] were cast into the concrete facade as an ode to paper architecture. The pattern is an adaptation of a rough hand sketch. The left-hand hatching is a testimony to the autoethnographic nature and narrative of this element. The diagonal planks that form the voids of the artwork are "… stuck on the wall to repeat the pattern [on the western side], but in the positive" (Van der Merwe 2009).

In addition to the pattern on the concrete surface, a cutout was curated in the facade to receive and frame a sculpture by Angus Taylor.



Figure 324 The preparation of formwork for Kee Enterprises (Unknown 2007)



Figure 325 The concrete wall at Kee Enterprises under construction (Unknown 2007)

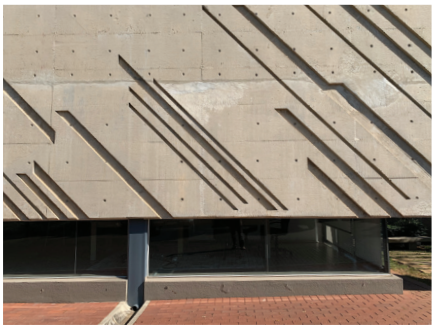


Figure 326 Concrete detail at Kee Enterprises (Unknown n.d.)

C.3. The Nellmapius Bridge panels

The facade of the Nellmapius Bridge consists of two main panels, three connecting panels, and two angles which were curated to create a random pattern. By changing the angles and the order of the panels, variety is established using relatively few elements.

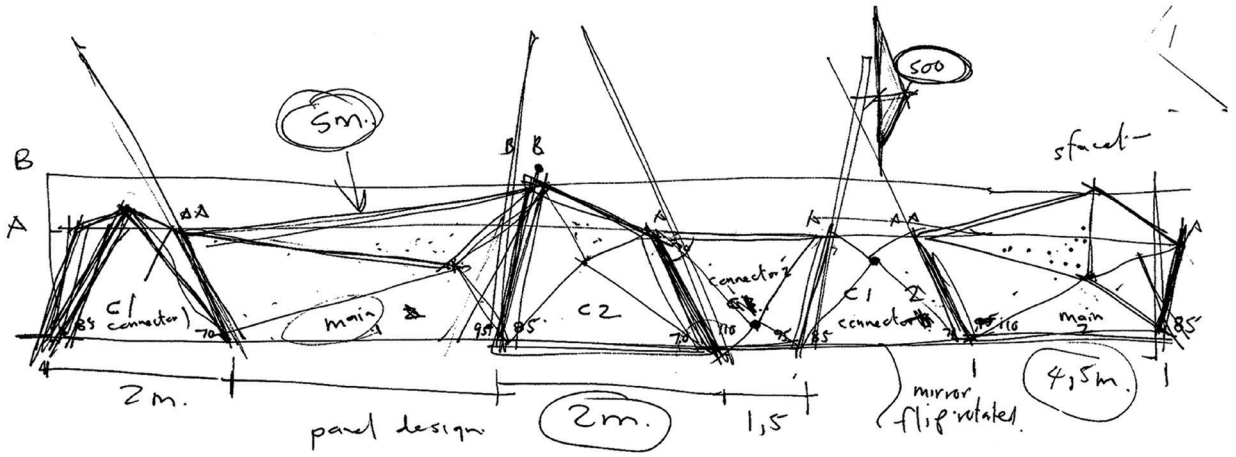


Figure 327 Concept sketch of the Nellmapius Bridge (Author 2010)

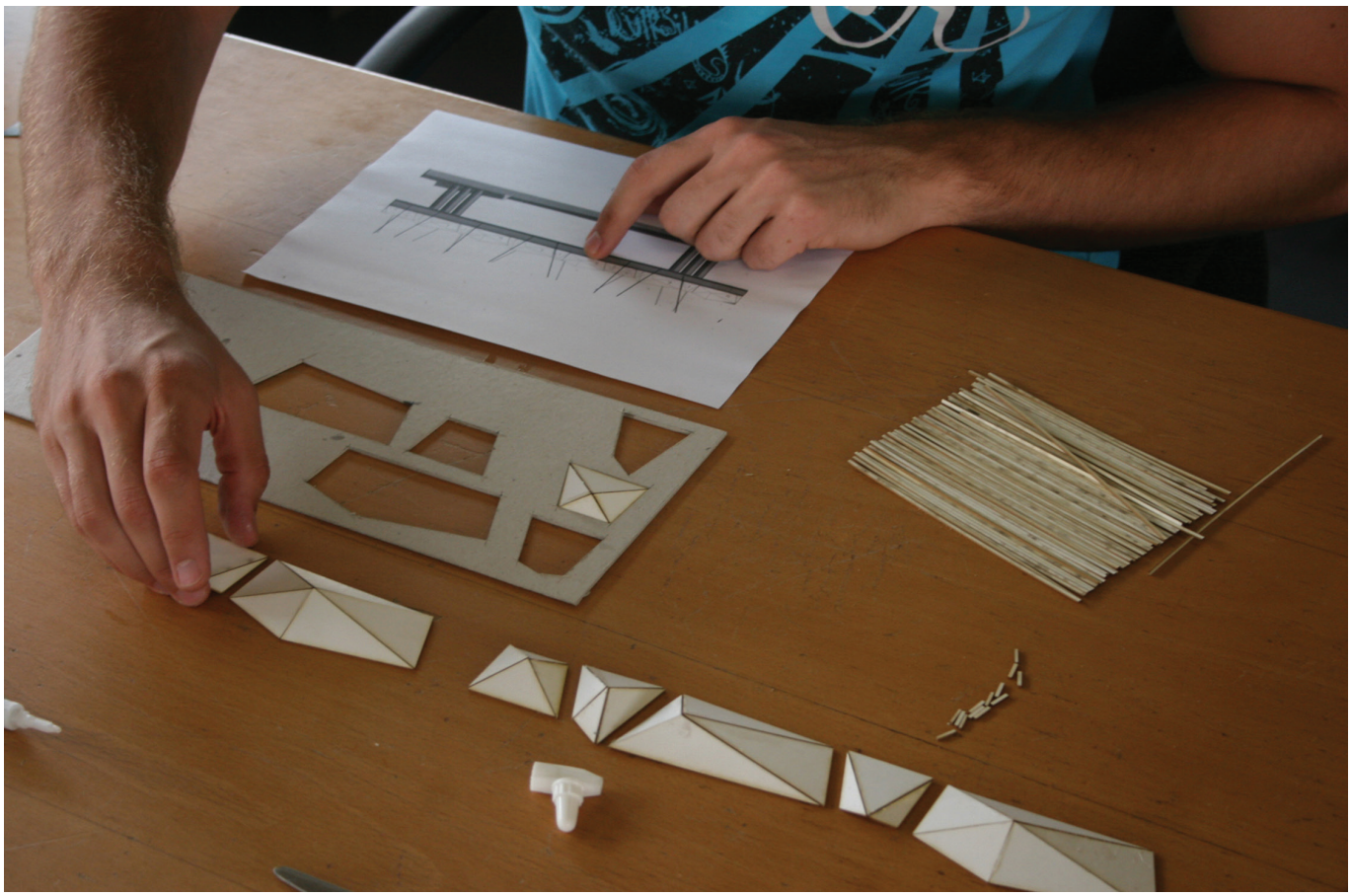


Figure 328 Curating the Nellmapius Bridge façade (Unknown 2009)

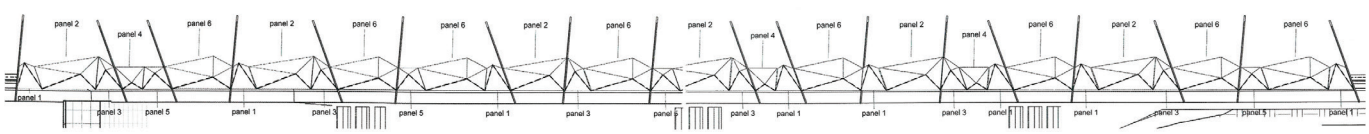


Figure 329 Façade of the Nellmapius Bridge (New Nellmapius Bridge Facade 2013:60-61)

C.4. The Javett Art Centre bridge

The patterned lightweight concrete panels were carefully curated to create a random effect of light and shadow on the Javett: UP bridge. We have experimented on various projects with the notion of randomness to create visually stimulating patterns. Making multiple moulds would have been too costly and we had to be content with two panel types. We turned some of the panels upside down and changed their sequence to create a facade that seemed random yet familiar (Figure 333). The same panels were used at the edges of the bridge, and at the loggia as part of the pergola, to dapple and feather the light in these transitional spaces. Few people pick up on this subtle form of curation.



Figure 330 The missing 'tooth' (Author 2021)



Figure 331 Artist's representation of the missing golden anodised aluminium panel (Booyens 2021)

What is, however, evident in a carefully curated facade is the missing 'tooth' on the eastern facade of the bridge (Figure 330). A special, protruding steel panel in gold was planned for the portion next to the Mapungubwe mount as a reference to the treasures inside (Figure 331). The deposit was paid, but the contractor went bankrupt and a series of contractual issues prohibited us from installing the golden panel. It is still in the factory as far as I am aware. Time and again people ask us why there is a hole in such a prominent place. I see this as proof of public engagement, albeit negative. Hopefully it can be installed sometime in the future.

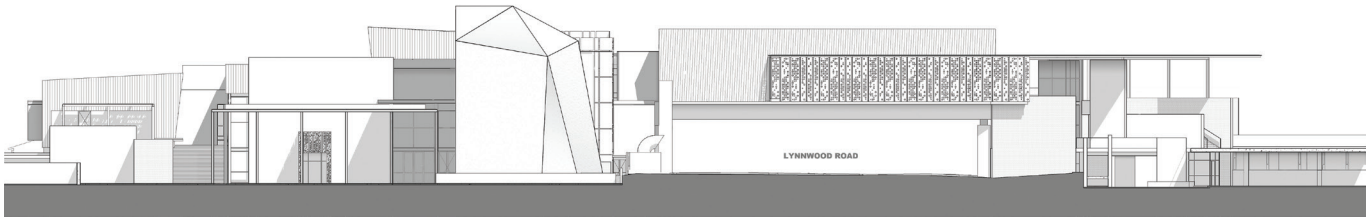


Figure 332 Javett: UP: east elevation (MAAA n.d.)

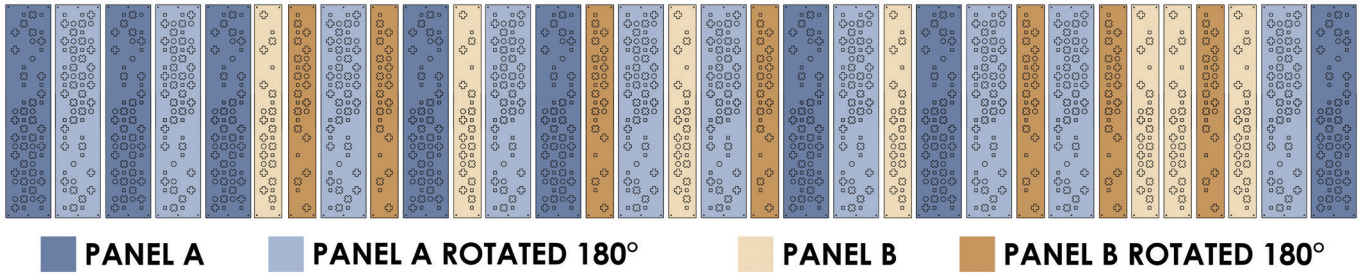


Figure 333 Diagram of the Javett: UP screens. Only two panel designs are repeated (MAAA 2022)

5.2.2. Sculpture as a core divergent competency

In this section, I will consider how sculpture as one of my core competencies enhances the architectural design process. Specific case studies will be discussed through which sculpture as one of my core competencies has exemplified the value of E-D thinking.

Not all projects or buildings can be object buildings. There are, however, some instances where the context does require a building or intervention that serves as a focal point. One such example is the humble guardhouse we designed for the Belgium Embassy - Delegation of Flanders. We were originally commissioned to compile a report on the property they were leasing. In response to the report, the client identified two projects. The first was to assist with the general maintenance recommendations and design of the existing façade. The second project entailed the design and supply of the new interior. This included the selection and curation of artworks from the museum of Modern Art, Antwerp, which allowed us to curate spaces that integrate art with architecture as described in section 5.2.1.B.1.

We were required to present the two projects virtually to the Facilities Department in Brussels, together with a budget. However, I used the presentation to also introduce the need for a third project. We presented the first two projects in depth and completed the presentation with a proposal of the third project, the guardhouse, as a compliment to the other projects. My tactic for introducing this project is quite unconventional: effectively shaming the bureaucrats by showing their current guardhouse, a dilapidated temporary structure colloquially known as a 'wendy house' (Figure 334). I strategically mentioned that this is the first point of call for visitors and thus the first impression of the Embassy of Belgium – Delegation of Flanders. As an alternative to the dilapidated structure, I presented our proposal for a sculptural intervention which would serve as a focal point and orientation device (Figure 335). As the presentation came to a close I deliberately showed the derelict guardhouse image again to reinforce the need for our proposal.

The third project was approved immediately. My experience is that, when presented with a problem alongside a solution, decision-making bodies, particularly committees, find ways to overcome bureaucratic obstacles.

When designing and specifying the guardhouse we carefully considered the materiality, sculptural elements and texture as opportunities to establish deep narratives. For instance, bricks were laid in Flemish bond, a bond that is also synonymous with many of South Africa's historic buildings. The texture and materiality of the bond thus represents the close relationship between Flanders and South Africa.

Another example of sculptural materiality and texture that enriches the propositional density and narrative depth of a design is our latest project on the AHS campus, the student annex. This project is situated at the main entrance of the campus between two prominent existing buildings and required a sensitive approach, respecting the existing buildings instead of a prominent object building that would have competed with existing structures. However, this does not disqualify the use of a sculptural approach. Sculpturally, the design paid homage to the existing situation in terms of scale and the repetition of the gable of the student centre on the one side. We also used the materiality of the new addition to strengthen its sculptural qualities (as well as propositional density and narrative depth) by echoing the sandstone of the historic main building and boy's residence, Huis Pannevis, on the other side.

In the following section, through the use of anecdotes and various examples, I aim to illustrate further sculptural strategies, including the specific instances and contexts in which they were applied, as well as their outcomes.



Figure 334 The original guardhouse for the Belgium Embassy - Delegation of Flanders (Author 2021)



Figure 335 Proposed design for the guardhouse for the Belgium Embassy - Delegation of Flanders (MAAA 2021)

A. Sculpture as a conceptual process

In his thesis on design thinking titled *Architectural thought: The design process and the expectant eye*, Michael Brawne applies Sir Karl Popper's theory on the way in which scientific theories come into being in architectural design. Popper describes theories as developing "… with the recognition of a problem, then put[ting] forward a hypothesis, a kind of tentative theory which needs to be tested in order to eliminate errors and end with a corroborated theory" (Brawne 2003:32-33). According to Brawne, "… the problem, tentative solution, error elimination, problem sequence is the most accurate description of the design process" (Brawne 2003:33). In design, this process is "dominated by non-verbal thinking" – explorations that cannot necessarily be described and justified verbally (Brawne 2003:35). My studies in sculpture taught me to think with my hands and explore material properties. I use sculptural skills to conceptualise and test ideas; to deconstruct the functional; and to explore building forms within their context (as discussed in Chapter 4).

Once a building has been pragmatically resolved with freehand concept plans, I turn to sculptural methods to explore form. In other instances, especially in buildings and structures which are sculptural forms in themselves, sculpture is the starting point of the investigation. It is a means of exploring forms, shapes and views. I use multiple materials, ranging from polystyrene, flower-arranging oasis, quick-drying Spanish clay and leftover pieces of cardboard and balsa wood. Clear acetate is another useful material with which I explore shadows and translucent form. I find sculpture and modelling a useful tool for investigating how the proposed structure will impact the context and surroundings (Figure 336-350). I often hold these models aloft in the context, squinting to imagine the building in its proposed location. Cellphone photos further help me to analyse views and the cinematic experience.

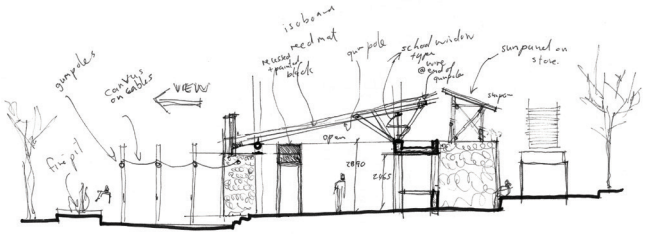


Figure 336 Initial drawing of Sekoga Lodge (Author 2007)

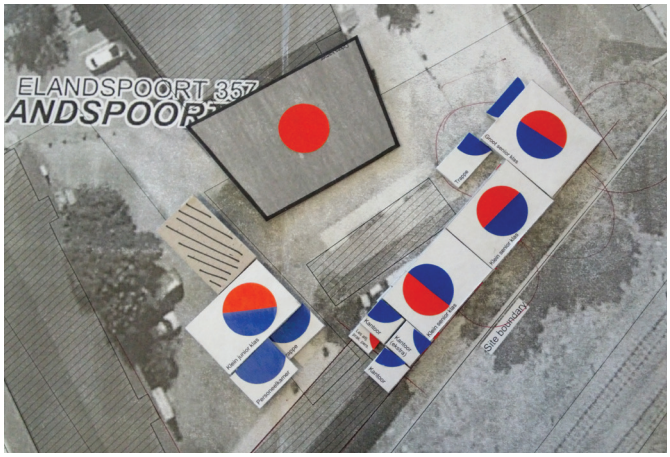


Figure 337 Spatial planning of the AHS Arts Campus (MAAA 2014)

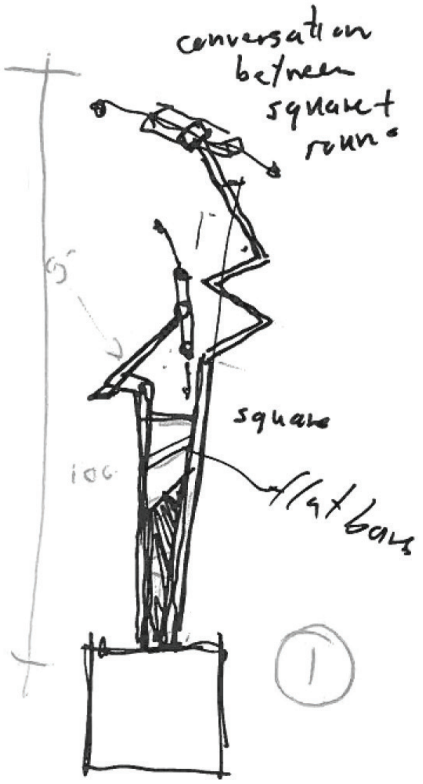


Figure 338 Concept sketch for sculptures at Mashova Headquarters (Author n.d.)

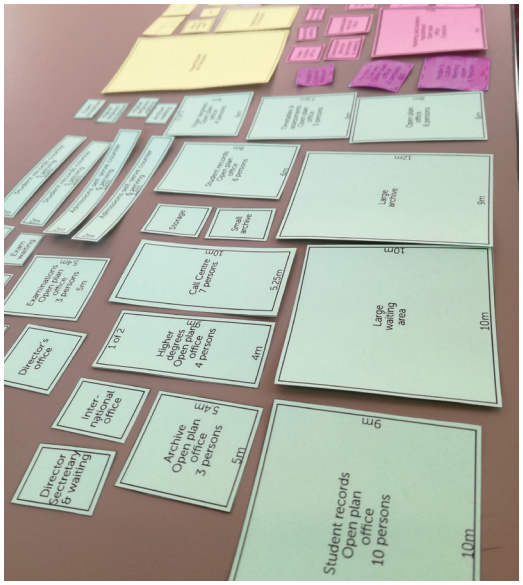


Figure 339 Colour blocks used for spatial planning (Booyens 2018)



Figure 340 Concept model for the Nellmapius Bridge installation in the Palazzo Bembo at La Biennale di Venezia (Author 2012)



Figure 341 Concept maquette for the Javett: UP, illustrating the bridge as termination point of Tukkie Lane (Author 2013)

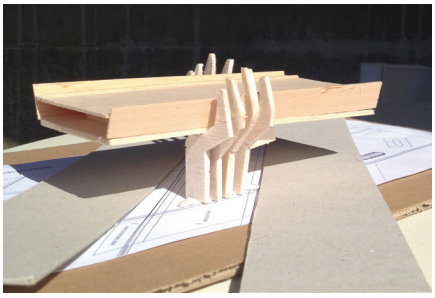


Figure 342 Balsa-wood model of the Musina Hand Bridge (Author 2013)

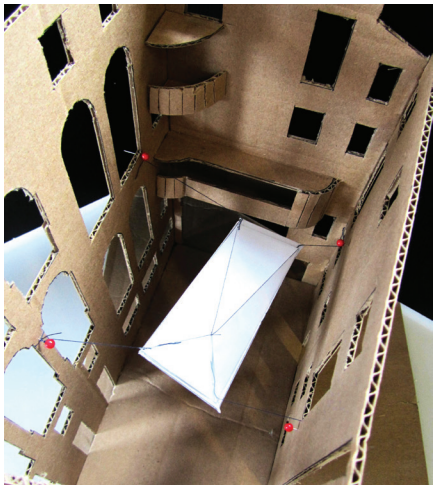


Figure 343 Concept model for the Nellmapius Bridge installation at the Palazzo Bembo (Author 2012)

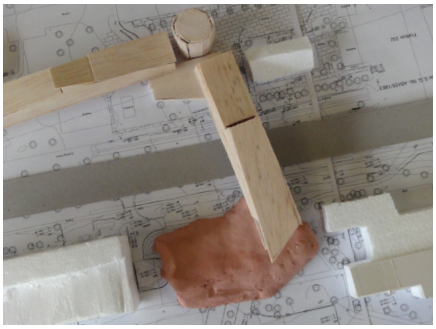


Figure 344 Concept maquette of the Javett: UP (Author 2013)

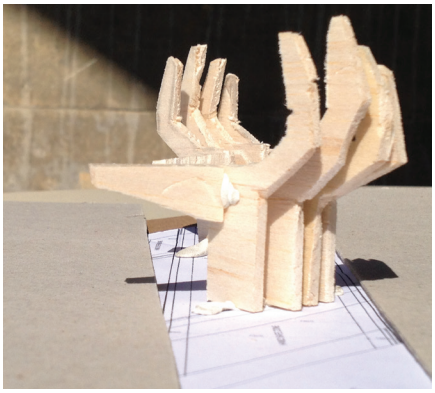


Figure 345 Balsa-wood maquette of the Musina Hand Bridge (Author 2013)

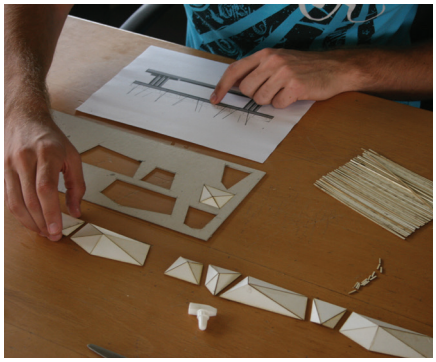


Figure 346 Curating the Nellmapius Bridge façade (Unknown 2009)



Figure 347 Acetate model for the SAN(d) + stars project (Author 2019)

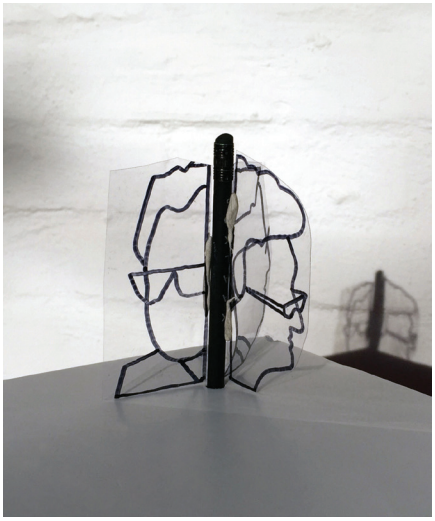


Figure 348 Acetate maquette for the Stand van Poësie bicycle stand (Author 2017)

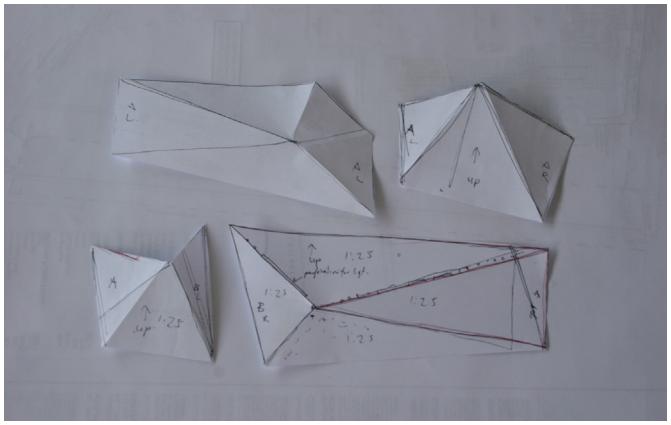


Figure 349 Origami maquettes for the Nellmapius Bridge façade (Author 2009)

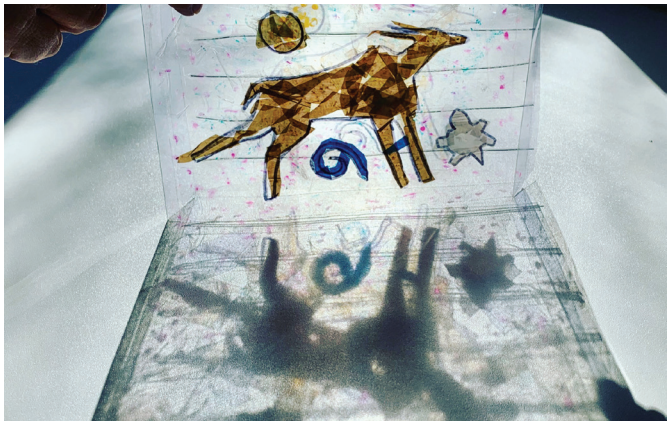


Figure 350 Acetate model for the SAN(d) + stars project (Author 2019)

Brawne asserts that "… design is always concerned with some future event; that it is an attempt to forecast that event by whatever means are appropriate and available at a particular time: a drawing, a model, an electronic simulation" (Brawne 2003:8). For the Baobab Tollgate near Musina, I commissioned a sculpture from Marike Prinsloo Rowe to narrate the importance of the baobab in the ecology of the northern regions of South Africa. I requested that she make a maquette of the proposed piece. I was so disappointed by her appalling maquette! The base was a dishwashing sponge into which she stuck an HB pencil with four pieces of cardboard offcuts attached to it. A Pierneef-style tree was cut into each cardboard piece. Despite my negative first impression, it communicated her ideas extremely well. Four concrete panels would be cast and fixed at the centre, and the rims of the tree cutouts would be painted with reflective road paint (Figure 351). At night the headlights of vehicles would reflect off the paint and highlight the abstract Pierneef trees. The end product was an exceptional work of public art that added to the narrative of the toll gate. This instance taught me that one does not need a bronze sculpture to communicate ideas, and that the humblest of materials can be highly effective communicators. Conceptualisation is about imagining the future: "In a real sense it is a prophecy" (Brawne 2003:8).



Figure 351 Concrete artwork by Marike Prinsloo, inspired by the baobab tree (Unknown 2003)

A.1. Sculpting a concept

The AHMP sports complex was first visualised through freehand drawings. The functional part of the brief could easily be accommodated in any form and, as such, it was the open-air pavilion and its location that dictated the design response. Model building was an important tool in the conceptual process. The *kappie* [bonnet] which the girls wear as part of their school uniform, and which is featured on the school's coat of arms, provided a conceptual starting point. The pioneer bonnet or *kappie* was a functional piece of clothing to protect the wearer against the harsh African sun. The main feature of the sports complex is an inverted *kappie* which projects into the sports arena. Interestingly, all our additions to the AHMP school campus draw on variations of the *kappie* explored through model building: the addition to the school hall can be likened to a cap that sits over or on the original structure: "The 55 year old hall has been left virtually untouched and the old roof replaced by an added mass – a wedge shape mimicking the existing" (Greyvensteyn 2014). The entrance guardhouse is a *kappie* that wraps around the functional interior, and the pavilion is a reverse *kappie* which juts forward, its form implying that it is facing the school. A series of exploratory models were crucial tools in establishing the architectural forms (Figure 354-356). The result, according to architect Isia Ortner, is an "… overall effect [that] is quite sculptural and full of depth. As one moves around it, the building presents differing and surprising aspects without ever becoming inconsistent or discordant" (Ortner 2013).

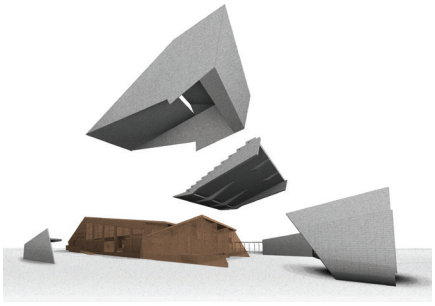


Figure 352 Exploded conceptual diagram of the AHMP school hall (MAAA 2011)

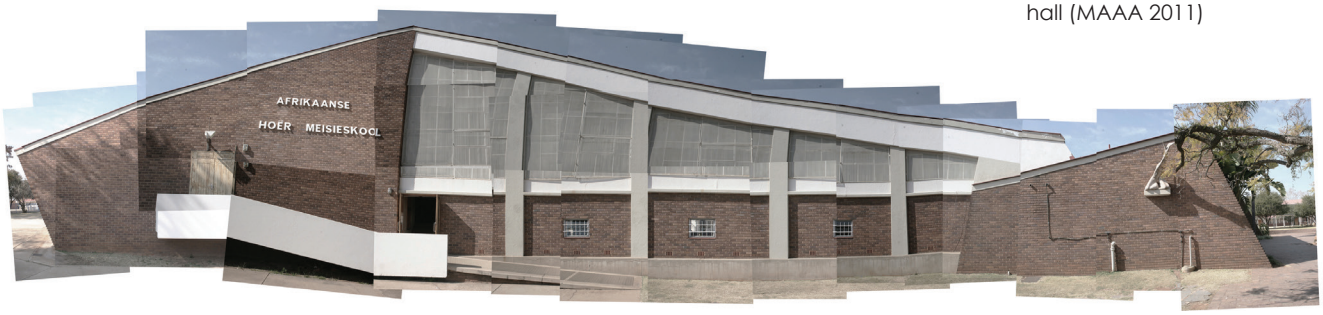


Figure 353 Collage of the street façade of the old AHMP school hall (MAAA 2013)

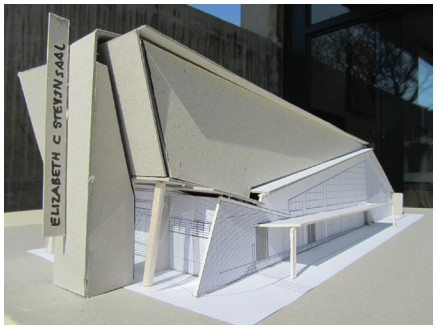


Figure 354 Explorative concept model for the AHMP school hall (Author 2011)

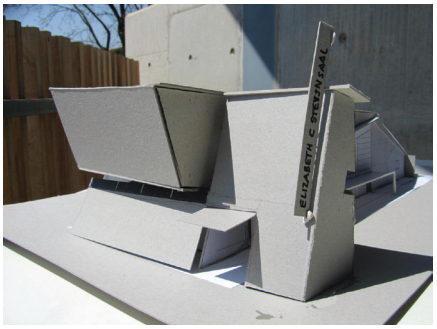


Figure 355 Explorative concept model (Author 2011)

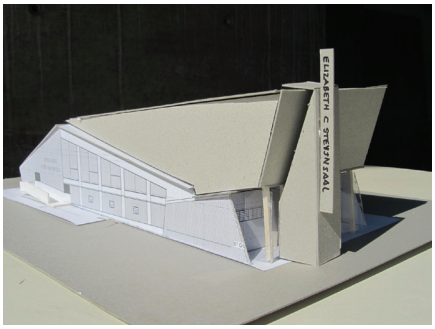


Figure 356 Explorative concept model (Author 2011)

The conceptual process for the Javett: UP involved a number of model components. Various bridge options were constructed from balsa wood. I had the idea that the gold artefacts of the Mabungubwe exhibit should be housed in a mountain resembling the mountain in the north of South Africa from which they were excavated. For the model, the Mapungubwe mountain structure was moulded from red Spanish self-drying clay (Figure 358-359). I took the models to the site to help me envision the building in the context. They assisted me to focus on the forms that would be important in the overall scheme. This investigation helped me realise early on that the scheme had two important elements: the vertical Mapungubwe mount and the horizontal bridge. Two sculptural elements in such close proximity to each other would not work; a civil dialogue had to be created. The hierarchy between the two was eventually established by looking at history. According to the social stratification of the Mapungubwe society, the royal household was placed at the top of the hill. As such, the decision was made to give formal preference to the mountain, with the bridge assuming a secondary role. From the conceptual massing exercise, it became evident that the facets and textures should firstly allude to the original mountain, while simultaneously reflecting the handmade quality of the objects it would house. The artist and aesthetics expert Leonard Koren writes that this "poetic irregularity and variability are difficult to mass-produce" (Koren 1994:87).

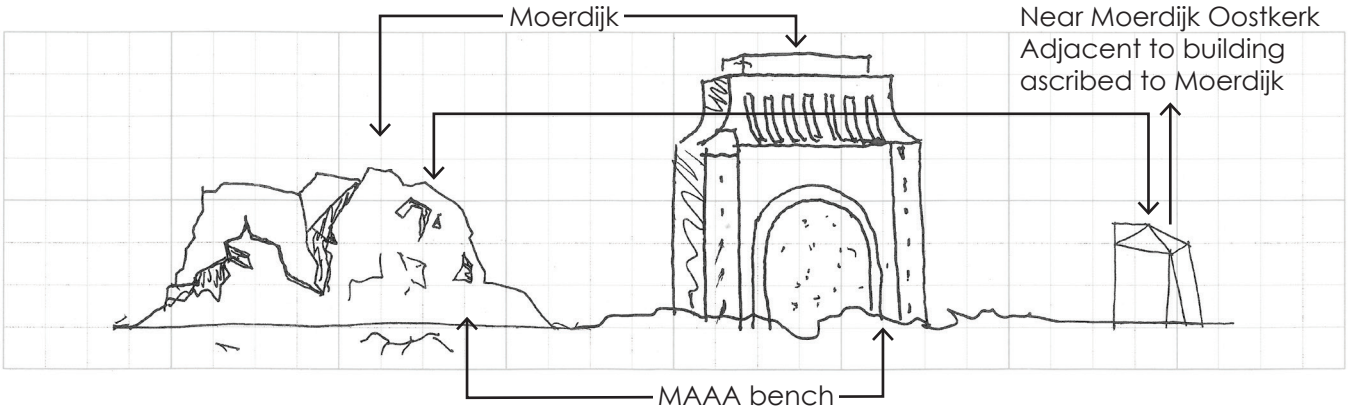


Figure 357 The relationship between the Mapungubwe mountain, the Voortrekker Monument and the Javett: UP's Mapungubwe structure (Author n.d.)

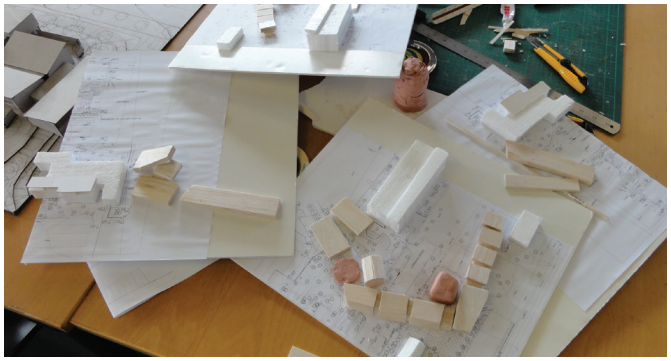


Figure 358 Maquettes of the Javett: UP (MAAA 2013)

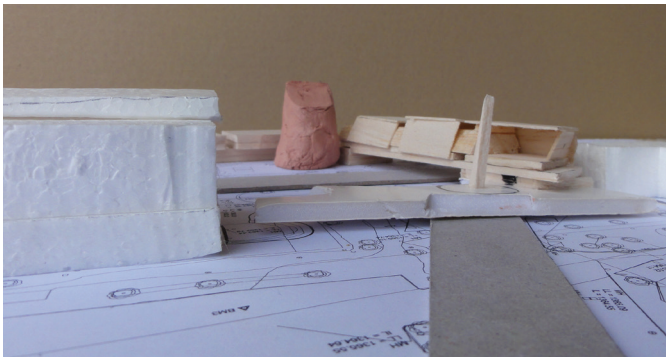


Figure 359 Concept maquette for the Javett: UP, illustrating the bridge as termination point of Tukkie Lane (Author 2013)

A.2. The metamorphosis of a working model

The Kee Enterprises site is located on a prominent corner with a difficult sharp edge that had to be resolved through design. As the building would house our own office, it was important for us to make the most of the opportunity presented. To explore design possibilities, a 1:100 scale model of Kee Enterprises was built from the concept design drawings. For a few weeks we followed a process which entailed me ripping off a facade of the model, only for the model builder to try another option on the same base model. We viewed the result from multiple angles. Once a portion of the facade had been solved, it could stay. The unsolved parts would be pulled off to find a more apt solution. The model builder soon grew accustomed to this ritual of me taking pieces apart like an unsatisfied female finch. The sharp corner was resolved through this process. The concrete wall seemed to float and the window panes and connections came together perfectly. The roof, walls and floors do not touch, creating an illusion of concrete as a light material.

A.3. Sculptural themes in concept modelling

The exegesis of my conceptual work led to the discovery of faceted objects and folds as a recurring theme within MAAA's oeuvre. From the conscious origami methods investigated in the design of the Nellmapius Bridge, to the faceted forms of the Mapungubwe mount, the steel *kappie* of the AHMP sports complex and an indented timber fold in Albé's Barn House, these forms are explored in various ways and in a multitude of materials. Art critic Sean O'Toole (2019a) mentions the AHMP pavilion in his article about the Javett: UP in *Wallpaper Online*. This made me realise that the faceted guardhouse (Figure 360-362) could have been a possible pre-study for the monolithic concrete form at the Javett: UP. Design tends to morph itself from things we have already done and seen. Design projects do not exist in isolation. Unconsciously, the same forms and themes are explored and improved with each subsequent design. In this sense, design projects share the 'contaminated' nature of E-D practice.

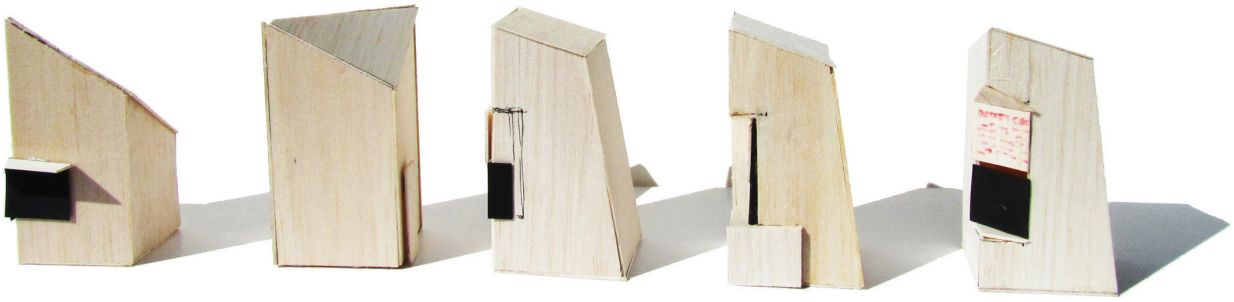


Figure 360 Concept models for the AHMP guardhouse (Author 2012)



Figure 361 The AHMP guardhouse under construction: the concrete fold is clearly visible (Unknown 2013)



Figure 362 The AHMP guardhouse (Author 2020)

B. Sculpture in construction: materiality and innovation

Experimentation with materials, forms and technology is crucial to the development of new directions in architecture. Renzo Piano, co-architect of the Centre Pompidou (Brawne 2003:76), had the following to say about construction innovation:

> If you intend to use a material, a construction technique, or an architectural element in an unusual way, there is always a time when you hear yourself saying, "It can't be done", simply because no one has ever tried before. But if you have actually tried, then you can keep going – and so you gain a degree of independence in design that you would not have otherwise … Our understanding of structures set free our capacity for expression.
>
> – Renzo Piano (Brawne 2003:76)

B1.Innovation in the use of concrete

B.1.1. Kee Enterprises

The southern facade of Kee Enterprises is a floating concrete artwork. The construction process was challenging. We had to conceive of an idea to position the concrete casting as a suspended element that needed to 'hang' from steel columns (which also housed and hid the downpipes). The first floor would be difficult to construct. The formwork was assembled on the ground and the indented hatching pattern was inspected and curated on site (Figure 363-364). The construction method was novel, as the wall hangs from the first-floor slab and is supported by the steel columns (Figure 365). The artwork was signed with the inscription in Afrikaans, "*Suidaansig Skaal 1:1*" [South Elevation Scale1:1] – a play on text as a decorative pattern to imbue further meaning to the architecture.



Figure 363 The preparation of formwork for Kee Enterprises (Unknown 2007)



Figure 364 The concrete wall at Kee Enterprises under construction (Unknown 2007)



Figure 365 Concrete detail at Kee Enterprises (Unknown n.d.)

B.1.2. The Javett Art Centre at the University of Pretoria

My visit to Jean Nouvel's Institut du Monde Arabe as a student taught me that building elements and shading devices can tell cultural stories. His kinetic stainless-steel sun screens are based on the mathematically proportioned patterns of Islam. The screens are complex, but the idea is simple. At the Barnes Foundation in Philadelphia, Todd Williams and Billie Tsien similarly used traditional patterns as inspiration. Ghanaian Kente textiles, exhibited inside the gallery, served as inspiration for the building's stone-clad facades and internal floor-tile layouts (Brownlee 2012).

The concrete panels that adorn the bridge of the Javett: UP are similarly derived from cultural patterns, in this case the shweshwe fabrics of South Africa which have become synonymous with South African fashion (Figure 366). Few people know that this 'distinctly African' fabric was brought to this country by German immigrants in the mid-1800s. Upon closer examination of the history of the cloths, Rhodé Marshall, columnist for the local airline magazine *Sawubona*, found that shweshwe "… has saturated the wardrobes of numerous South Africans, regardless of their race or culture [–] from Khoi-San people, slaves, soldiers, settlers to Voortrekkers … It is representative of an intercultural past [and] it testifies to a history of encounters and exchanges between humans around the globe" (Marshall 2019:16). Although the cloth speaks of an often troubled past, shweshwe has, according to Marshall, been made "… culturally significant with the way in which we use it and the meaning we attach [to it]" (Marshall 2019:16). The shweshwe pattern has close ties with the three official languages of the University of Pretoria, namely English, Sepedi and Afrikaans, and as such we felt it was a fitting symbol of the context of the Javett: UP.



Figure 366 Shweshwe pattern (Etsy.com/ urbanstax 2022)

Creating concrete screens with intricate patterns is no easy feat, but I wanted to use the opportunity to experiment. Laser-cut steel screens are plentiful on contemporary building facades, but they lack dimensionality and seem flimsy. Concrete, however, would add a certain gravitas to the patterned facade.

My experimentation with lightweight concrete in my sculpture classes at Fried Contemporary introduced me to the possibilities of this material. A few years later we received a commission to design the SIT bench and Sybrand Wiechers and Grietjie Lee, a specialist in cement finishing and mixes, helped me to conceptualise the concrete furniture piece. We did not have the technical knowledge to ensure that the thin members of the bench would be structurally sound. Concrete specialist engineer Santie Gouws taught us about fibre-reinforced concrete and helped us to develop the correct mix for the moulds (Figure 368-369). The bench was exhibited at the PPC Young Concrete Sculpture Awards in 2012 (Figure 367). This innovation sparked Santie Gouws and Ursula van Eck of Ocean-I to experiment with concrete mixes containing cigarette butts and plastic waste. A recycled-plastic version of the same bench has been made by Ocean-I (Figure 371), proving that the E-D work method and networks can spark research and the development of ideas in other fields as well.

My knowledge of lightweight concrete came in handy when we started developing the concrete panels with shweshwe-inspired apertures for the bridge of the Javett Art Centre at UP.



Figure 367 The author on the SIT bench (Unknown 2012)



Figure 368 The construction of the SIT bench (Unknown 2012)

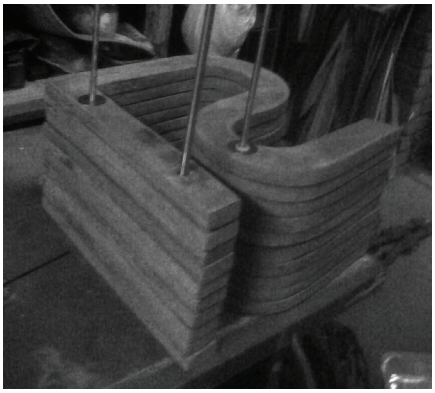


Figure 369 The construction of the SIT bench (Unknown 2012)

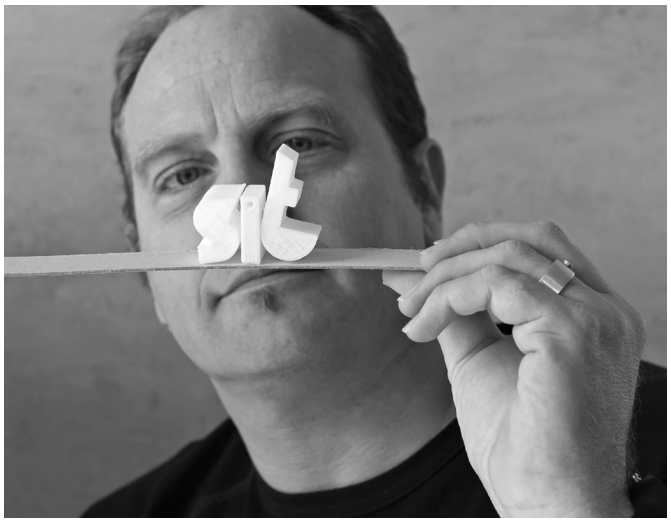


Figure 370 The author with a concept model of the SIT bench (Crafford 2012)



Figure 371 The SIT bench (Gouws 2012)

We approached the University of Pretoria's Department of Civil Engineering to assist with the research and development of a suitable concrete design. The Department was keen to use the project as an opportunity to do research into Ductal® lightweight concrete.
Under the leadership of the renowned concrete specialist, Professor Kearsny, the department made life-sized concrete mock-up panels (much larger than the small SIT bench) to test and amend the design, if necessary (Figure 372-375). They conducted numerous tests to determine what the minimum thickness of the panels and the distances between apertures should be. Imported steel and synthetic fibres were also tested. Following the experiment, we contracted a commercial company who could cast the panels at the scale required. On request of Professor Kearsny, measurement technology was installed on the panels to extract data from our project.
Who knows where that will lead in the future …?



Figure 372 Concrete test panels (Purnell 2016)



Figure 373 Samples for the concrete-panel experiment (Unknown 2016)



Figure 374 Testing samples for the concrete panels (Unknown 2016)



Figure 375 Testing the concrete panels (Purnell 2016)

Pragmatically, these screens shade the bridge gallery from the harsh western sun, reducing the pressure on the air-conditioning system of this portion of the building. On another level, the pedestrian walkway over the bridge offers an embodied experience that is testimony to the value of the explorative-divergent process undertaken to design the panels. The panels cast patterned shadows over the floor and walls as the sun moves along its trajectory throughout the day. During the evening, light shines from within the gallery, illuminating the bridge as a patterned lantern (Figure 432). Driving underneath the bridge, and walking across it at various times of the year, guarantees different experiences. These will be discussed in more detail in the section on architectural choreography and cinematic experience.



Figure 376 Mock-up of the Javett: UP Mapungubwe structure (Booyens 2018)



Figure 377 A construction worker inspects the model of the Mapungubwe structure with the Javett: UP under construction in the background (Purnell 2018)



Figure 378 Concrete signage for Lafarge (Author n.d.)



Figure 379 Concrete signage for the AHS Arts Campus (Author 2017)

B.2. Steel armature: the AHMP Sports Pavilion

The *kappie* [bonnet] served as inspiration for the pavilion's floating roof, which shields the podium from the sun without blocking the views towards the fields and courts. All four sides of the roof project outward, emphasising the manner in which it floats above the podium of the sports pavillion. As such, there were no conventional walls separating the ceiling and the eaves of the roof. The entire roof structure needed to be constructed as a single sculptural element, with the same cladding material applied to the roof and ceiling.

We approached the roof from a sculptural perspective, seeing the structure as the armature of the form. The roof consists of a series of inverted lightweight steel trusses which was constructed off-site and brought to the school. A crane hoisted the structure into position on a steel frame (Figure 380). The construction process became a demonstration and pedagogical exercise. On the day that it was lifted into position, we invited the learners to gather class by class on the neighbouring hockey field, where the engineers and architects took the opportunity to explain the process of construction and design to them. Thereafter they witnessed how the roof was put in place. This provided an alternative opportunity to engage with the building and informed the learners' understanding of design, construction and this particular edifice.



Figure 380 Placing the roof structure of the AHMP sports complex (Unknown 2012)



Figure 381 The armature of the stairwell at the Oaktree Studio (Unknown n.d.)

The sports complex received a Regional award of Merit award from the local Pretoria Institute for Architecture. In the citation the following remark is made: "What strikes one most about this project is the sheer fun of it … It is tongue-in-cheek and playful, with the roof inverted and sitting off-grid on the building like a hat" (Ortner 2014). The school children have also interpreted the building's roof as a hat, a very specific one at that. They've nicknamed it the 'Jack Parow', after a local rapper known for wearing distinctive peaked caps with enormous visors. Public reading adds dimension and meaning to the building over and above that which we intended as architects. The E-D practice encourages and celebrates these adaptations and learns from them.

Another example where steel was used as armature for a sculptural form is the staircase at our Oaktree Studios office (Figure 381), discussed briefly in Chapter 4. Both these examples allude to recurring themes of facets and folds and the emphasis of the 'corner'.

c. Textures in architecture and patina in sculpture

Textures and tactile experiences are an important feature of our oeuvre, probably as a result of my early experimentation with materials and textures as documented in the book *Architexture*, discussed in Chapter 2.

Bronze sculptures are finished in various patinas and colours which render a distinct final appearance. I attempted to achieve a similar effect with the finish of the addition to the AHMP hall. We specified three colours of white factory-painted cladding in an attempt to get a random finish which would mimic a

cloud (Artefacts 2013a). Under the correct lighting conditions the gallery addition 'disappears', and the original form of the old hall comes to the fore (Figure 382). During the construction of the hall, many parents called us to report that the contractor was installing incorrect sheeting as they did not seem to match. The completed project, however, reveals the guerrilla design intention.



Figure 382 The addition to the AHMP school hall disappears against a cloudy sky (Du Toit 2012)



Figure 383 The façade of the AHMP hall as viewed from the street (Crafford 2013)



Figure 384 The exposed concrete beam at the AHMP school hall (Du Toit 2012)



Figure 385 Interior of the AHMP school hall (Crafford 2013)

During construction, the original beams were opened up and I observed a casting method I had never seen before: wooden blocks had been used as construction ties and they had made an imprint on the concrete (Figure 384-385). I decided there and then that this imprint should remain exposed to tell the story of the old and differentiate it from the new addition. Initially not everyone was happy with the finish, but I convinced the audience at the opening of the hall when I explained the rationale: leaving the beams exposed was in the manner of the Japanese tradition of wabi-sabi, which "… suggests that beauty is a dynamic event that occurs between you and something else" (Koren 1994:51). It reveals itself in the "the minor and the hidden, the tentative and the ephemeral" (Koren 1994:50). Wabi-sabi, I explained to the school, is ambivalent about "separating beauty from non-beauty or ugliness" (Koren 1994:52), because they are two sides of a whole, in line with the dualistic nature of E-D. The solution, according to the wabi-sabi tradition, is not to cover up what you consider ugly, but to come to terms with it. Following my explanation, many people went up to the beams to touch and inspect them.

The beam represents an element with high propositional density. It is an element of architectural pedagogy; a marker and narrator of history; and a structural element that joins old and new. When a visually-impaired radio host was taken through the building, she touched the beam and described what she felt and how she understood the construction through texture. Her tactile experience was well translated to her 'blind' radio audience.

This incident with the radio host informed the approach to heritage throughout the rest of the building: the contemporary additions were juxtaposed with the existing in such a way that the old and the new are clearly expressed and distinct from each other. On the external facade, old and new are distinguished by a steel channel which marks the position of the beam. It forms a recessed shadow line during the day and is lit up at night.



Figure 386 Concrete textures at the Javett: UP (Pretorius 2018)



Figure 387 The concrete texture of the Mapungubwe structure (Author 2021)



Figure 388 UP Vice-Chancellor, Prof Tawana Kupe, at the opening of the Javett Art Centre (Booyens 2019)

The texture of the Mapungubwe structure was brought about by necessity. Originally, smooth formwork with golden inlays was proposed. When we realised what smooth formwork would cost, we had to resort to a local shuttering company. We opted for the alternative: a rough, tactile finish which would reference the handcrafted quality of the golden objects displayed inside as well as the fractal form of the Mapungubwe mound (Figure 386-388). This did not please the client, but as architect Peter Rich remarked on touching the Mapungubwe rock, "In Africa one has to design for forgiveness and tolerance." He goes further, describing how it is the handmade quality of the shutter work that gives character to the concrete. When "Sert [Josep Luis Sert] built Corb's building [Carpenter Centre for the Visual Arts] at Harvard University, it was as if Sert drained the blood out of it – the concrete was all *ordentlik* [well-mannered]. *Dit werk net nie*. [It just does not work]." (Rich 2021). Rich identifies a dialogue between the Mapungubwe structure and the rest of the building. By setting up the sophisticated with the handmade, a dialogue is established which creates interest in the architecture.

5.2.3. Cinematic architectural choreography as a core divergent competency

My appreciation for cinematography developed through exposure to the making of television inserts and documentaries, as discussed in Chapter 2. In this section, I will consider how this interest (core competency) influenced the oeuvre and architectural vocabulary of Mathews and Associates Architects.

The overlap between architecture and film has enjoyed much attention in post-modern architectural theory. Jean Nouvel, architect of the Institut du Monde Arabe (Cairns 2013:65), suggests that "… the filmmaker can teach the architect to 'think temporally', to imagine the experience of the building user as an experience in sequence, an experience not only of space but also of time". The temporality of cinematography provides a link to architecture in a way that neither drawing, nor sculpture, nor photography – which represents a snapshot of a fixed location at a fixed moment in time – can achieve.

For the purposes of this study, I will refer to this competency as "cinematic architectural choreography". It is different from cinematography in the sense that, as an architect, I am not attempting to create an on-screen narrative which is passively viewed; rather, I am choreographing sequential spaces to offer the dweller a cinematic, sequential experience through place and time. The dweller participates in the narrative, as the sequential experience is dependent on their actions – on their movement through and interaction with the space.

Having established that the cinematic experience of architecture depends on the interaction of the dweller with the architecture, one can hypothesise that the mode of movement and the type of interaction of the dweller will have a profound impact on how they experience the architecture. During my world tour discussed in Chapters 2 and 3, I stopped in Las Vegas, wanting to see what all the hype was about. I was sorely disappointed and couldn't get away from the city fast enough. I did not understand what made Robert Venturi's thesis, Learning from Las Vegas, so spectacular, and I left convinced that I had learnt nothing from Las Vegas. Upon reflection, and with the insight of the research I have done for this thesis, I realised that a backpacker, arriving at midday in a desert city and exploring on foot, could not expect to have the same impression of the city as a commuter arriving by car at night when the facades (the architecture of Las Vegas) are lit up (Figure 389).



Figure 389 Las Vegas (Author 1989)

Inspired by the insights I have gained from cinematic architectural choreography, I have often tried to find novel ways to simulate the intended user experience of buildings. Often, this is done by copying the movement of the user with the mode of transport most users would utilise. I will briefly discuss three projects which used different modes of transportation – walking, cycling and driving a car – to achieve the best cinematic result.

In Chapter 6 I extensively discuss the Stellenbosch Triennale's Braak Pavilion. The initial concept of the pavilion was turned down because the curator felt it referenced Cape Dutch and colonial architecture too much (see section 6.3.2). With this observation in mind, I wanted to address the various perspectives of the people using the site on a daily basis. This approach required me to walk the path repeatedly and at different times during the day to experience the space as it would be experienced by the pedestrian visitors. This vantage point and the slow speed of movement allowed me to design the pavilion to frame particular views that would have been inconspicuous at faster speeds.

I also travelled the route of the BRT on my bicycle to simulate the approximate speed commuters would experience the stations, art and interventions in terms of different modes of transport- whether on foot, cars or as commuters in buses. A bicycle allows you to cycle slow, fast and push it in order to achieve various speeds and simulations. You can also stop to take photographs of specific angles and make notes which might inform curation. The photographs were later studied to achieve the best cinematic response possible.

The third project required vehicular transportation. The Musina Hand Bridge is a larger scale project, including the bridge and abutment on the N1 motorway near the border between South Africa and Zimbabwe. Due to the scale of the project and the speed of movement at which most users were likely to experience the site, I drove the route a few times to get a sense of the area and context. As this was a landmark project, we wanted to make the user aware of the narrative along the route leading to the project.

Travelling by car showed me that it would be possible to sustain a sense of anticipation for much longer (and further) than I had initially anticipated, and therefore the preparation of the traveller for crossing the bridge could be choreographed on a much more elaborate scale. By simulating the speed at which people were moving it was possible to appreciate the value of placing small sculptures as much as ten kilometres away from the bridge in each direction. Another E-D tactic we employed was to call the small sculptures 'samples'. I argued that these were necessary to ensure that the final sculptural hand of the bridge be executed as well as possible, offering practice opportunities for the contractor to understand the complexities of the design. The term sample is generally accepted in South African bills of quantities whilst sculptural narrative is not and would not have been approved.

The urbanist Donald Appleyard describes the difference between the experiences of a pedestrian versus that of someone driving in a vehicle as follows:

> The modern car interposes a filter between the driver and the world he is moving through. Sounds, smells, sensations of touch and weather are all diluted in comparison with what the pedestrian experiences. Vision is framed and limited; the driver is relatively inactive. He has less opportunity to stop, explore, or choose his path than does the man on foot. Only the speed, scale, and grace of his movement can compensate for these limitations. (Appleyard, Lynch & Myer 1964:6)

Our architectural projects are designed with these variable experiences in mind. Buildings that will be experienced predominantly from a moving vehicle, such as tollgates or bridge structures, are predominantly object buildings. These can be understood from the framed view seen from the vehicle interior. Sennett (2018:36) observes that "… movement removes the particularity of place because we move faster than we can experience it". The need for mobility diminishes the sense of place and experience of the city (Sennett 2018:36-37). Buildings which will be interacted with on a pedestrian level are designed to be more intricate. Some buildings make provision for both the pedestrian and the motorist.

A. Landmark objects and fast cars

The sculptural nature of object buildings was discussed in the previous section. In this section, the building as a landmark object will be explored from a cinematic perspective. Landmark objects are best suited to instances where they will be viewed from a distance, most often from moving vehicles. Projects from our transport oeuvre can be understood by analysing our design thinking in terms of movement towards, movement from, and movement through these objects.

A.1. The Diamond Hill Toll Plaza

Selecting a site for a tollgate is challenging from a design perspective, as the guidelines from the client tend to be vague: choose a site anywhere in this 10 km section of road … For the Diamond Hill Toll Plaza, on the eastern outskirts of Pretoria, we selected the highest outcrop on the stretch of road assigned to us. The highest point would elevate the tollgate as an object in the landscape and allow it to make a bigger visual impact. The position would also emphasize the deceleration of the car towards the tollgate and its subsequent acceleration downhill. This symmetrical experience simulates the frames of a film slowing down, stopping briefly to pay toll, and speeding up to dissolve into the landscape (Figure 390).
The experience of rising towards the tollgate confirms Appleyard, Lynch and Myer's (1964:13) hypothesis that an upward sloping road "… against an important axial view [creates a] dramatic effect of truncation, or of foreground–background discontinuity".



Figure 390 The Diamond Hill Toll Plaza (Cronje 2015)

At night, the experience changes. The landscape disappears in the darkness and the lights of the tollgate are given prominence. The approaching lights and Diamond Hill are tilted towards the road, illuminating the road surface, but also creating the effect of passing through a tunnel; of being enclosed by the 'falling' structures. My former studio master, Heinrich Kammeyer, remarked that passing through the masts of the tollgate makes him feel like he is in a "sci-fi movie" (Kammeyer 2019). "It makes the end-user feel important."



Figure 391 Cinematic experience of the Diamond Hill Toll Plaza (Cronje 2009)



Figure 392 The Diamond Hill Toll Plaza at night (Cronje 2015)

According to Appleyard *et al.* (1964:10), "… the fundamental sensation of the road … is the visual sense of motion and space. This includes the sense of motion of self, the apparent motion of surrounding objects, and the shape of the space being moved through. These factors are all intertwined." The objects that we place along the road either confirm our sense of motion, or accentuate it. The slanted masts at the Diamond Hill Toll Plaza accentuate the experience of slowing down to move *through* the object/ space (Figure 391-392).

A.2. The Nellmapius Bridge

The Nellmapius Bridge marks the southern gateway to Tshwane/Pretoria. Unlike tollgates, a bridge offers two conditions of movement: passing over the bridge or underneath the bridge. For urban road users (including cyclists and pedestrians) who go over the bridge, the facade of the bridge acts as a visual and acoustic barrier which creates a sense of protection. As the facets aren't visible from inside, the light posts act as the principal indicators of movement (Figure 393).



Figure 393 The Nellmapius Bridge at night (Botha 2012)

For road users on the N1 who pass under the bridge, the facades of the bridge act as an urban artwork. The facets change depending on the quality and conditions of the natural and artificial lighting. It is especially at night that the facets come to life with the dancing light poles and the streaks of vehicle lights heading home. Appleyard *et al.* (1964:9) observe that: "Artificial light is a resource for directing attention, for changing apparent spatial form, for producing visual sequences. At night the familiar day-time landmarks and activities may be picked out to give a reassuring sense of continuity." To ensure this continuity of place during both day and night, we insisted on experimenting with different lighting solutions in a workshop – a hands-on design experiment on a full-scale mock-up (Figure 394-395). The client wanted a lighting system that would change colour, but we argued that it would compete with the surrounding visual 'load' of billboards. We finally settled on warm-white LED strips that created a softer aesthetic and highlighted the paper-like folds and facets of the panels.

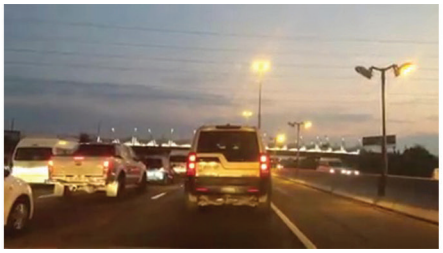


Figure 394 1:1 scale mock-up of a panel for the Nellmapius Bridge (Author 2011)



Figure 395 Testing lighting options for the Nellmapius Bridge (Author 2011)





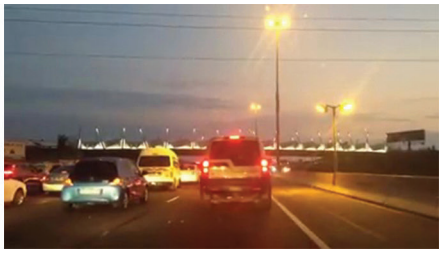


Figure 396 Stills from a video of the Nellmapius Bridge (Da Cruz Almeida, C 2018)

A.3. The Memory Box BRT station

The user experience and perspective is different depending on the mode of transport, as I learnt from my trip to Las Vegas. The BRT station project is an interesting example in which the experience at all levels and modes had to be taken into account and designed for. People would interact with these station buildings from within a moving bus or car, and also as pedestrians on the sidewalk. People within the station space would have a different experience from those who merely view it from the outside. As popular philosopher Alain de Botton aptly points out: "A station is a space which people move through, rather than a space in which people spend their time" (De Botton 2002:34). This makes the typology quite different from other buildings.

With this awareness of the videomatic nature of the BRT stations, I took to cycling through the city on the proposed BRT routes on Sunday mornings. The city was quiet and sleepy, and it gave me an opportunity to connect the dots: commuters would have vivid recollections of the two connecting stations where they got on or off, but the rest would be a blur viewed from the windows of the bus. Cycling offered a simulation of the speed at which the interventions and surroundings would be experienced. The bicycle proved more effective than a car for the purpose of simulating and conceptualising. I could stop, make notes and take photographs from various angles. In true E-D fashion, exercising could be imbued with fringe benefits.

Expressing movement in the interior of the bus station was just as important as the experience outside. The 'dancing' ceiling resembles a wave of movement which leads the eye through the station to the transfer station or exit (Figure 397). It has the added benefit of allowing all services to be easily accessible. Each wooden panel was individually drawn and cut by computer numerical control (CNC) to achieve this dancing ceiling.



Figure 397 View from the interior of the Rivonia Trial Station towards the Old Synagogue (Unknown 2015)

To address the pedestrian on the sidewalk and assist with wayfinding, totem poles were erected at each station. These unique art pieces assist in identifying the otherwise generic stations and speak of the character of each neighbourhood. This was discussed in more detail under the section on curation.

A.4. The Musina Hand Bridge

The new Hand Bridge on the Musina bypass is an example of the overlap between two divergencies: sculpture and cinematography. The sculptural investigation into the abstracted hand form which supports the bridge was discussed earlier in this thesis. The cinematic aspect of the bridge is largely an 'accidental' consequence of construction requirements. Formwork and concrete mixes for the finger columns had to be tested. We proposed that the samples be used to create a narrative that starts 10 km before reaching the bridge (Figure 399, 400, 402). These samples, pragmatic in nature, are now 'fingers' rising from the ground as one reaches the bridge, until the entire 'hand' is revealed. These structures are propositionally dense: they serve as samples, as narrative elements, and as indicators of speed.



Figure 398 Angus Taylor's maquette for the Musina Hand Bridge (Author n.d.)



Figure 399 Narrative samples designed to be placed 10 km from the Musina Hand Bridge (Mathews H. 2022)



Figure 400 Narrative samples designed to be placed 10 km from the Musina Hand Bridge (Bennet 2022)



Figure 401 The Musina Hand Bridge (Mathews H. 2022)



Figure 402 Narrative samples designed to be placed 10 km from the Musina Hand Bridge (Bennet 2022)

B. Projections and light boxes

Cairns (2013:242) identifies film as a potential "architectural material": the projection of film material onto building facades can be seen as "an attempt to alter architectural reality through the application of light". The practice of Elizabeth Diller and Ricardo Scofidio (now DS+R) is well-known for their investigations of film as an architectural medium. "Central to their work and its theoretical underpinnings is their questioning of visioning technologies and, in particular, how the moving image has weaved its way into the cultural fabric of the twentieth century" (Cairns 2013:219).

One of the highlights of the 2014 Cool Capital biennale was a lighting installation which saw the Voortrekker Monument in Pretoria lit up in pink for the duration of the biennale (Figure 404). The intention was the following: to change inhabitants' perception and one-dimensional interpretation of the monument as a colonial edifice, and turn it into a symbol of how we could also change our perception of our city (Mathews & Taljaard 2015).



Figure 403 Light projection on the concrete surface of the Mapungubwe structure (Author 2019)


Figure 404 The Voortrekker Monument bathed in pink (Van Helsdingen 2014)


Figure 405 Projecting the concept of the mural for the Wonderboom Intermodal Interchange (Author 2021)


Figure 406 Guardhouse for the Flemish Delegation (Author 2022)

Filmic projection is a medium I have only recently taken cognisance of. However, the users of some of our built projects have intuitively adapted this medium in the process of taking ownership of their buildings. Their interpretations have increased the propositional density and added to the narratives of these structures.

For example, during the opening week of the Javett: UP, the logo of the art centre was projected onto the surface of the Mapungubwe structure, momentarily changing the appearance of the concrete surface (Figure 403).

The AHMP Sports Pavilion rapidly assumed many other functions upon its completion, thereby raising its propositional density. The raised podium and the floating roof form an unplanned outdoor stage, with "the roof shape reflecting sound onto the audience" (Artefacts 2013b) gathered on the hockey field below. In January 2013, the first annual initiation concert was held here, as the main hall was not yet complete. Soon thereafter, the hostel learners started using the space for outdoor movie nights,

projecting films onto the white roof sheeting jutting out over the field. It is a lovely example of summer-evening entertainment that reminded me of the drive-in theatres of my youth. The building, itself designed as a spectacle, is used as a backdrop for events. Chimero (2012:95) writes that designers should see frameworks as "… good restrictions that act as suggestions, but then step out of the way to see where the audience takes those purposeful limitations". This is exactly what the sports complex does: it creates spaces for viewing and being viewed, but the way in which this plays out – the specific uses assigned to the space – is open for interpretation. The edifice can easily be adapted to various uses and dualistic roles, a principle ingrained in the explorative-divergent mindset.

Another manner of working with light to alter materiality is by treating buildings as light boxes. The Rivonia Trial Station is experienced in different ways, depending on the time of day. During the day it reflects the surroundings, but at night the interior is lit up, the synagogue disappears, and the focus shifts to the station building which becomes a light box for the surroundings (Figure 407).



Figure 407 The Rivonia Trial Station as a light box (Author 2015)

C. The in-between and the sequence of spaces

Complexes containing several buildings offer different cinematic experiences than object buildings. As they cannot be observed as a whole, the transition between spaces and the sequence in which they are experienced become important design considerations. Kengo Kuma's description of the English Garden typology as a spatial experience is a good example of this cinematic experience where one cannot see everything at once:

> The English landscape garden was conceived as a series of qualitatively different experiences rather than as a single entity ruled by some overarching geometry. Any inconsistencies in those experiences were of no consequence. A masonry pavilion in a medieval European style might occupy one spot, a Chinese pagoda another. From above, these mutually incompatible fragments were seen to be connected by a continuous path. An observer (that is, the subject) followed this path around the garden and at any one moment was able to experience only the fragment that was before his eyes. (Kuma 2013:9)

Kuma draws on Immanuel Kant's observations that the subject "… does not simply compartmentalise qualitatively different experiences but in some way perceives and defines the sum total of those experiences – a whole that makes possible their diversity" (Kuma 2013:9). In similar fashion, the scenes of a movie are not understood as individual shots, but are rather read as an overarching narrative and cinematic 'space'. Although we do not observe this cinematic space in its entirety, but rather as cutaways, thresholds, transitions, foci and paths, amongst others, our understanding or experience of the cinematic representation is holistic.

According to Cairns (2013:65), Jean Nouvel's work exemplifies cinematic principles applied to architectural thinking. "It is not uncommon that Nouvel explains projects as a series of spaces that open out, one into the other, in a sequence of specific moments; the points at which we pass from one of these spaces to another becoming the architectural equivalent of a cut that jumps from one location, space or room, to the next." In this light, thresholds are not merely architectural devices, but also hold cinematic potential. The organisation of spaces is not merely pragmatic, but also a cinematic sequential device which can be employed to reveal and strengthen narrative. Similarly, scale, which in film is "capable of moving the eye closer or further from a given object", is employed in Nouvel's work by placing "… spaces of radically different scales next to one another so that the spatial effect created by crossing the architectural threshold involves a radical change in our perception of the scale of the spaces we enter and leave" (Cairns 2013:67).

Two prominent MAAA projects, namely the AHS Arts Campus and the Javett: UP, illustrate the use of cinematic devices to structure a sequence of spaces in building complexes and object buildings. The Arts Campus focuses on the sequence of external spaces amongst buildings, while the Javett: UP serves as an example of the cinematic arrangement of internal spaces.

C.1. The AHS Arts Campus

When we were commissioned to design the Arts Campus at the AHS, I made it clear to the clients – Dr P Edwards, the school principal, and the governing body – that a symmetrical design would not be possible given the constraints of the triangular site. It was important that the client understood from the start that the historical buildings could not be mimicked. I proposed a solution that would consider the project as a series of alleyways in a medieval European city. I had in mind Venice's innumerable vistas, details, narrow streets and consolidated urban courtyards. We had to ignore the school's grid and make use of filtered light. The only way to accommodate the programmatic requirements was to design separate buildings, and to arrange (compose) them according to function within the tight constraints of the site.

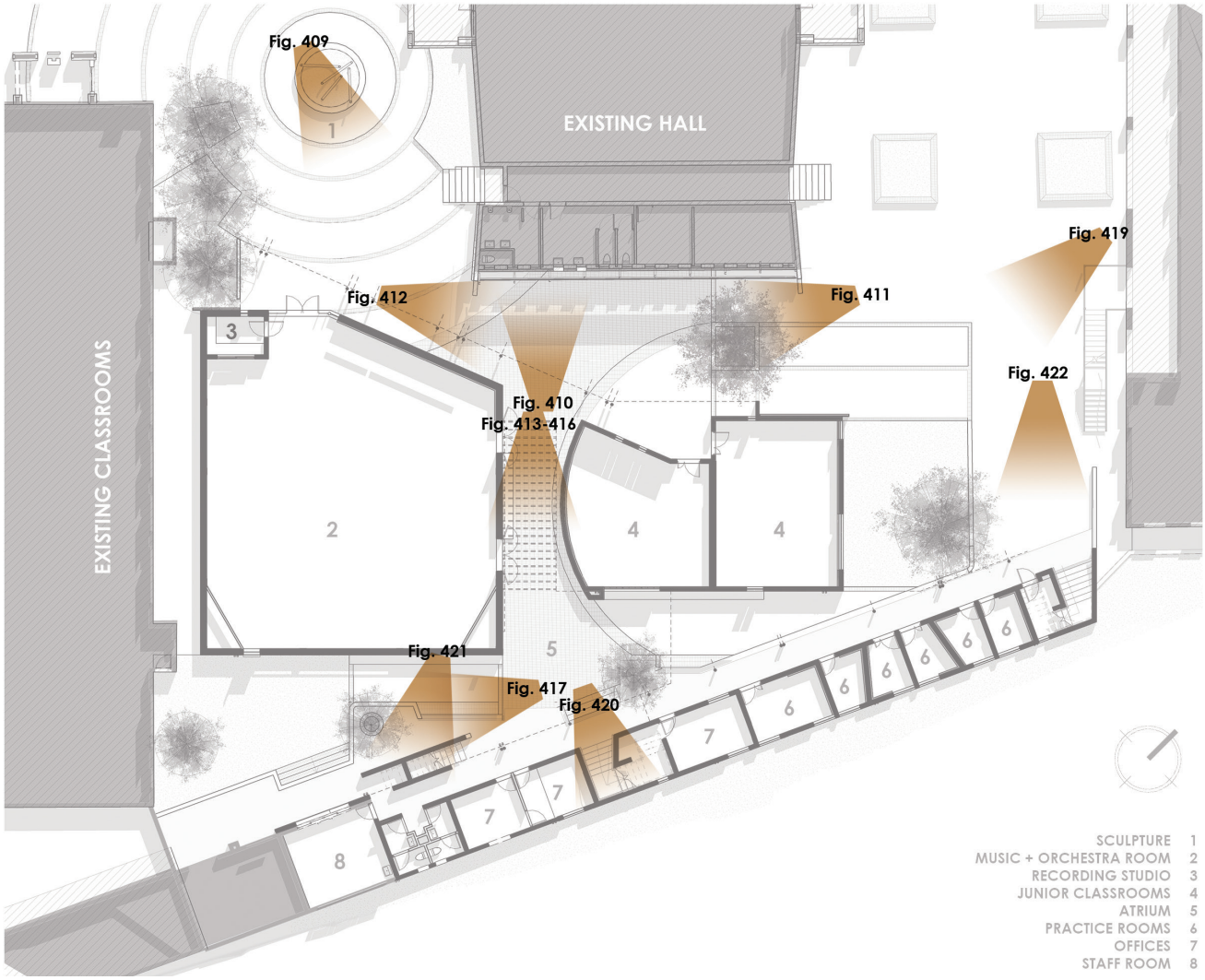


Figure 408 Ground-floor plan of the AHS Arts Campus indicating various views to orientate the reader (MAAA 2022)

The Arts Campus had to be accessible from various parts of the school campus. Fulfilling this requirement resulted in multiple movement routes, pause areas and vistas which became important design features. These routes provide different experiential sequences.

The buildings of the complex have been arranged to form three courtyards. The main courtyard faces the auditorium, and is defined by the eastern wing and the school hall on the western side (Figure 409). This courtyard opens out to the west towards the sports fields and welcomes visitors to the auditorium, the public facility of the arts campus. A large sculpture by Strijdom van der Merwe occupies the space. Circular paving emanates from the sculpture. A large concrete sign, Affies Kunste Kampus 2015, announces the Arts Campus and hides the unsightly rear elevation of the hall. This is the opening shot.



Figure 409 The administration entrance to the AHS Arts Campus seen from the piazza, with the signage and sculpture in the foreground (Pretorius 2018)09

As one approaches the auditorium, its entrance becomes more prominent and the 'backstreet' behind the hall is revealed. A glimpse of the eastern side of the school is possible. A concrete peristyle connects the new buildings and draws the visitor to the entrance. The asymmetrical spacing of the columns resembles a music bar and notes – a visual jazz tune.

On the opposite side of the back alley, a billboard-sized print of piano keys covers the services of the auditorium's ablutions (Figure 410). Seating in the form of standard culverts ensures that this is not just an alley to rush through. The piano keyboard elevates the experience of walking down the street: an inexpensive solution to cover unsightly services at work (Figure 410-412).



Figure 410 The keyboard screen hides unsightly services (Author 2016)


Figure 411 The space between the Arts Campus and the existing school hall (Author 2021)



Figure 412 In-between spaces (Author 2021)

The entrance to the heart of the Arts Campus, the domain of the students and music staff, is located opposite this billboard, between the auditorium and the classroom block. The curved wall of the classroom, built in red soldier course (or in this case 'choir' course), ushers students into the room. This wall is propositionally dense as its form also serves to enhance the acoustics of the interior space. The juxtaposition of the curved wall with the angular walls of the neighbouring building creates tension at this critical intersection of pedestrian paths. The entrance is softened by filtered light which enters from above through a steel pergola. The pergola tracks the changes of the days and seasons through its effect on the lighting conditions. When shadows are cast on the floor surface, the threshold is accentuated. When shadows fall on the walls, the curve and brick choir are accentuated. The experience is never static.



Figure 413 Cinematic shadows (Unknown 2017)

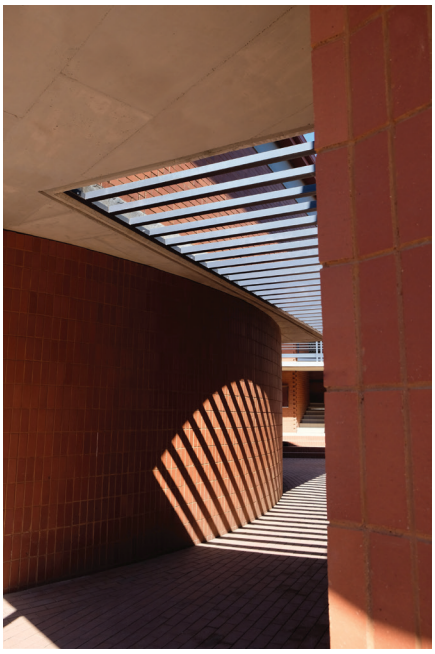


Figure 414 Shadows at the AHS Arts Campus (Author 2018)



Figure 415 Cinematic shadows (Unknown 2017)



Figure 416 Changing lighting conditions (Pretorius 2018)

Passing through this gateway, one finds oneself in an enclosed inner courtyard. The double-story row of practice rooms shields the courtyard from the rail tracks to the south-east. To accommodate the slope of the site, a second platform level had to be inserted into the courtyard. This platform has generous steps leading to the main staircase. The retaining walls have high propositional density, serving as planters, seating, steps and spill-out space, and solving the problem of a small courtyard with two levels. On plan, the retaining walls 'dance' and add a sculptural cinematic dimension to this external space. In true E-D fashion, a great deal of ad hoc on-site design and curation was required to achieve the end design.



Figure 417 Bird's-eye view of the courtyard at the AHS Arts Campus (Author 2016)



Figure 418 Steps, planters and seating (Author 2021)



Figure 419 Panorama from the west (Author 2016)

From the courtyard, three staircases can be observed:

The main staircase has a wide opening and converges towards a landing with a large opening facing the railway tracks. A steel panel inserted in this opening depicts the original school song in braille. The words of the school song punctuate the shadows of the staircase and strengthen the narrative of the school's 100-year existence. This feature would be adapted a few years later at the Javett: UP, when we needed to screen the bridge to make pedestrians feel safe when passing over a busy arterial road.

The fire-escape stairway had to be accommodated when the design concept was already at an advanced stage. It was treated as a sculptural piece within the courtyard. Its balustrades were plastered and painted to render it as a singular focal object within the space (Figure 421).

The eastern staircase turns away from the train tracks and opens towards the eastern courtyard with its bell tower (Figure 422). From the school's side, this staircase becomes a focal point which frames this important space where the rituals of the school can be enacted.



Figure 420 Staircase with braille screen (Author 2021)



Figure 421 A view of seating and the fire-escape staircase from the central courtyard (Author 2021)



Figure 422 The approach from the east (Author 2021)

A less well-known entry point is from the visual arts classroom across the courtyard (Figure 423). From this vantage point, an intimate view of the campus is revealed.

The close attention given to detail elements, such as the choir course, the braille screen and the billboard, force the viewer to zoom in and experience the space from different perspectives of scale. Multiple perspectives of the inner courtyard are offered from different vantage points: from the various entry points; from the first-floor balcony and passage; and from the raised platform within the courtyard itself. In this sense, the project takes cues from Scarpa's cinematic approach to space, as is especially evident in the routes around and vantage points of the Cangrande della Scala equestrian statue, which forms the nexus of Scarpa's design of the Museum of Castelvecchio, as discussed in Chapter 3 (Cairns 2013:80).



Figure 423 View of the AHS Arts Campus courtyard from the art classroom (Author 2016)

C.2. The cinematographic experience at the Javett: UP

Interior spaces

> Of all the conventions used by architects it is the plan which is the most curious and unreal; a horizontal cut which reveals all the spaces on one level at the same time and from a point of view which never exists for the ordinary user. Yet it is fundamental to architecture even if somewhat mysterious to laymen since it presumably requires a difficult mental conversion which translates two-dimensional outlines into three-dimensional volumes understood by an observer looking parallel to the plane of the plan. (Brawne 2003:84)

Plans do not convey the cinematic nature of spaces easily. I realised this during the planning phase of the Javett: UP, when it became clear that the director and curator did not understand the layout of the Javett on plan. Nor is it possible to fully understand the building in section. The experience of walking through the interior of the Javett: UP was best described by Christopher Till as not a "series of rooms, but rather a series of platforms that presents possibilities" (Till 2019).

When approaching the Javett: UP from the public entrance, the loggia structure serves as a transitional space between the parking lot and the foyer.



Figure 424 The loggia at the Javett: UP (Author 2021)

The finishes of the foyer are dark and subdued, in contrast to the rest of the gallery. This area is accentuated as a secondary transition space.


Figure 425 Entrance foyer of the Javett: UP (Booyens 2019)


Figure 426 The Javett: UP foyer (Kruger J. 2019)

Upon entering the main gallery one is immediately aware of the height and scale of its triple-volume space. Natural light is filtered from a skylight above. This triple-volume space will anchor the visitor spatially during the course of their visit. Throughout the gallery, windows to the exterior are intended to link the interior world to the activities outside to orientate the visitor. One is enclosed within the gallery, but always comforted by slit windows which frame the outside to assist in orientation.

Rather than dictating a set path, the Javett: UP encourages exploration by offering a choice of routes. Two staircases lead up from the ground-floor gallery and meet on an extended mezzanine landing space. The 4 m long landing becomes a gallery in itself. From this vantage point a glimpse of the first-floor level above is possible. Further up, the visitor has a choice to explore the main first-floor gallery, the donor wing or the Mapungubwe vault, or to continue up towards the bridge gallery. The triple volume stands central in this junction space.

The donor wing is located in the south wing of the gallery. Fire regulations required that we install smoke doors between the first-floor gallery and the donor wing. Cairns observes that, from a cinematic perspective, "… doors are not only physical and metaphorical thresholds for architects to manipulate but also moments full of cinematic potential" (Cairns 2013:65). The threshold lobby is treated differently from the main gallery space. The floor finish changes from concrete-look vinyl to parquet flooring. A moment of visual 'palate cleansing' is created through a large picture window which looks out over the grounds of Pretoria Boys' High School. A lower ceiling emphasises the threshold. Once inside the donor wing, a specialist light fitting recreates the feeling of a natural skylight and, together with green-painted walls, creates an overall calm in which to observe the collection of mid-century South African masterpieces.



Figure 427 The atrium at the Javett: UP, featuring Wim Botha's Christ (Pretorius 2019)

The main gallery spaces are rendered in white, with ample natural light and exposed services. In contrast to the white interiors of the rest of the gallery, those of the Mapungubwe exhibit are pitch-black. The Mapungubwe creates a completely different experience to that of the rest of the gallery interior. The interior is like a 'tomb':

> You go in. It is a dark, grave, sacred place. The connection to civilization is gone, but the spirituality is there and it is extremely powerful. When the archaeologists took the first guy who discovered some objects back [to the diggings], he was extremely scared and ran away ... Discovering the things [artefacts], he believed he would die. If you can generate that power of objects in a way that is tangible and can be experienced, then you succeed in doing the installation justice. When you enter the dark space you immediately experience the sacredness. (Till 2019)



Figure 428 Framing the landscape beyond the Javett: UP (Pretorius 2019)

> The Mapungubwe civilization is supposedly the southernmost example in Africa of a stratified society with the king on the top and the proletariat down below. This social stratification justifies completely what you have done by placing the most important at the top of the mountain. It is a pilgrimage route of how it was ascending the mountain. The sacredness that has been lost at the excavation site has been recreated. (Rich 2020)

A threshold passage, leading from the main gallery space to the Mapungubwe vault, prepares the visitor for this experience. The lights in this space are dimmed, and a double set of doors muffles external sounds. On entering the black box, the visitor is greeted by the shining gold of the West African collection, enhanced by minimal lighting. The acoustic treatment of the space further absorbs sound, bringing people to a hush. A staircase leads to the top of the 'mountain' which houses the Mapungubwe Gold Collection (Figure 430). This collection is small. Only the highlights are displayed alongside the famous Golden Rhino. The hushed sounds resulting from of the intentional absorptive acoustic treatment, the dark interior, and the glowing gold artefacts seem to have a profound effect on visitors and their behaviour within the space.

Upon exiting the Mapungubwe gallery, the visitor is confronted with the drop of the atrium and its natural light, emphasising how they had climbed to the top of the 'mountain'. This space leads to the bridge gallery which is situated over Lynnwood Road. Strategically placed slit windows make them aware of the unusual placement of a gallery over a busy road, where movement is accentuated in a different way.

The diversity of spaces and choices of routes contribute to the multivalent and rich experience that the Javett: UP offers. Rather than moving from one enclosure to another, "… there is an experience of engaging one space with the other … You can see ahead of you, above you … you don't need to walk through a door to view it" (Till 2019). This multi-perspectival approach alters the way in which we experience and engage with the displays. We may see a glimpse of an artwork on the level above through the atrium, or see flashes of what is to come through a hole punched in the staircase. "You can look out, look in across and down and always see something of the environment outside but you are also engaging with one part of the exhibit to the next part and you can revisit it from another angle. That gives it a sense of multiple perspectives" (Till 2019). The interior of the Javett: UP offers a cinematic experience of space, time and objects in order to strengthen the narratives of the pieces on display.

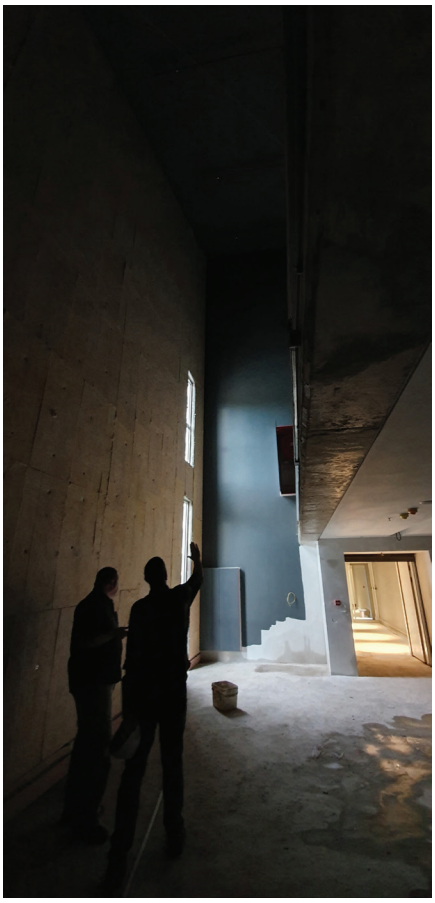


Figure 429 A sacred space: the interior of the Mapungubwe structure whilst under construction (Hattingh 2019)



Figure 430 The interior of the Mapungubwe structure (Pretorius 2019)

Exterior spaces

Walking towards the Javett: UP down Tukkie Lane, the cultural spine of the University which connects various Humanities departments and museums, the steps to the bridge 'reopen' the historical first entrance of the campus in an attempt to reveal the narratives of the context, albeit unconsciously.

As one ascends the staircase to the bridge, the 'forest' of the Department of Visual Arts serves as a screen. The city skyline is revealed as one rises above the tops of the trees. The concrete screens of the bridge are not encountered immediately, ensuring that a view over the city and its landmarks is offered. The experience of walking over the bridge differs depending on the time of day. In the late afternoon, the light shines through the apertures, and animated patterned shadows dance over the bridge-gallery wall. "Although light can be described as invisible, its effects are palpable and an inseparable component of architecture" (Brawne 2003:145).

The patterns in the panels are peepholes (Figure 431) that frame Pretoria's skyline and recognizable landmarks such as the Telkom Tower, the Ooskerk tower (the same Moerdijk church that is framed by our Sports Complex on the AHMP campus), Loftus Stadium and the Magaliesberg ridges. On either side of the bridge, *miradors* – lookout points – provide pause spaces from which to enjoy the view. The camera pans. "Aside from the practical purpose of linking the gallery and the university campus, the bridge has the symbolic purpose of linking the city with the university and surrounding school community," remarked Val Boje, the late editor of the local *Pretoria News* daily newspaper (Boje 2017).



Figure 431 The cinematic experience through the screen apertures of the Javett: UP bridge (Pretorius 2019)

At night the roles are reversed and it is then that motorists are treated to the patterns highlighted from within the bridge gallery (figure 432). Driving underneath the bridge makes for a movie-like experience similar to that of driving underneath the Nellmapius Bridge. Pallasmaa (2005:47) states: "The shadow gives shape and life to the object in light … The art of chiaroscuro is a skill of the master architect too."



Figure 432 The Javett: UP bridge lit up from the interior (Unknown n.d.)

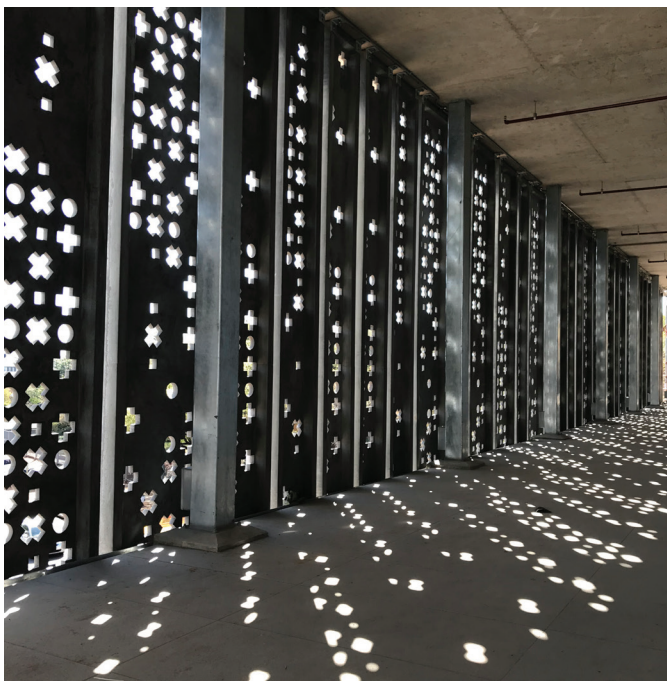


Figure 433 The cinematic experience of the Javett: UP bridge (Author 2018)

5.3. Sensory experiences

We typically associate art with work that is perceived visually, but architecture relates to the other senses too. Christelle Webb-Joubert, presenter of an art programme on the national radio station RSG, requested an audio tour of the AHMP school hall for its weekly Tuesday evening arts programme. As the listeners would be able to see neither the building nor the art, it was important to describe the building's features and convey its acoustic qualities. The presenter's own impairment (she herself is partially blind), added to this otherworldly experience of the building. In a very informal style, I led her through the building and described the different features. I had her touch the various elements to illustrate what I was talking about, and the final recording captures the hubbub of the girls outside, the muffled sounds of our footsteps on the gallery floor, and the sound of music within the hall. The above confirms what Pallasmaa means when he writes that the ear can also perceive the size and shape of space (Pallasmaa 2005:50).

Recording this programme for the radio station reminded me that architecture is not merely experienced through the visual sense, but that its tactile, spatial and acoustic qualities are equally important.
The feedback on the programme was so positive that the whole studio team wanted to visit the school to experience the building they had 'visited' through their sense of hearing. The response from the listeners prompted the presenter to record two more programmes, one at AHS and one at the Javett: UP.
These programmes were successful in terms of public engagement with the building.

5.4. Conclusion

Chapter 5 explored how the chosen core competencies of explorative divergence, namely curation, sculpture and cinematography, have manifested in the oeuvre of Mathews and Associates Architects.

Curation was revealed as a prominent and diverse competency. Architecture can be curated on various scales, from the urban scale (in the city, on a campus, when curating groups of buildings) to the more tangible scale, such as the curation of a facade or of art in architectural spaces.

From an urban-scaled curatorial perspective, selecting and positioning object buildings as focal points is crucial. In the right location, an object building acts as an acupuncture point which defines its urban context. The form that it takes needs to be determined by its function and the nature of the surroundings.

Curatorial knowledge also assists in the curation of building complexes. In these instances, the spaces between buildings – the negative spaces – are just as important as the positive spaces, as affirmed in the analysis of the Javett: UP and AHS projects. The curation of buildings becomes especially important on constrained sites where strict limitations dictate layouts. The constraints are often the clues which allow the architect to maximise the user's experience in order to increase propositional density and narrative depth.

The interplay between judgement and intuition is critical in facade curation, where the composition of various elements has the potential to increase propositional density and narrate the context. The notion of randomness has proved effective as a curatorial device to retain interest and add a novel element to otherwise standardised forms of production. Through the discussion of the case studies, this was discovered to be a recurring theme.

On the scale of the building, hands-on and ad hoc decisions have a big impact on design outcomes. My direct involvement with the construction process at the AHMP hall allowed us to integrate artworks into the architecture. Similarly, guerrilla tactics ensure that a budget is available for artworks. These tactics have allowed me to assume the role of curator to commission works that activate space and encourage public engagement, such as the artwork by Strijdom van der Merwe at the AHS Arts Campus. The Javett: UP further illustrates the importance of the architect as curator, and also of the ability to envision future exhibitions to create a space that is flexible and can be interpreted by independent curators in the future.

Sculptural divergence manifests in the conceptual design process as 'thinking with the hands'. This method of design opens up the possibility to deconstruct the more pragmatic parameters stemming from strict planning considerations.

Through sculpture classes, I was exposed to new materials and grew accustomed to the investigation of materials and their limits, which led to construction innovation such as the development of the concrete screens at the Javett: UP. The armature as a crucial aspect of sculpture modelling proved a valuable precedent for lightweight sculptural forms, such as the roof structures of the AHMP Sports Centre and the Oaktree Studio staircase.

Recurring sculptural forms were identified, specifically the use of facets and folds which are accentuated through different lighting conditions. Articulation, especially of the corners and connections between different materials, is another important revelation. The juxtaposition of curved elements with straight lines is evident in many projects, such as at the AHMP hall foyer, the AHMP Sports Centre and the AHS Arts Campus, to name a few. Cognisance of the importance of the patina of materials becomes evident in the various experiments in texture to enhance the user's tactile experience, as is evident in various projects.

The cinematic experience of architecture goes hand in hand with the mode of movement in, around and through it: buildings experienced through pedestrian movement require a different approach than those experienced from a moving vehicle, for example. Acceleration and deceleration through structures such as the Diamond Hill Toll Plaza have a profound effect on the way that people experience the architecture, and cognisance of movement speeds is important in design. On foot, thresholds and views to spaces that follow become important cinematic tools. At the Javett: UP a series of platforms was choreographed to guide movement through the gallery. In addition, static design can be used to emulate movement, as the 'dancing' ceiling of the Rivonia Trial Station illustrates.

Natural and artificial light not only emphasise sculptural form, but also play an important role in the cinematic experience. The movement of the sun is intentionally used to create experiences and reveal narratives, such as the coat of arms on the western facade of the AHMP hall which is only revealed when the late-afternoon sun casts shadows on the wall. Artificial light, in the form of projections and light boxes specifically, also has the power to completely change the materiality of buildings in the evening. The Javett: UP bridge lights up like a paper cutout lantern during the evening, negating the heaviness of the concrete panels. The progression from light-filled spaces to dark interiors further influences the cinematic experience of architecture.

The divergent competencies explored in this chapter show how the specific E-D approaches followed by MAAA finds expression in the design process, thinking and architectural outcomes of the practice. The central themes of this chapter are substantiated by underlying architectural principles that require further clarification. Chapter 8 is intended to be read in conjunction with this chapter, as it serves as a discussion of the design principles that have enabled the implementation of my E-D methodology in my work. These principles are derived from the investigation of my work presented in this chapter.

This kind of E-D mindset allows us to explore alternatives in such a way that spaces are imbued with a higher degree of propositional density and narrative depth than would otherwise be the case. The engagement of the public with these buildings is further explored in the appendix: An overview of public engagement. The purpose of the appendix is to enhance the co-reading experience of this chapter in conjunction with chapter 8 by providing visual support and examples of how the public has engaged with our buildings. The following chapter serves to illustrate the convergence of my three divergent approaches, namely curation, sculpture, and cinematic architectural choreography, in the realisation of a specific project, the Braak Pavilion.

6

THE BRAAK PAVILION: A REVERSE TOUCHSTONE FOR E-D

6.1. What is a touchstone?

Merriam-Webster (2021) defines a touchstone as "a fundamental or quintessential part or feature" of an idea or object. Metaphorically, a touchstone refers to "any physical or intellectual measure by which the validity of a concept can be tested" (Chemeurope n.d.). In architectural education, a touchstone is a student's intuitive attempt to give form to their initial ideas for or response to a design brief. In this chapter, the Braak Pavilion will be discussed as a reverse touchstone that represents the principles of explorative divergence (E-D) as established in this thesis.

We embarked upon the Braak Pavilion project when I had already started my PhD thesis, after the successful completion in 2019 of my master's dissertation, *The spatial act of curation: How the intersectional spatial relationship between place and artwork unlocks meaning*. As such, the Braak Pavilion was partly an experiment which tested some of the theories that were developing as part of the theoretical study and my reflection on our practice. This discussion of the Braak Pavilion will further crystallise the explorative-divergent approach and related concepts discussed thus far.

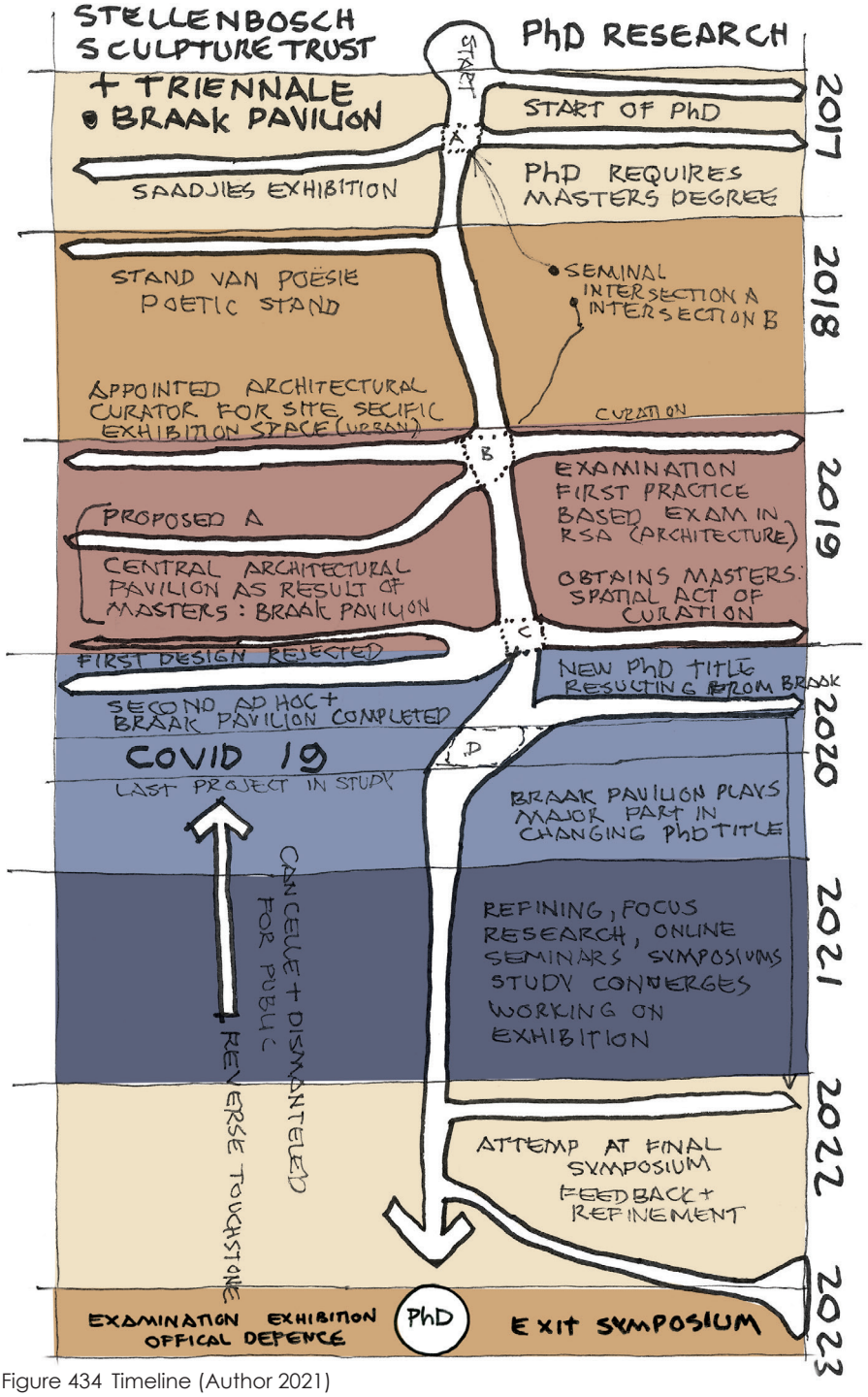


Figure 434 Timeline (Author 2021)

6.2. Background

6.2.1. The Stellenbosch Triennale

In 2020 I was approached by the Stellenbosch Outdoor Sculpture Trust to act as spatial curatorial consultant for, and to assist with the planning of, the inaugural Stellenbosch Triennale. The Stellenbosch Triennale was to be "… a showcase for large-scale contemporary art exhibitions [and] a non-commercial, multidisciplinary art platform hosting a range of artists from Africa and the diaspora" (Hello Cape Town 2020). The organisation wanted to expose the citizens of Stellenbosch to contemporary African art and artists through the platform of the Triennale. They approached me for my experience as convenor of Cool Capital, curator of the South African Pavilion at the Venice Biennale in 2016, and my studies in spatial curation (Mathews 2017). To host Triennale events and exhibitions, the organisers specifically wanted to investigate spaces that were not your run-of-the-mill historic Stellenbosch winery galleries. The organiser, Andi Norton, was aware of the *Sample Workshop* (a guerrilla exhibit as part of my master's, hosted in the basement of the Javett: UP while it was still under construction), and, to this end, I was called in to assist her and the team in locating appropriate alternative spaces, locations and structures.

To kick-start the process, the curatorial team was invited to Stellenbosch for a tour and a brainstorming session. This team consisted of Khanyisile Mbonga (chief curator), Dr Bernard Akoi-Jackson (co-curator), me as architectural consultant and curator, and various artists from all over Africa. Andi Norton was the main organiser on behalf of the Trust. The tour proved to be a valuable experience which allowed me to engage with, and form good relationships with, the participating artists and curators. We had frank discussions on South Africa, the Triennale and the issues that affect the African continent.



Figure 435 Public notice board for the Braak Pavilion in Stellenbosch (Author 2020)


Figure 436 A group of tourists on Die Braak, Stellenbosch (Author 2019)

6.2.2. Curating at city scale

Board member of the Stellenbosch Sculpture Trust, Dr Mike Mavura, remarked that: "The Triennale turns Stellenbosch into a curated public laboratory for creative expressions and engagements ..." (Morris 2020). However, the choice to host the Triennale in industrial buildings on the outskirts of the town meant that the exhibition had little representation in the historic centre of town.

I saw an opportunity for an architectural intervention that would fulfil this need. Dame Julia Peyton-Jones DBE (Mathew, 2019) had pioneered the highly successful annual Serpentine Pavilion in London's Kensington Gardens. According to Macarthur, Holden, Paine and Davidts (2018:29), "Part of [the Serpentine Pavilion's] success rests with its opening up the question: 'is architecture art?' This question succeeds in making an event, a cultural moment … precisely because it cannot be resolved or fixed." An architectural pavilion would not only question the relationship architecture, the setting (the so-called 'curated public laboratory'), and the art installations of the Triennale, but also represent the events of the Triennale in the historic part of Stellenbosch.

A pavilion was not part of the initial programme, but I convinced the team that it had merit and used the Serpentine pavilions as an example of its potential. We volunteered to design the first pavilion in order to launch the Braak Pavilion as an institution – similar to that of the Serpentine – that would see African architects designing triennial architectural pavilions as part of the events at the Triennale.



Figure 437 Selecting venues for the Triennale installations in the industrial area of Stellenbosch (Author 2019)



Figure 438 An installation in one of the scouted locations (Author 2020)



Figure 439 The curator Bernard Akoi-Jackson photographing Ibrahim Mahama's elongated and stylized coffins made from local timber (Andreasen 2020)

6.3. The inaugural Braak Pavilion by Mathews and Associates Architects

6.3.1. Funding

By the time we received the go-ahead for the Braak Pavilion, wealthy funders had already been secured and allocated to the various art installations of the Triennale. This meant that the Trust had no reserve funds available for an additional project. I felt strongly about the pavilion, and convinced the organisers that we would source funding once we had a viable concept design. An integral part of our E-D practice is the ability to use networks and spend our energy on raising sponsorships for passion projects. For us this was worthwhile, as we saw the potential of being rewarded in the currency of exposure.

6.3.2. The initial concept

Our first concept was inspired by the historic architecture of Stellenbosch that had grabbed my attention as a young boy (on a church camp to Stellenbosch, I sneaked out of the organised activities to sketch the town's Cape Dutch buildings). The first concept for the pavilion drew on the simple gable form of these buildings, but in contrast to the whitewashed surroundings, we proposed a black structure on which people could draw and write in chalk (Figure 440-442). The idea was that this temporary structure would serve as a shaded spot and landmark on Die Braak, and that the Triennale programme could be displayed on its walls.

We made a beautiful model of the proposal with which I approached potential sponsors to obtain funding for the pavilion. I was successful in selling the project to one of these sponsors, but the project was unfortunately halted by the chief curator who argued that the design had too many colonial references, and that it did not reflect the theme and nature of the Triennale. The rejection of the initial concept by the chief curator raised the question "whose narrative should be prioritised in the design". In response to this, the concept was modified to incorporate multiple narratives.

In hindsight, our first attempt was too 'traditional' and perhaps too specialised. Given the understanding we had started to develop about E-D at this point in time, we embarked on a different approach to develop a new concept. The heritage colonial buildings were contextualised through views and vistas created by the incorporation of three sculptural abstract structures. These structures facilitated community participation, thereby enriching the narrative and fostering a dialogue between the Braak Pavilion and its broader surroundings. This process will be discussed in the next section.

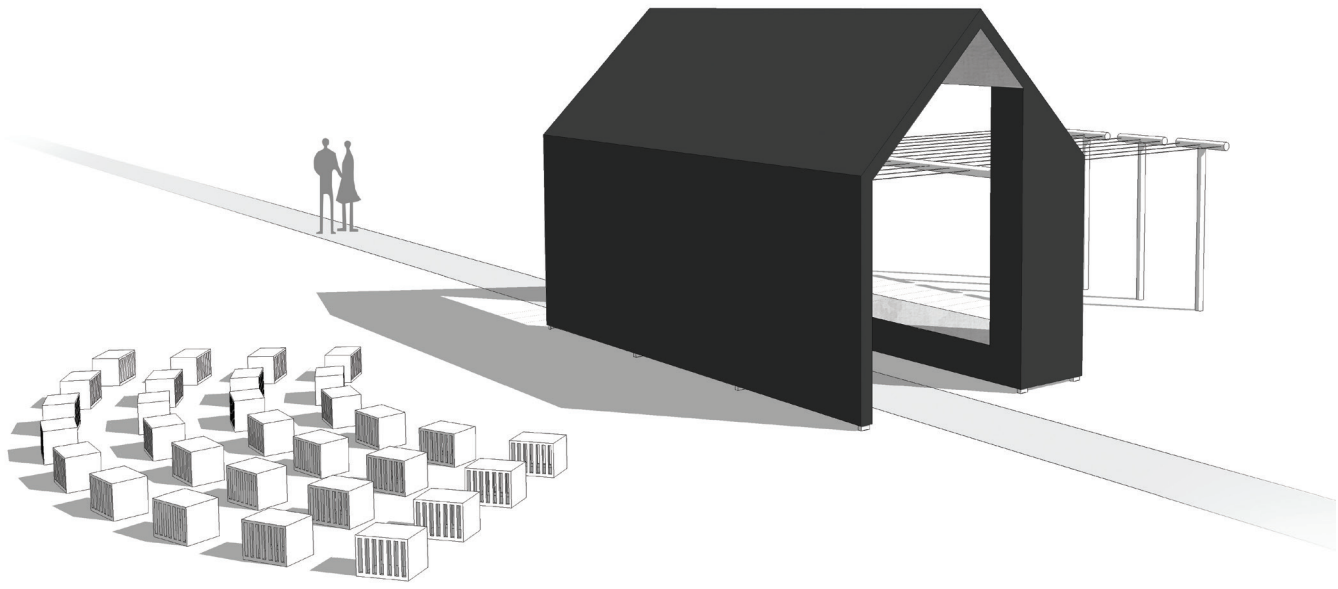


Figure 440 Initial concept for the Braak Pavilion (MAAA 2019)



Figure 441 Initial concept model for the Braak Pavilion (Author 2019)

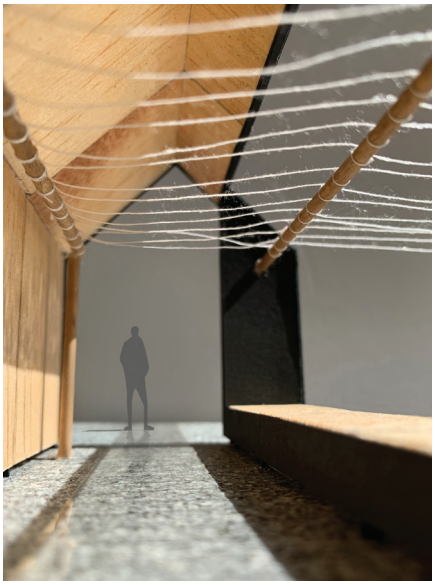


Figure 442 Initial concept model (Author 2019)

6.3.3. Back to the drawing board

The sponsors I had secured for the 'Cape House' proposal were set on the idea and were not prepared to fund a different design. This meant that our new approach had to be as cost-effective as possible.

I contacted Yolandi Vorster, our associate in Cape Town who had also assisted with the 2016 Venice Biennale, to help me with a new design. I told her that we needed someone who was familiar with the Cape milieu and culture, and who could work closely with the contractor in Stellenbosch to realise the pavilion. Reaching out to others who have skills and contacts that you yourself do not necessarily have, is integral to our E-D methods.

Yolandi Vorster parametrically modelled a pavilion which consisted of loose trapezoidal panels arranged along a main axis, "… a pedestrian walkway frequented by a cross-section of Stellenbosch's population …" (Wood 2020:25). Our new approach was to focus on recycling (and simultaneously tackle the issue of our budget) and to create abstract forms which could frame the historic buildings surrounding Die Braak, such as the Kruithuis and the historic churches.

The materiality of the pavilion was simply determined by what we could source (and thus ad hoc): a local contractor was willing to donate old scaffolding planks, off-cuts from mesh panels, used shutter boards, and netting used for hoarding on construction sites. The following appeared in an article on pavilions in *Wallpaper** magazine: "… the structure is made out of reclaimed construction material, 'inviting conversations on the future of our environment and the notion of waste as resource,' says Mathews" (Stathaki 2020).

Yolandi Vorster's parametric model proved to be still too complex and too expensive (Figure 444). We distilled the idea further by building a colourful maquette. The E-D process is often ongoing and open-ended. This maquette came in handy when Triennale catalogue had to go to print and we were pushed to deliver. We photographed the maquette to create visuals for our abstract.

The most successful solution was eventually a very quick hand sketch and cardboard model I built at the last minute (Figure 445-447). Although the sketch was simple, it captured all the important ideas. I believe the constraints and concerns had become so ingrained in my mind that a strongly intuitive response was especially apt.



Figure 443 Second concept model (Author 2019)



Figure 444 Parametric concept development (Vorster 2020)

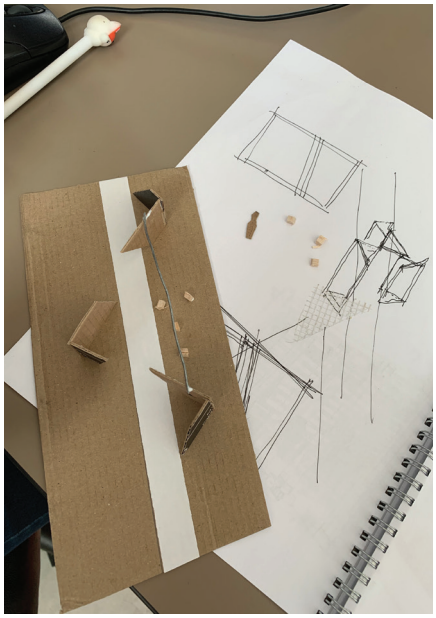


Figure 445 Cardboard concept model (Author 2020)

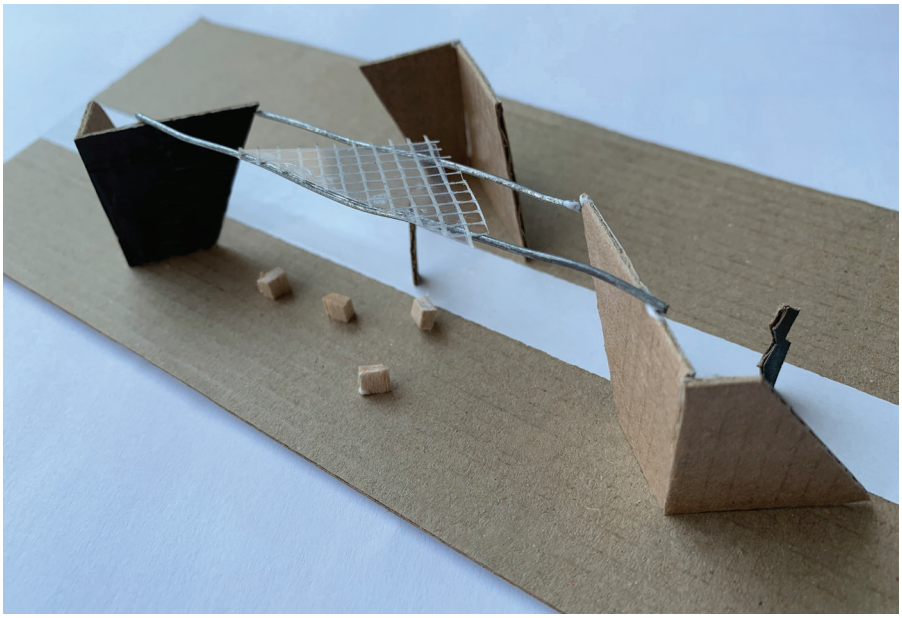


Figure 446 Cardboard concept model (Author 2020)

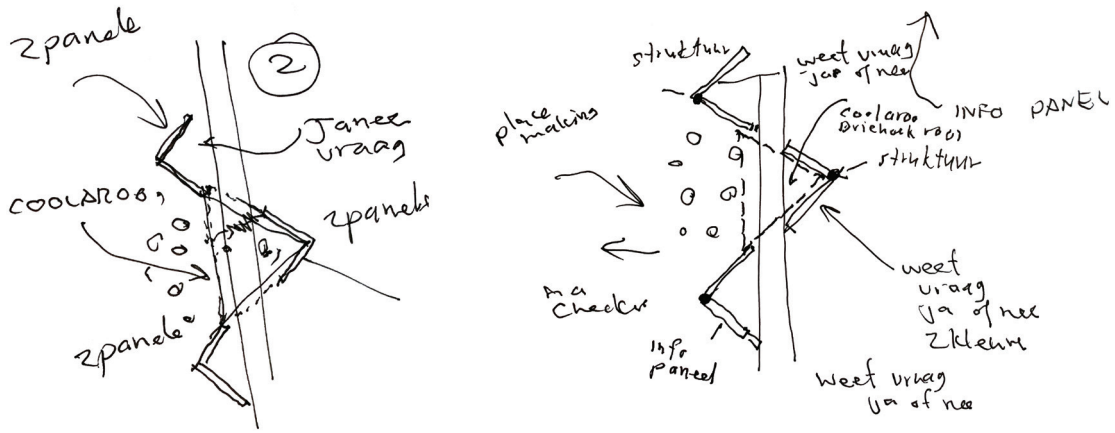


Figure 447 Concept sketch for the Braak Pavilion, as implemented (Author 2020)

6.3.4. Making the pavilion

The pavilion only truly came to life on site during the process of making it. I travelled to Stellenbosch a few days before the pavilion was set to open and, together with Yolandi, directed the team who made it happen. "The pavilion is participatory in nature and the result of contributions from all walks of life ranging from communities who contributed recycled material, nature conservation agencies like CapeNature who contributed alien stumps for seating and crucially CS Property for erecting the skeleton structure from where the pavilion will evolve" (Stellenbosch Visio 2020). A local sewing NGO assisted by stitching the pieces of shade netting together to create a sheltered spot for visitors to sit amongst the panel structures.

The structures were erected as per the model, but we had to replace some panels with mesh to counter the strong south-easterly wind. This material choice allowed for the wind to flow through, rather than blow the structure over. Additional tension cables also became necessary after we saw the effects of the wind on the site.

As the pavilion was nearing completion, I stood back and realised that two panels had become focal points in its composition. Serendipitously, land artist Strijdom van der Merwe, with whom I had previously collaborated, came walking by. I asked his advice, and he offered to fetch some paint from his house and make a feature out of these two panels. This is a pertinent example of the observation in Macarthur *et al*. (2018:45) that, in the history of pavilions, "[t]here is a trajectory of architecture engaging with artists and art practice through collaborations". Apart from Strijdom van der Merwe's contribution, the other panels were woven and decorated with found materials collected by local waste pickers.

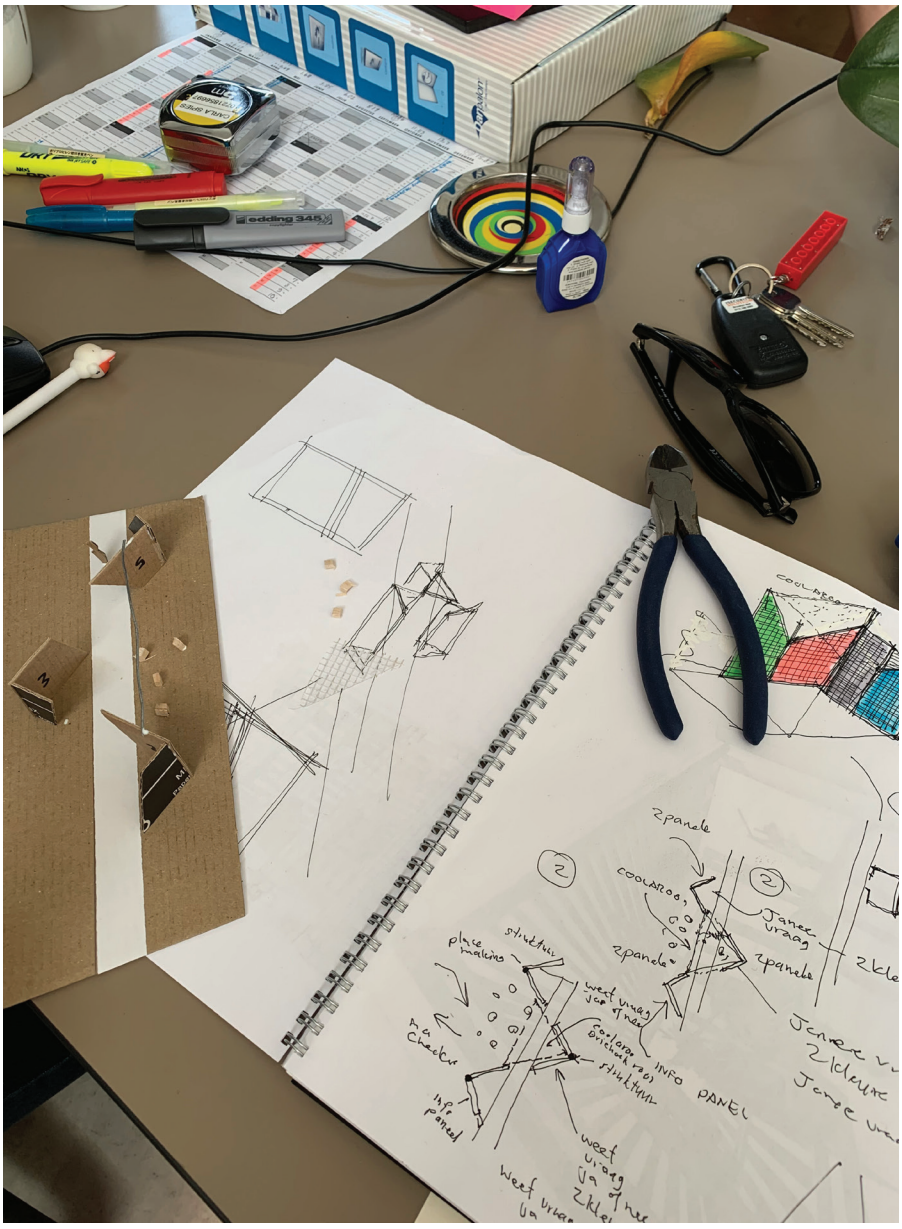


Figure 448 Concept development process (Author 2020)

6.3.5. The narrative of the pavilion

An abstract pavilion has no obvious link to Stellenbosch's architectural heritage and history. The word "braak" means fallow, referring to a leftover portion of town which was never developed (Figure 449). The pavilion highlighted that Die Braak, which had become an important town square, was once again becoming fallow through neglect and increasing incidents of criminal activities. The pavilion "… catalyses the revitalisation of the square, aiming to reactivate the public space of Die Braak and shifting the local population's relationship with shared space …" (Wood 2020:24). Through the framing of views of the historic square, the pavilion altered people's experience of Die Braak and offered them a different perspective.

The cinematic qualities presented by the pavilion heightened the spatial experiences of people using the space, and brought architecture into the realm of the public. "The Pavilion is a gathering space for people from different walks of life who use it: Lawyers, tourists, churchgoers, workers, schoolchildren, homeless people …" (Stellenbosch Visio 2020).

The pavilion was both art form and architectural work. It was "ephemeral in nature" yet communicative, as it was intended to also "… highlight the ethos of the sponsor and curator while simultaneously speaking to social and environmental issues" (Morris, 2020). As such, the pavilion was a means to layer various meanings associated with the site and the Triennale and convey these narratives to the public.



Figure 449 Die Braak (Author 2019)

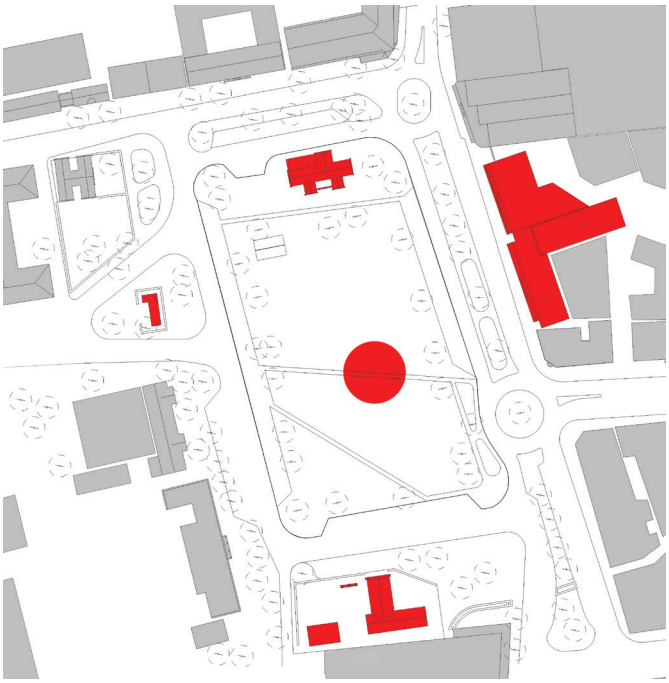


Figure 450 Map of Die Braak indicating important and heritage buildings in the vicinity and the proposed location of the pavilion (MAAA 2020)



Figure 451 St Mary's Anglican Church on Die Braak (Author 2019)



Figure 452 The Kruithuis (Author 2019)

6.3.6. Marketing

At Mathews and Associates Architects, no project is complete until it has been packaged and documented. The same is true of the Braak Pavilion. We rely on the coverage and interpretation of projects by journalists to relay our design intentions to the public, to create an awareness of the project, and to further the narratives associated with the project. The Triennale was reported on by the *New York Times* (Figure 460). Photos were prepared and text descriptions sent out to various publishing platforms. The most prestigious coverage of the Braak Pavilion was in an article in *Wallpaper** (Figure 456). The architectural editor picked the apt headline: "Architectural pavilions: Architects packing a big punch with small structures" (Stathaki 2020).



>> BLUEPRINT

PROJECT #4 **DIE BRAAK**

Space of waste

Conceived as part of the inaugural Stellenbosch Triennale, Die Braak Pavilion, designed by Pieter Mathews, prompts questions about the future of construction, the re-use of waste as building material, and the potential of architectural intervention to transform public space.

PHOTOGRAPHY ABRI KRUGER; PIETER MATHEWS

The last inaugural launch event at the Stellenbosch Triennale, an event originally planned to run from 11 February until 30 April 2020, but closed early as a result of the COVID-19 outbreak, was the launch of a pavilion on the Braak, Stellenbosch's town square. Die Braak Pavilion, a temporary structure designed by architect Pieter Mathews, was designed to provide a platform for education, talks, information gathering and dialogue during the Triennale.

Die Braak is the heart of Stellenbosch, situated at a key point between historic churches, the university and magistrate's court. Once a vital public space, in more recent times functioning as a starting point for guided tours of the town, it has of late fallen into dereliction and disrepair.

As well as catalysing the revitalisation of the square, aiming to reactivate the public space of Die Braak and shifting the local population's relationship with shared space, the pavilion also included an ecological dimension.

The word 'braak' means fallowland, a description often used in post-apocalyptic art and movies, here reminding us that if we do not care for our planet, it eventually will become 'braak'. Echoing the theme of the Triennale, Tomorrow There Will Be More Of Us, the intervention invited participants to ultimately determine the aesthetic of the Pavilion, just as our choices would determine the 'tomorrow' of our planet.

The notion of 'embodied experience', explained by architectural theorist Juhaani Pallasmaa as a full sensory experience in time and place, was the foundation of the pavilion. It was intended as a space to be experienced, to be interacted with and contributed to. The Pavilion as a fusion between the disciplines of public art, sculpture and architecture.

The pavilion was constructed of reclaimed materials for construction sites – shutter boards, scaffolding planks, hoarding nets – inviting conversations on the future of our environment and the notion of waste as a resource. As such, it was an analogy for a planet of waste, devoid of resources.

Top: The main axis of the pavilion was a pedestrian walkway cutting through the Braak, a public space frequented by a broad cross-section of Stellenbosch's population.
Above: The armature of the pavilion defined its structure, encouraging the local population to participate in filling in its walls with materials such as discarded fishing nets, ropes, plastic bags and nylon packaging.

The pavilion was constructed of reclaimed materials from construction sites such as shutter boards, scaffolding planks and hoarding nets.

Rather than a finished object, the pavilion could be considered the 'armature' or skeleton intended to 'grow' throughout the Triennale as people participated in its making. By providing only the armature as defined structure, the Pavilion encouraged the local population to participate in the filling in of the Pavilion.

Its main axis was a pedestrian walkway frequented by a cross-section of Stellenbosch's population, from students and magistrates to residents and homeless people. By inviting the participation of all sectors and stakeholders in the public life of Die Braak, the pavilion also aimed to become a meeting point and the beginning of a transformation in the nature of this central public space – from a polarising and divisive area to a safe and democratically inclusive space.

Waste materials such as discarded fishing nets, ropes, plastic bags and nylon packaging were woven and knotted as infill material. The reuse of waste material communicated the value of waste and the future of a waste economy. The Pavilion stood as a metaphor for the future of our planet's depleting resources and the value of what we today refer to as waste. As people wove their own strands of waste into its structure, it became a metaphor for each person's individual contribution to the conservation of the planet. The outcome does not depend on a select few, but rests on the collective shoulders of every human being.

An afterlife for the Pavilion is envisaged: as a playground for a crèche or perhaps a shading device for local crafters. Conversations around everyday materials and their afterlives are integral to the message the Pavilion portrays.

PROFESSIONAL TEAM

ARCHITECT: Mathews and Associates Architects **SPONSORS:** CS Property Group; Cape Nature

20 years mathews associates architects maaa.co.za

Vredelust renovation currently in progress

COMMITTED TO THE HERITAGE OF STELLENBOSCH

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Figure 453 Article published in Leading Architecture and Design, June/July 2020 (Wood 2020:24-25)

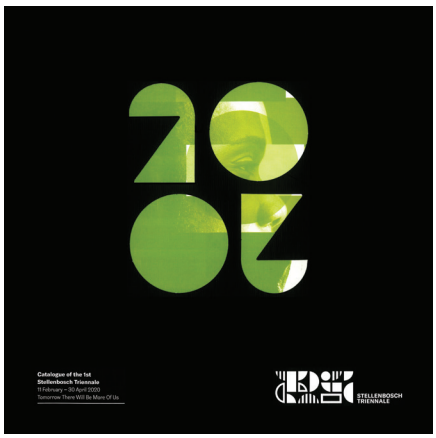


Figure 454 The official Stellenbosch Triennale catalogue (2020)

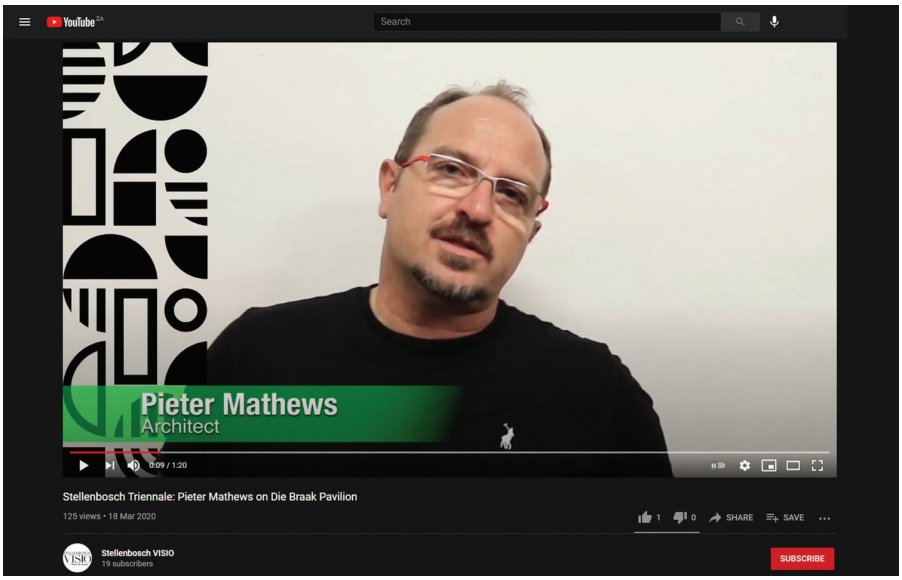


Figure 455 The author being interviewed by Stellenbosch Visio (Stellenbosch Visio 2020)

Wallpaper*

ARCHITECTURE | 1 APR 2020

Architectural pavilions: architects packing a big punch with small structures

From provocative responses to socio-political issues, to solid pillars erected at the heart of communities, pavilions – whether permanent or transient – allow architects to experiment with materials, passions and concepts. Providing meeting points and shelter, they are socially minded centres for activity, debate and celebration – challenging people to integrate, interact and approach their environment in a new way. Here's our ongoing pick of the best of the finest architectural pavilions across the globe...



The Braak Pavilion
Mathews Associates Architects
Stellenbosch, South Africa

South Africa's Stellenbosch Triennale may have been cancelled due to the current global developments surrounding the novel Coronavirus, but The Braak Pavilion – originally conceived as part of the festival - has now been built to support the local community, and in particular the area's homeless people. Designed by Pretoria based architect Pieter Mathews, the structure is made out of reclaimed construction material, 'inviting conversations on the future of our environment and the notion of waste as resource,' says Mathews. The project will remain on site until the end of April 2020 and then it will be donated to a local school. *Photography: Pieter Mathews*

Figure 456 Wallpaper* article about the Braak Pavilion (Stathaki 2020)

Triennale has 5 venues

From page 1

The journey of the Stellenbosch Triennale will take in various sites of engagement, the geographical location supporting ideas of foundation and transition.

The trustees and curators of the Stellenbosch Triennale aim to make Stellenbosch the primary destination of multi-disciplinary art in Africa in 2020, by tapping into the creative impetus that reverberates across the continent.



An artwork by Patrrick Bongoy, *Out of the Weeping*, woven out of recycled rubber, is one of the art pieces at the Stellenboach Triennale starting on 11 February.

Trustees of the Stellenbosch Outdoor Sculpture Trust (SOST), established in 2012, are Dr Mike Mavura, France Beyers, Michael van Wyk, Andi Norton and Elana Brundyn.

Says Mavura: "The Triennale turns Stellenbosch into a curated public laboratory for creative expressions and engagements in response to society's questions now, then and there; what kind of people do we want to be? What relations to nature do we cherish? What knowledge, and what technologies do we deem appropriate? What aesthetic values do we hold?"

The Triennale is structured around a number of exhibitions. These include *On The Cusp,* an exhibition of artworks by 10 young African artists, curated by Dr Bernard Akoi-Jackson, *From The Vault,* an archival exploration forming part of the education programme, *Die Braak Pavilion,* designed by award winning architect Pieter Mathews, will provide a platform for education, talks, information gathering and dialogue.

The *Concepts of Freedom Film Festival,* curated by Kenyan musician and filmmaker Silas Miami, and shown throughout the town in venues both outdoors and indoors and *The Imaginarium*, presents a unique learning opportunity for learners of all ages.

Figure 457 An article in Eikestad Nuus about the Braak Pavilion (Triennale has 5 venues 2020)

STELLENBOSCH VISIO

Stellenbosch Triennale: Die Braak Pavilion now open

Last night saw the launch of Die Braak Pavilion, the structure erected on the eponymous public space, which forms part of the **Stellenbosch Triennale.**



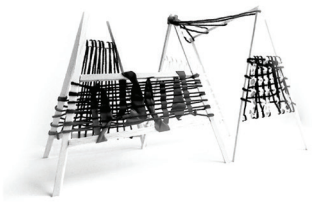
The pavilion is participatory in nature and the result of contributions from all walks of life ranging from communities who contributed recycled material, nature conservation agencies like **CapeNature (https://www.capenature.co.za/)** who contributed alien stumps for seating and crucially **CS Property (https://csprop.co.za/)** for erecting the skeleton structure from where the pavilion will evolve.

Figure 458 Stellenbosch Visio published an article about the Braak Pavilion (2020)

visi SA's MOST BEAUTIFUL MAGAZINE

FEBRUARY 6, 2020

THE STELLENBOSCH TRIENNALE: WHAT TO EXPECT



WORDS Cheri Morris **IMAGES** courtesy of Stellenbosch Triennale

Over 50 artists from all around Africa will come together to showcase contemporary art at the inaugural Stellenbosch Triennale(https://stellenboschtriennale.com/), running from 11 February to 30 April 2020.

Brainchild of the Stellenbosch Outdoor Sculpture Trust(http://www.sost.co.za/)'s Dr Mike Mavura, France Beyers, Michael van Wyk, Andi Norton and Elana Brundyn, the Stellenbosch Triennale is a non-commercial, multidisciplinary art platform set amidst the famed academia halls and historical vineyards of The Woodmill and its surrounding precinct that aims to make Stellenbosch a primary destination of multidisciplinary art in Africa.

"The Triennale turns Stellenbosch into a curated public laboratory for creative expressions and engagements in response to society's questions now, then and there," says says Dr Mike Mavura. "What kind of people do we want to be? What relations to nature do we cherish? What knowledge, and what technologies do we deem appropriate? What aesthetic values do we hold?"

The theme *Tomorrow There Will Be More of Us* informs seven multidisciplinary platforms to provide meeting points for engagement with the divided past, the collective present and imagined future.

Here's what to expect:

The Curators' Exhibition

Compiled by Chief Curator Khanyisile Mbongwa with Triennale co-curator Bernard Akoi-Jackson, this exhibition features works interpreting the theme by 20 artists from across Africa. Situated inside The Woodmill and on the surrounding precinct, this multidisciplinary art exhibition introduces visitors to the Triennale's other exhibitions and installations.

Figure 459 Visi online published an article about what to expect at the Stellenbosch Triennale (Morris 2020)

The New York Times

Stellenbosch Triennale, a Bold Experiment

In a South African city emblematic of wealth and privilege, a program of radical art from the whole continent seeks to confront and heal.



Figure 460 Article published in the New York Times online (2020)

6.4. Conclusion

The Braak Pavilion is an appropriate reverse touchstone for Mathews and Associate Architects' E-D approach, because it encapsulates various aspects which make up our E-D practice. As reverse touchstone, it shows how, at the time, the practice was starting to integrate E-D thinking consciously into our process. Therefore, it illustrates the way we tried to make sense of E-D in a small project, and serves as proof of our aim to bring design to the people and architecture into the public domain, and also of strategic ways in which the approach of the office has been strongly influenced by the current PhD study.

6.4.1. Curation

The Braak Pavilion illustrates how my curatorial abilities were used to evaluate existing spaces for their exhibition potential. Curation can also be seen as the skill which assisted in identifying the need for a pavilion as 'heart' or landmark for the Triennale, and Die Braak as a decaying urban space in need of an installation to activate it.



Figure 461 On-site curation (Author 2020)

6.4.2. Sculpture

The hands-on, adhocist approach adopted in the design and construction of the Braak Pavilion is reminiscent of the process of sculpting. Just as a sculptor utilises the materials at hand as the medium, but works from a maquette, which is a sculptural solution resulting from numerous iterations of form-giving, the Braak Pavilion project also depended on the use of various maquettes and models that illustrated the multifaceted result of the intricate form-giving process that preceded construction. It also illustrates the ad hoc process which characterises the sculptural aspects of design on site (design in the moment). "The pavilion as a type … belongs to a longer tradition that includes, but far exceeds, the experimental model of modernism" (Macarthur et al. 2018:23). The Braak Pavilion was experimental in the sense that the design had to be adapted to the resources and skills that were available (Figure 462), and had to make use of well-known materials in innovative ways to create a memorable, sculptural experience for visitors.



Figure 462 Women sewing the covering for the Braak Pavilion (Author 2020)



Figure 463 Artist Strijdom van der Merwe creating a focal artwork (Author 2020)



Figure 464 Women sewing the covering for the Braak Pavilion (Author 2020)



Figure 465 Signage explaining the concept for the Braak Pavilion (Author 2020)

6.4.3. The cinematic architectural choreography

The experiential quality of artworks is sometimes clouded by intentions that are difficult to understand. In Macarthur *et al.* (2018:49) the remark is made that, in contrast, architecture "… by virtue of its functionality and practicality, has the advantage that once it is understood (for example, that the pavilion provides a bar, shelter, or seating) that this is sufficient to begin enjoying a direct sensory experience". The Braak Pavilion served as "… a platform for education, talks, information gathering and dialogue during the Triennale" (Wood 2020:24), yet it offered the experience of perspective and the passing of time. The shadows cast by the panel structures lengthened as the day passed and the experience and views that pedestrians enjoyed changed as they walked through the structure.



Figure 466 Movement through the Braak Pavilion (Author 2020)



Figure 467 Visitors admiring the Braak Pavilion (Kruger A. 2020)



Figure 468 The Braak Pavilion with the Kruithuis in the background (Author 2020)



Figure 469 Cinematic view towards the Rhenish Church, Stellenbosch (Kruger A. 2020)

6.4.4. The Braak Pavilion as a yardstick for E-D

The Braak Pavilion serves as a clear touchstone for explorative divergence, as it proves how E-D, as a mindset and a way of life, can coax an architectural project into existence. Key to the success of the architect in this role is their care for the project and the discipline. The analysis of the Braak Pavilion (from inception to close-out and marketing) illustrates the characteristics of E-D and our practice's growing awareness of the benefits and gifts that E-D provides. The E-D process is dynamic and open-ended. It relies on the inputs of various stakeholders, other designers and assistants to inform both the process and the end product. Often these inputs are accidental rather than planned. Making is an integral part of the process of discovery, especially ad hoc, contextual making. Open-ended pragmatism is equally important; for example, we had to change the design on site to deal with the gusty Stellenbosch winds. The Braak Pavilion illustrates how spatial experience is enhanced through increased propositional density. The more functions a space serves and the more narratives it conveys, the richer it becomes in meaning and the deeper the engagement of the public with the constructed space. The commencement of the first COVID-19 lockdown, one week after the opening of the Braak Pavilion, impeded the engagement of the public with the structure, and as such it was difficult to truly assess public engagement as we have done with other buildings in the oeuvre. For this reason, journalistic reading of this project has enjoyed more attention in this section. Nevertheless, as a reverse touchstone the Braak Pavilion clarifies some aspects of the E-D practice and approach, and the benefits these hold for the built project.



Figure 470 The ad hoc pavilion was made from hoarding nets, planks and tree stumps (Author 2020)



Figure 471 Textures (Author 2020)



Figure 472 Erecting the timber framework for the pavilion (Author 2020)

7

GEGROND / IN FLIGHT: THE EXHIBITION

7.1. Introduction: The aim and purpose of the exhibition

One of the outcomes required by the design-led PhD study at the Department of Architecture at the University of the Free State is an exhibition that serves as a tangible design outcome. It must illustrate how the research – in this case the three divergencies (or core competencies) as a practical application of explorative divergence (E-D) – can be applied in a novel design. The design outcome should manifest the insights obtained through the study and articulate the theoretical premises on which these are based.

In Chapter 8, I will explain the thinking behind the exhibition, how the ideas evolved and were distilled through E-D, and how the final exhibition articulated the concepts explored in this thesis.

I will also reflect on how the exhibition has impacted Mathews and Associates Architects and the way we design, and how the exhibition contributed further to a more nuanced understanding of E-D architectural practice.

7.2. Background: origins of the exhibition

From the outset, the idea was to orchestrate an exhibition which could reach beyond the confines of the physical space of the PhD exam exhibition. This aim was in line with the general intent to create a public bias for good design.

My involvement with the Saadjies exhibition, which won a Business and Arts South Africa (BASA) Innovation Award in 2014, informed the decision to opt for an exhibition that could travel and adapt to various settings, both indoors and out. Each new setting would require performative curation of the whole and would provide new opportunities to create cinematic experiences for the visitor.

During a morning walk to the office, I thought about the tendency on social media to polarise debates and how people's thoughts are controlled and channelled into binary camps – exactly the opposite of E-D. The Pink Floyd song "Another brick in the wall", written by Roger Waters, sprang to mind.
When the song was released in 1979, it was banned in South Africa under the strict censorship laws of the time (faroutmagazine.co.uk 2020). My friends and I, however, obtained pirated cassettes of the song and listened to the line "We don't need no thought control" endlessly. Along the route to work I was struggling to find a suitable way to conceptualise my PhD exhibition. The first line, "We don't need no education", was of no help. But the "Aha!" moment was sparked by the title, "Another brick in the wall." This memory was the catalyst that made me take a closer look at the brick: can a brick be more? When one considers the brick as (1) building block, (2) door stop, (3) paper weight, (4) protest weapon, etc, its propositional density becomes quite high. And what if a brick is placed on a pedestal and curated as part of an exhibition? Louis Kahn supposedly remarked, "Even a brick wants to be something" (Moore 2014).
The serendipity in this discovery is that I collected bricks on all my travels and even collected sculptures referencing bricks, not to mention that bricks were ubiquitous during my walk, surrounding me on all sides on the route to the office. The brick exhibition made perfect sense, as it was adhocist to the core.

7.3. The collection: categories of bricks and clay artefacts to be exhibited

I considered, identified and categorised three types of bricks for the exhibition: autoethnographic, theoretical and interpretative. The curation of each type would differ, as described under curatorial rationale (see section 7.4).



Figure 473 The collection of bricks selected for the examination exhibition (Author 2022)

7.3.1. The autoethnographic brick

As discussed in depth in Chapter 2, this study is autoethnographic in nature, and the first category of brick displayed in the exhibition is representative of this fact.

The bricks were sourced from my personal collection: some gathered on my travels, others taken from projects I was involved in, and the sculptures I acquired that use the brick as reference.

7.3.2. The theoretical brick

The second category of brick exhibited presents the two theoretical concepts discussed in this study, namely narrative depth and propositional density.

A. Narrative depth

Each brick in this exhibition is symbolic of a narrative and links with the autoethnographic storyline explored in this thesis. By unpacking all the stories associated with this simple element, it is elevated and becomes rich in narrative.

An example of a brick that represents the theoretical premise of this study is the sculpture by Guy du Toit called *Kirkness Brick*. The artwork is marked "Kirkness" on the one side and "Pretoria" on the other, and is made out of polystyrene and painted to look exactly like a real brick. The artist's intent was to use this benchmark of quality in a trick by floating the brick on water and documenting the event (Figure 474).

The seen and the unseen narratives converge. These bricks have hidden or unseen stories.



Figure 474 Kirkness Brick by Guy du Toit floating in Venice (Crafford 2016)

The Chinese brick I purchased at the 2015 Venice Biennale symbolises narrative depth. For the Rirkrit Tiravanija installation, labourers had stamped the Chinese characters for the words "never work" into each of the 14 056 bricks they produced (Figure 475-476). The quantity of numbered bricks included in the installation corresponded with the number you'd need to build a modest Chinese house (Tiravanija 2015). Although it seems to be just a simple brick, the object speaks of the plight of Chinese labourers and the culture of building in China.



Figure 475 The author with his Chinese brick (Unknown 2015)

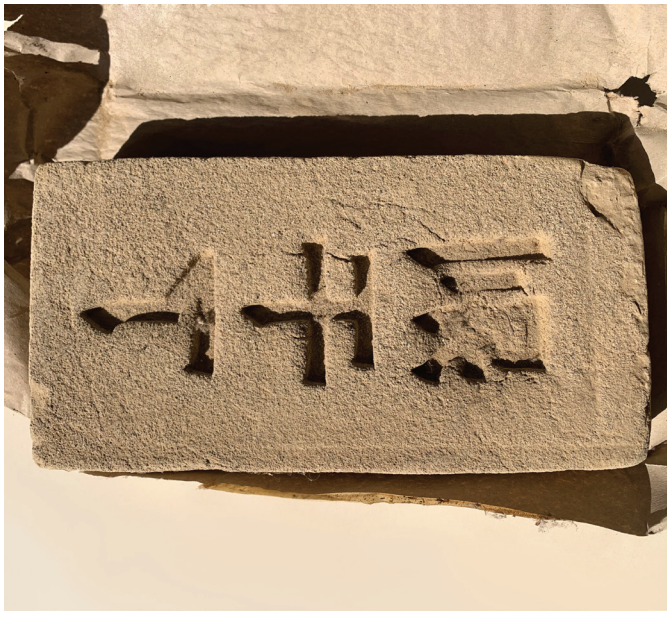


Figure 476 The Never Work Chinese brick (Author 2022)

B. Propositional density

The exam exhibition was a simple manifestation of the principle of propositional density: we consider a brick as a singular element, but the exhibition demonstrated that this singular element can have multiple purposes and meanings, depending on how it is used and interpreted.

Brick Psyche by Sybrand Wiechers encapsulates propositional density (Figure 477). The brick is made up of all the elements used to construct a city: glass, aluminium, tarmac, concrete, cement, copper, steel, and so forth. In theory, if the brick were planted, it would have the potential to grow into a city (Mathews 2018:124). It is a brick, but it also encompasses the elements of the city.

This artwork/brick was exhibited at the 2016 La Biennale di Venezia, where it was stolen. It had to be replaced (with a chain added for security reasons), and has since become a doorstop at our office and will continue to deepen in propositional density.



Figure 477 Brick Psyche by Sybrand Wiechers (Booyens 2022)

7.3.3. The interpretative brick and clay forms

The recurring architectural themes discussed in this thesis were illustrated through an exhibition of interpretative bricks and specially made clay forms. These referred to the autoethnographic background of the author and manifested the findings of the study.

The interpretative bricks were named as such as they had to articulate the discoveries and recurring themes of an E-D practice that emerged through the reflection on the three chosen divergencies (see Chapter 2). The installations had to 'interpret' the findings of the study concerning these chosen divergencies, and lay them bare for the public/viewer to interpret and engage with.

The artefacts were exhibited according to the divergencies of sculpture, curation and cinematic architectural choreography. As a fun workshop in preparation for the exhibition, several of the interpretative bricks were carved by MAAA staff members from unfired bricks supplied by Corobrik. The clay forms were sculpted by the author.

7.4. The curatorial rationale

The exhibition was titled *Gegrond / In Flight*, and was divided into two parts. The first part of the exhibition, "*Gegrond*" means grounded in my mother tongue and included the autoethnographic and theoretical bricks. The second part of the exhibition, "In flight" refers to my 'father tongue', which encouraged me to explore. This part of the exhibition included all the interpretive bricks.

The exhibition illustrated the main theoretical premises of this study. In the first instance, it made the notions of narrative depth and propositional density tangible (experiential) through the use of bricks in a variety of ways. Secondly, it illustrated in an interpretative manner the main themes in MAAA's oeuvre associated with the three divergencies. The exhibition framework and space illustrated the ad hoc approach inherent in our E-D practice. The display of the autoethnographic and theoretical bricks made autoethnographic sense because, as a child, I was always playing in the mud and building clay houses and cities from earth.

7.4.1. The first part of the exhibition – *Grounded / Gegrond*

Grounded / Gegrond, the first part of the exhibition included all the autoethnographic and theoretical bricks. As several of these had been collected over decades, I consider them irreplaceable, much like art in a museum. They had therefore been placed on the staircase balustrade which made public interaction more difficult.

This introductory part of the exhibition gave the visitor fundamental knowledge of the study, the theoretical background, the keywords discussed, and served as an introduction to how seemingly humble bricks can be representative of so much more. This first part of the exhibition enabled visitors to interpret the bricks in the next part of the exhibition.

The information on the hidden or unseen narrative and the deep propositions was communicated on small plaques. Information was set out on three levels – a technique which I had learned from my many museum visits and study tours abroad. A title to introduce the work, a short pull quote for those who do not want to read the whole story, and then the deep-diving part for those who want to immerse themselves in what fascinates them.

7.4.2. The second part of the exhibition: an interpretative experience – *In Flight*

The second part of the exhibition consisted of all the interpretative bricks. The specific bricks and interpretative collections will be discussed individually later in this chapter.

This part consisted of all the interpretative bricks and the various representations of the chosen divergencies of E-D in our oeuvre. The list of recurring themes in the study revealed by these divergencies was creatively enacted through various brick compositions together with clay forms.

The last brick displayed is a reverse touchstone. This lamp is a functional object and sculpture in one, representing the theoretical basis of the study as well as recurring themes from all three of the core divergencies.

This section of the exhibition stood in juxtaposition with the previous autoethnographic and theoretical section. Here visitors were encouraged to interact with the available objects, create their own interpretations, and experiment with spatial experiences. By interacting with the objects, they were able to explore the three divergencies for themselves. This playful approach allowed visitors to take on the role of an architect and to explore and see the result on a small scale. This result could then be photographed, shared on social media, and rearranged by the next visitor, in the process realising one of the main objectives of this study: fostering public engagement with our oeuvre.

In the following section it will be explained how the three chosen divergencies of our E-D practice and certain recurring themes, which emerged during the study, were displayed.

7.4.3. How the three chosen divergencies were exhibited for interpretation

The foyer exhibition, *Grounded / Gegrond*, was representative of white-box museum conditions where visitors are discouraged from touching the items on display. This foyer exhibition included all the autoethnographic and theoretical bricks. As several of these had been collected over decades, I consider them irreplaceable, much like art in a museum.

This introductory exhibition gave the visitor fundamental knowledge of the study, the theoretical background, and the keywords discussed, and served as an introduction to how seemingly humble bricks can be representative of so much more. The foyer exhibition enabled visitors to interpret the bricks in the next part of the exhibition.

The information on the hidden or unseen narrative and the deep propositions was communicated on small plaques. Information was set out on three levels – a technique which I had learned from my many museum visits and study tours abroad. A title to introduce the work, a short pull quote for those who do not want to read the whole story, and then the deep-diving part for those who want to immerse themselves in what fascinates them.

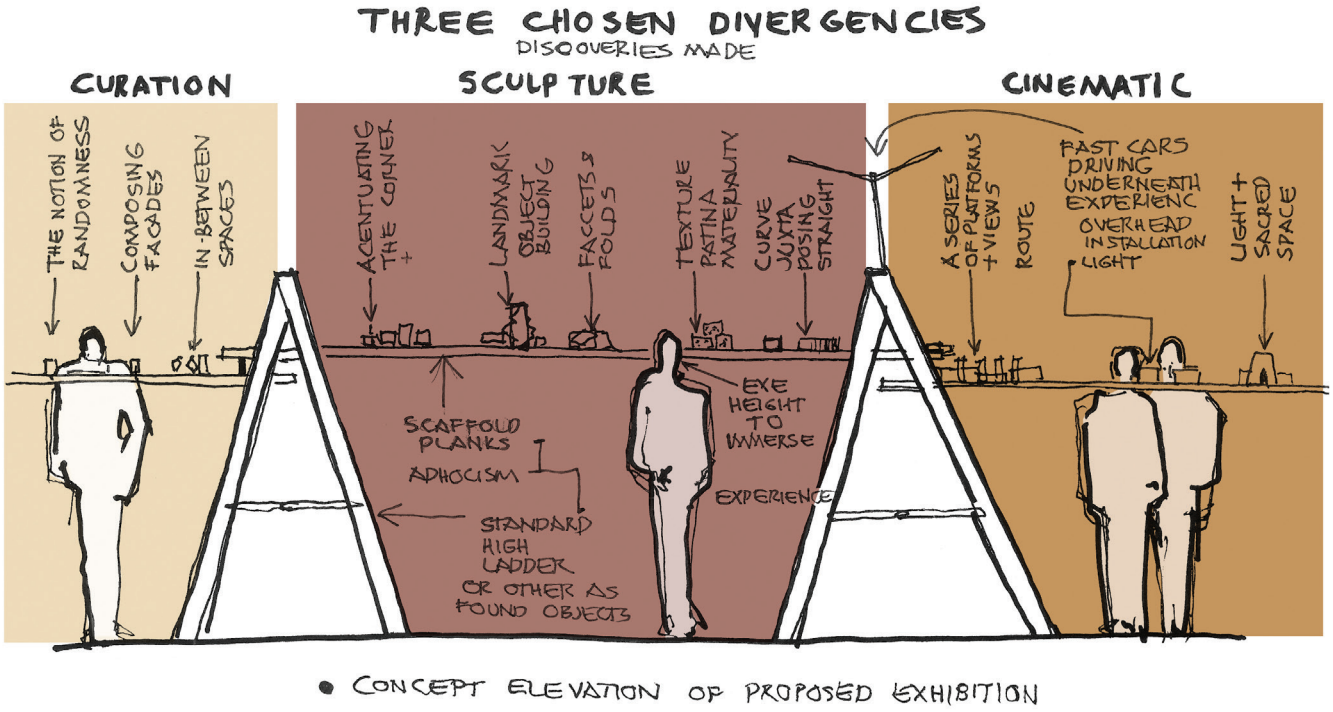


Figure 478 Concept elevation of the initial proposed exhibition which was replaced by a series of platforms to form islands. These were divided in the same way as the initial concept illustrated (Author 2022)

A. Sculpture

Sculpture and making were highlighted through the collection of sculptural bricks and slabs, made in preparation for the exhibition in a studio workshop. During the planning of the second round of the studio workshop, I worked in a neighbourhood pottery studio (Figure 479-480). I looked at the work of my favourite sculptors, Henry Moore and Richard Serra, for inspiration to inform the sculptural representation of the spatial themes I wanted to demonstrate. Formalistically, the two sculptors have opposite approaches, with Serra primarily focusing on spaces formed by flat planes of material, while Moore's work is an example of the object in space. I realised that even in creativity, we are bound to our autoethnographic backgrounds.

The following is a collection of bricks and clay objects representative of some of the recurring sculptural themes in this study.



Figure 479 The author experimenting with Spanish clay to represent concepts with physical materials (Mathews A. 2022)



Figure 480 Terracotta elements to be used with clay bricks to illustrate concepts (Author 2022)

A.1. Facets and folds

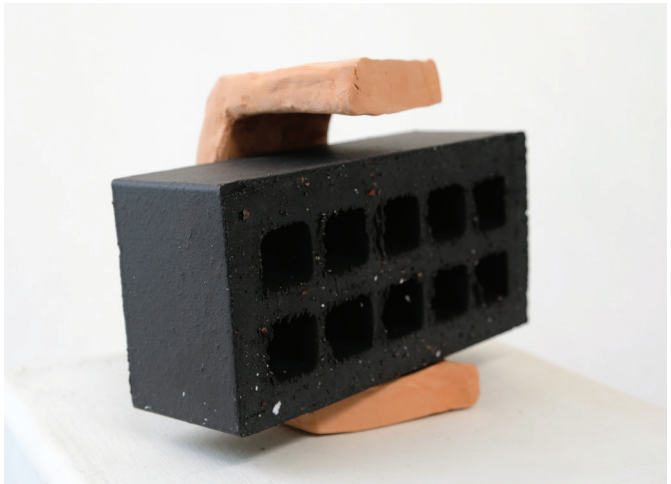


Figure 481 A collection of bricks indicating the concept of facets and folds (Booyens 2022)



Figure 482 A carved brick indicating the concept of facets and folds (Author 2022)

A.2. Juxtaposition of the curve and the straight line

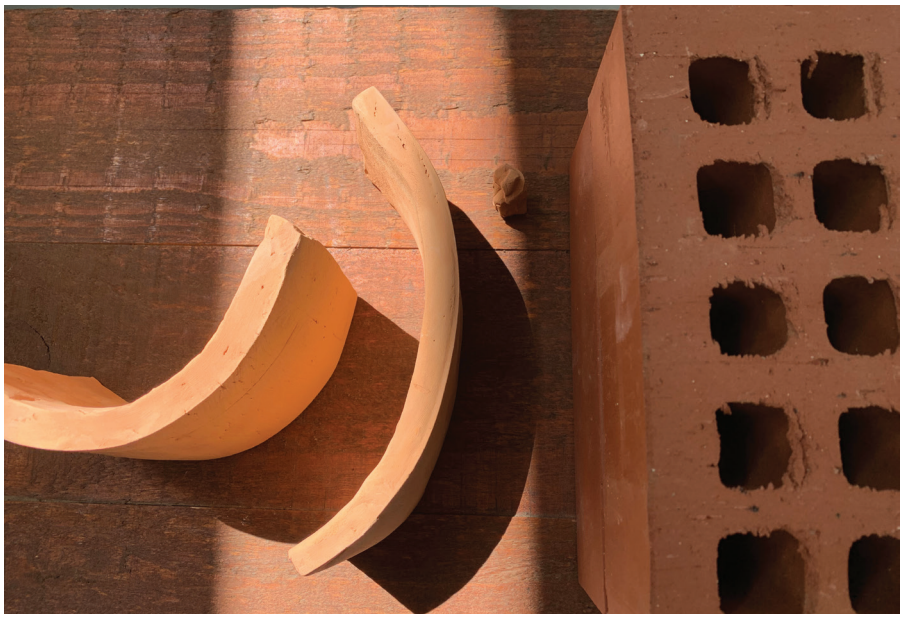


Figure 483 Top view of clay elements depicting the juxtaposition of curves and straight lines (Author 2022)



Figure 484 Clay elements depicting the juxtaposition of curves and straight lines (Author 2022)

A.3. Materiality and texture



Figure 485 Two bricks with different textures and finishes, one with a natural patina built up over time, and the other with a texture and pattern carved into the raw clay which was then baked (Booyens 2022)

A.4. Articulation of corners and connections



Figure 486 Collection of bricks depicting the concept of corner accentuation (Author 2022)



Figure 487 Plan view of a collection of bricks depicting the concept of corner accentuation (Author 2022)

A.5. The object building



Figure 488 Terracotta sculpture illustrating the concept of sacred space and changing light (Author 2022)



Figure 489 A carved brick indicating the concept of an object building. Sculpture (Author 2022) Photograph (Booyens 2022)

B. Curation

Curation as a divergency was applied to the composition of the collection of bricks and the narratives they represented. Each brick or collection embodied an interpretation of a concept discussed in the thesis, and the intention was to convey this visually through the exhibit. The curation of bricks illustrated themes such as (1) the curation of in-between spaces, (2) the notion of randomness, and (3) the composition of facades, of buildings designed for art, and of building complexes.

The following is a collection of bricks and moulded clay objects representative of some of the recurring curatorial themes in this study.

B.1. Facade composition

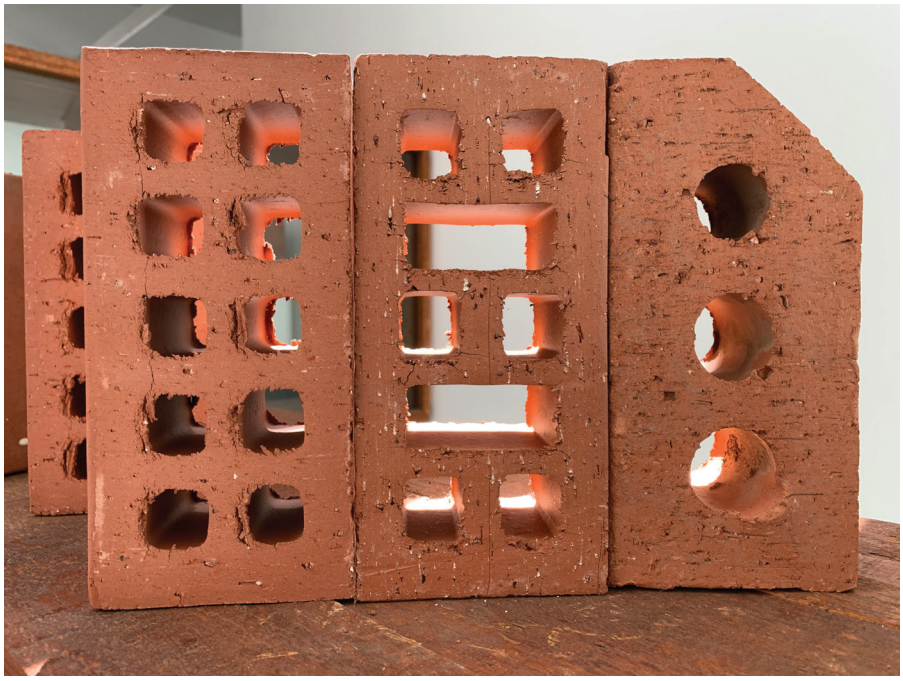


Figure 490 A collection of bricks indicating the composition of a façade (Author 2022)



Figure 491 The brick and the 'non-brick'. A curated façade versus a reflective façade (Author 2022)

B.2. Curated randomisation



Figure 492 Collection of bricks and clay elements representing randomisation (Author 2022)

B.3. A building designed for art



Figure 493 Bricks arranged to create a space ideal for receiving art (Booyens 2022)

B.3. In-between spaces



Figure 494 The author planning a brick layout to illustrate the exhibition concept (Booyens 2022)



Figure 495 Planning the visitor's perspective of the in-between spaces (Booyens 2022)



Figure 496 A collection of bricks demonstrating the concept of in-between spaces (Booyens 2022)

C. Cinematic architectural choreography

Cinematic architectural choreography as a core competency became useful in the planning of the sequence of the exhibition. To create and enhance the viewer's experience of the bricks on display, the various stairs, levels, movement routes and platforms in MAAA's Oaktree Studio were used to prepare the exhibition and photograph them for this chapter, to ensure that it allowed the bricks to be viewed as spatial elements rather than objects.

Subtle changes in height illustrated the principle of a series of platforms or spaces. The effect of natural and artificial light on the bricks and the spaces which were created in the exhibition added a temporal dimension. The viewer's movement alongside the elevated bricks and terracotta clay forms created a cinematic experience of different spatial conditions.

Lastly, the exhibition was filmed for the purposes of the final examination exhibition. The film depicts how this cinematic divergency assists in narrating and directing a sequence of experiences.

The following is a collection of bricks and clay objects representative of some of the recurring cinematic themes in this study.

C.1. Light and shadows



Figure 497 Carved brick sculpture illustrating the concept of sacred space and changing light (Author 2022)

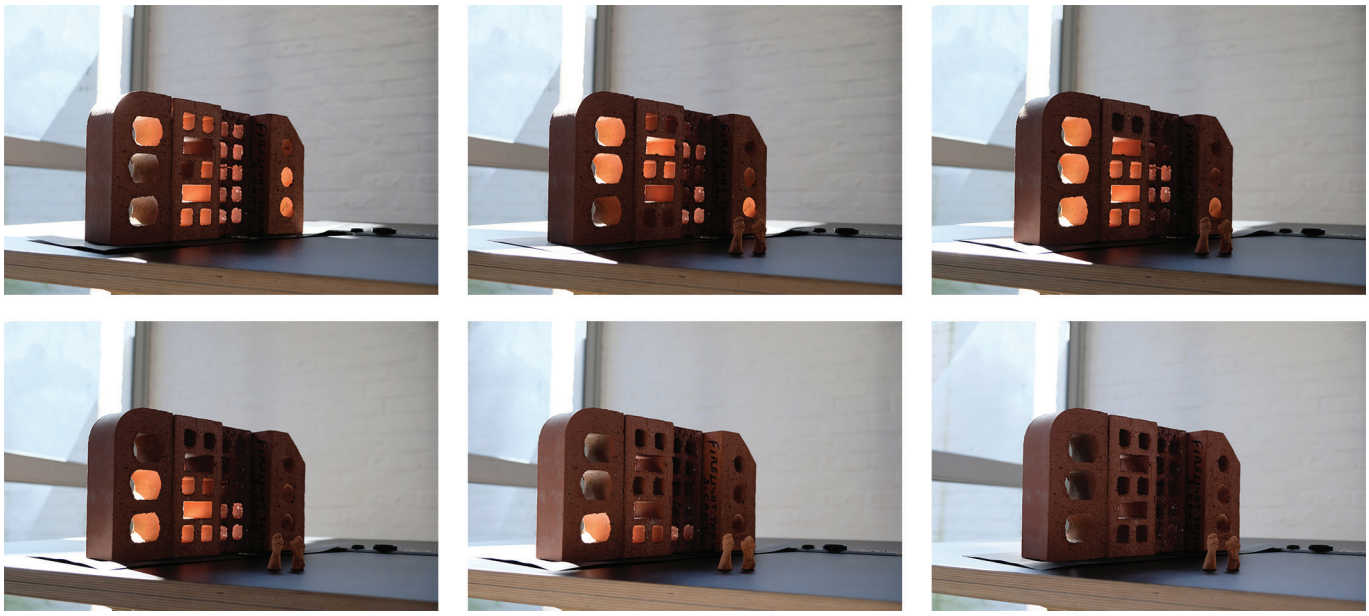


Figure 498 Timelapse indicating the cinematic concept of light. Curation (Author 2022) Photograph (Booyens 2022)

C.2. Emulating movement with static elements



Figure 499 Collection of bricks and clay elements representing movement and repetition (Author 2022)

C.3. Amplifying transitional spaces



Figure 500 Author curating a collection of bricks demonstrating transitional space (Booyens 2022)



Figure 501 A collection of bricks demonstrating transitional space (Booyens 2022)

C.4. The establishing shot



Figure 502 A clay sculpture which considered the finished establishing shot during the designing phase (Author 2022)

C.5. Linking spaces and views with a series of platforms



Figure 503 Collection of bricks demonstrating transitional space and a series of platforms (Booyens 2022)

C.6. Curating a cover



Figure 504 Bricks curated for the cover of this PhD thesis (Booyens 2022)

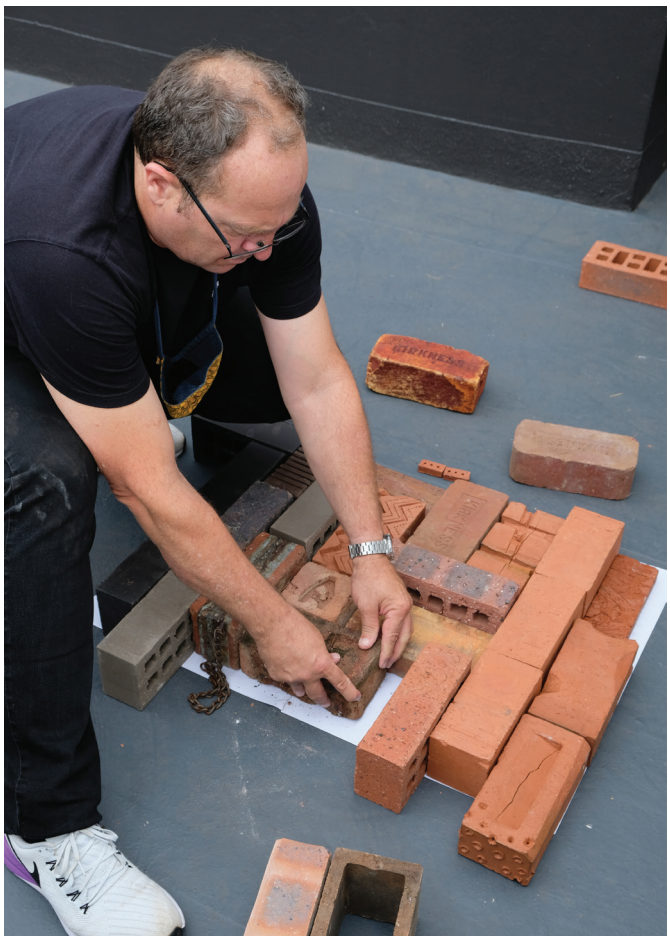


Figure 505 The author curating bricks for the cover page (Booyens 2022)

7.5. Conceptualising the space and place of the exhibition

7.5.1. The Oaktree Studio stairwell

The exhibition was documented in our Oaktree Studio to illustrate the adaptability of the brick collection which can be curated in many spaces. The studio as location was originally overlooked, although it was right under our noses. The staircase proved to be the perfect setting, as it has three podium levels which can be viewed from multiple angles. Also, the quality of light in the space provided stimulating, dramatic and evocative cinematic opportunities.



Figure 506 The proposed location of the Oaktree exhibition (Dook 2017)



Figure 507 Visitors at the Oaktree Studio exhibition Author 2022)

7.5.2. The examination exhibition at the UFS Department of Architecture

Similarly, as set out in section 8.4 The curatorial rationale, the examination at the University of the Free State Department of Architecture was set up in two main parts, *Grounded/Gegrond* and *In flight*.

The exhibition was designed with a series of platforms and pin-up boards. The first set of platforms/ podiums represented the autoethnographic and theoretical bricks.

The second part included of all the interpretative bricks and the various representations of the chosen divergencies of E-D in our oeuvre namely curation, sculpture and cinematic architectural choreography. Each of the representations were accompanied by a poster to link the exhibition to the oeuvre of MAAA.

Lastly a reverse touchstone served as a summary of the study and core divergencies.
Whilst concluding my presentation I encouraged the audience to interact with the bricks in the hopes of discovering their own core divergencies.

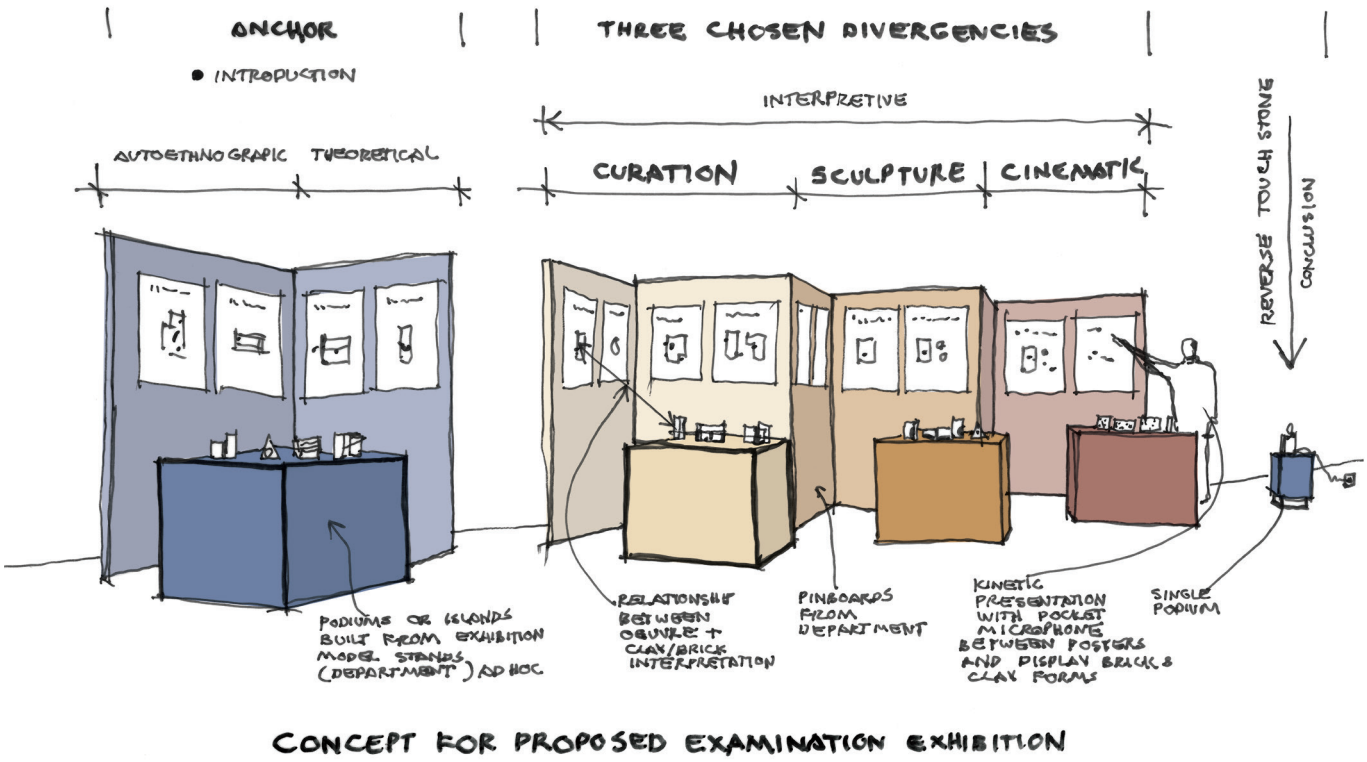


Figure 508 Design proposal for the examination exhibition (Author 2022)

7.6. Other E-D attributes manifested in the exhibition

7.6.1. Making / playing

To source the material for the exhibition, we approached Corobrik to sponsor raw unfired bricks which we carved and played with and they then baked for us. In return, we agreed to Corobrik interviewing us for marketing purposes about one of our latest projects which features their products. This type of hustling and drawing on a network within and beyond the built environment is an intrinsic part of E-D. Sculpting the raw bricks allowed me to experiment with the material and discover the themes that could be expressed in clay.

During further experimentation, Spanish self-drying clay was used to make small maquettes which could be translated to a scale that would fit in with the scale of the bricks. This is a medium I have used previously in the conceptual phases of building projects, such as for the Javett: UP.

Custom terracotta clay forms were then made to enhance and further clarify the themes explored through the exhibition. These forms were constructed in the studio of a potter in the neighbourhood. Using overlooked resources (whether people or physical materials) is intrinsically part of our E-D practice.

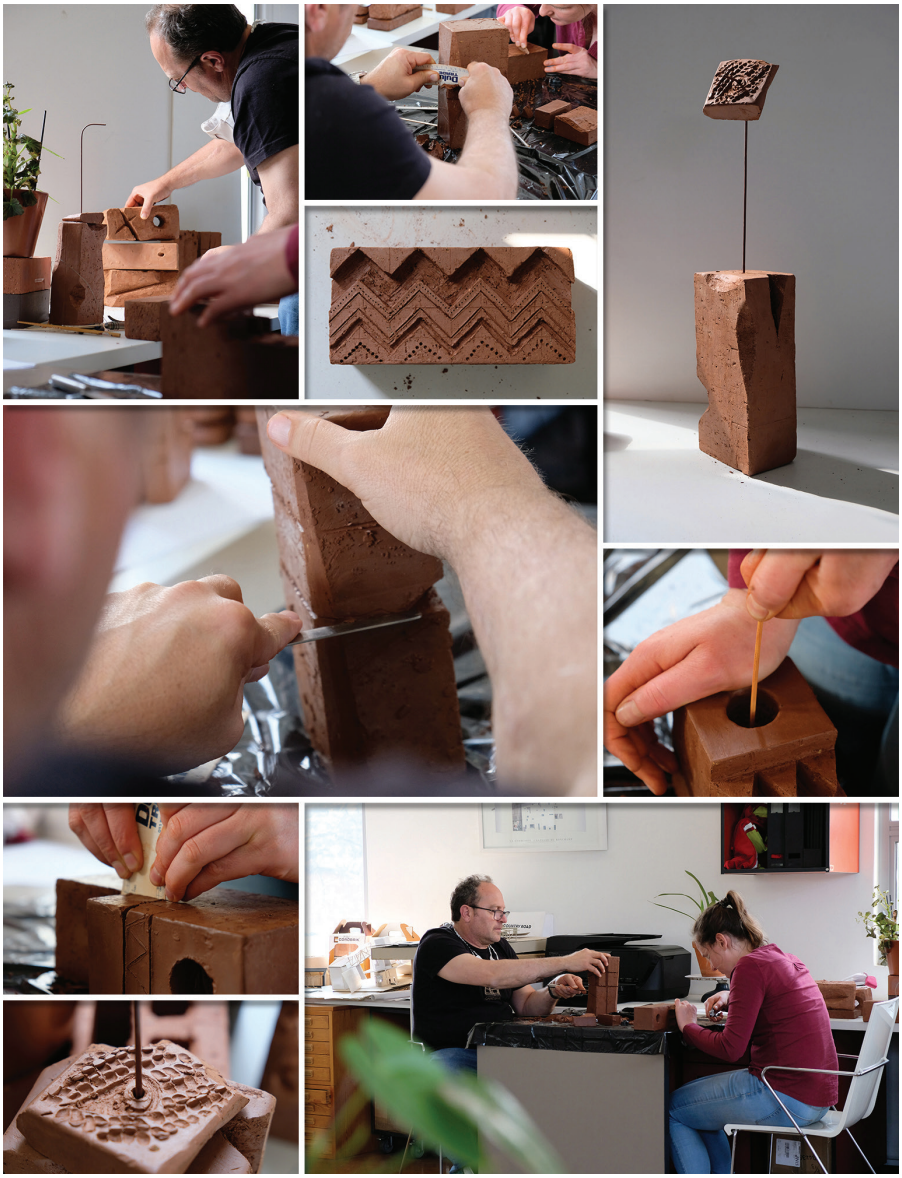


Figure 509 Collage of the brick-sculpting day (Booyens 2021)



Figure 510 The author in the pottery studio sculpting concepts (Hollander 2022)



Figure 511 The author in the pottery studio (Hollander 2022)

7.6.2. Adhocism

I have a love for found materials as a sculptural medium. This love is reflected in the choice of bricks and in the ad hoc use of everyday objects to create an exhibition space.

7.6.3. Dualism

In the exhibition, the humble, practical display structures and locations were contrasted by the more intuitive and random exhibition itself. This can be likened to the metaphor of the grounded hand and the hand in flight, and is a confirmation of the dualistic nature of E-D as reflected in the title of the exhibition, *Gegrond / In flight*.

7.7. A reverse touchstone

During our raw-brick carving workshop I created a lamp that encompasses several of the theoretical concepts and divergencies explored in this study. This one object represents a reverse touchstone for the study.

The brick lamp was designed to form part of my examination exhibition and is a functional object and sculpture in one, fulfilling the notions of narrative depth and propositional density.
Regarding the three core competencies, curation is represented by the curated faces of the brick; sculpturally the concept of facets and folds, materiality and textures, articulation of the corner and an object 'building' is evident. When illuminated the concept of light and shadows representing cinematic architectural choreography is evident.



Figure 512 A carved-brick lamp by the author (Author 2022)

7.8. PhD examination

The PhD with specialisation in Design examination took place on the 17th of January 2023 at the UFS Department of Architecture at 09:00. The internal examiner was Professor Jonathan Noble from the University of the Free State. The external examiners were: Dr. Urs Bette from the University of Adelaide, Australia and Dr. Michael Louw from the University of Canberra, Australia.



Figure 513 Author presenting exhibition during his PhD examination (Smit, J. 2023)

7.9. Conclusion



Figure 514 Author at his exit symposium in April 2022 (Smit 2022)

At my exit symposium in April 2022, one of the assigned critics, Theresa Hardman, questioned the ways in which the exhibition could take the practice further (UFS Symposium 2022). After much thought the obvious was revealed through time. The exhibition took the practice forward in a most unexpected and practical manner. It occurred when we discovered an extremely cost-effective way to investigate space by quickly constructing an urban environment from which to explore the impact of our architecture – by using bricks. Each brick represents a single storey with which we can immediately construct a physical context in which to design, complete with clay-modelled humans. The ample supply of bricks in the studio, together with the odd-shaped ones, is now used for this purpose. The bricks improved on the Lego blocks which we used until we discovered what the humble brick can offer. Mies van der Rohe summarised our new additional design method: "Architecture starts when you carefully put two bricks together" (Pawson 2015). The exhibition was both an ode to, and a manifestation of, the gifts of the E-D approach and its divergencies for architectural practice.

The source of inspiration for the exhibition, as is often the case in my E-D approach, came from autoethnographic pop culture, which reinforces the notion that E-D relies and thrives on crossovers between disciplines. The idea of using bricks to explain the key concepts of the study in essence embodies an ad hoc approach, in the sense that it is making use of what is readily available in the immediate environment of the architect. As such the exhibition is contextual. It also recalls the idea that the creative capacity of an E-D practice often thrives within the strictest constraints.

The concept of dividing the exhibition into two sections, one that can only be looked at as museum pieces on display (the autoethnographic and theoretical bricks), juxtaposed against the other interpretative and main part, plays directly into the thread of dualism and juxtaposition throughout the study. The interpretative exhibition strengthened the main aim of encouraging public engagement with our oeuvre, albeit in an abstracted way.

The iterations of the exhibition concept demonstrated the E-D working method in both the conceptual approaches followed, and in the way that ideas are encouraged to continuously develop. Working with clay to explore the key themes of the oeuvre brought me back to childhood days when I played in, and made things from, the mud. Some of the bricks included were found on my travels, were made by friends and mentors, or speak to our relationships with people in the building industry. The E-D practitioner relies on these relationships to do their work.

The collection of bricks was exhibited in such a way so as to illustrate some of the key patterns in our oeuvre as well as the themes and findings of this study. These are the result of our E-D methods and its divergencies. The viewer was encouraged to interact with the exhibition; firstly to only look and read, and thereafter to touch the surfaces, to play with the compositions while experiencing them from different angles, and to walk around to see the effect of light on the shapes displayed. The conclusion reached by the members of the audience was, however, in part determined by the narrative that each individual carries within themselves.

This brings us back to Olafur Eliasson, whom I have quoted several times: "I want to hand over the responsibility for experiencing the artwork to the participant" (Dadich 2019).

8

CONCLUSION: INSIGHTS OBTAINED AND CONTRIBUTIONS MADE

8.1. Introduction: Summary of chapters

In the study, I have reflected on my personal background and career in order to uncover and understand the way in which I (and Mathews and Associates Architects by extension) practise architecture. The investigation into my dualistic upbringing, and the thought patterns and outlooks established by my parents, reveal how I have been greatly influenced in the way I manage the practice on a day to day basis. My architectural education at the Department of Architecture at the University of Pretoria, and subsequent exposure to the European architecture of the late 1980s during my world travels, informed and formed my design sensibilities. The architectural outcomes of MAAA are supported and made possible by the culture of the studio and our practice and design methods, as was discussed in detail in Chapter 4.

However, the crucial determinant, and the focus of this study, is the explorative-divergent methods the practice and I have developed and the impact these methods have on our architectural outcomes. In Chapter 1 of this study, explorative divergence (E-D) was defined as an open-ended, explorative interdisciplinary working method for design and practice that is coupled with a receptive mindset. In order to examine the nature of this multi-faceted approach more closely, I have focused on three divergencies or core competencies – specific to Mathews and Associates Architects – to investigate how the tactics and methods learned from these divergent interests have been applied to architecture. Case-study projects were discussed on the basis of narratives in order to highlight the impact these tactics and methods have on the architectural outcomes.

During the course of the study, an increased awareness of our own working methods led to a re-evaluation of our practice and the conscious integration of the discussed concepts with our current projects. The Braak Pavilion (Chapter 7), conceptualised and completed within the timeframe of the PhD research, was documented to understand and explain the impact of the research on the practice and our work. The exhibition (Chapter 8) is an embodiment of these ideas in tangible form.

This section (Chapter 9) serves to summarise the key findings of and contributions made by the research. I will consider the recurring themes that have emerged, as well as design tactics and methods associated with E-D. Finally, I will highlight key aspects of E-D and make a case for explorative divergence as a method of practice and design in architecture.

8.2. General observations and discoveries

8.2.1. The ‘why’ determines the ’how’

In Chapter 2, I defined my credo as an intention to foster a bias for good architecture amongst the public by creating architecture that allows people to engage meaningfully with their environment (place). The aim is to foster relationships between people and buildings through holistic, embodied experiences. This credo – my ‘why’ – is the driving force behind my methods.

During the course of the study and my own reflections, I discovered that the greater our concern for the project is, the more we are prepared to put time and effort into research and investigation, and into searching for the narratives that the architecture should embody. By delving deep into the gifts of the divergencies and exploring various avenues, buildings which are propositionally dense and rich in narratives can emerge. This may come at a cost where finances and time are concerned, but in the end these are the buildings which often offer the most rewarding experiences to the dweller and foster meaningful relationships between the user and our oeuvre. The latter is attested to by the public engagement with, and public reading and post-rationalisation of, the architecture, as discussed in Chapter 6.

A. Two currencies

In certain instances we can justify working on projects which cut into our financial gain, because we realise that payment comes in various forms. In Chapter 4, I describe discovering that our practice accepts payment in two currencies: exposure and monetary gain. My dad always referred to swings and roundabouts in business: going about things differently to achieve required outcomes.

For example, an addition to a house where the aim is to provide each child with an en suite bathroom tends to be low on our list of priorities, because there is not much opportunity for narrative depth. The tactics employed would thus be more conventional. Although we would still put effort into providing a design of quality, this type of project would most likely subsidise other projects which might not be as lucrative, but offer greater opportunities to provide a rich experience for a larger audience.

B. Explorative-divergent tools to enhance narrative depth

The divergencies discussed in the thesis can be seen as explorative-divergent tools which serve to increase the propositional density of, and deepen the narrative contained in, the architecture.

The Afrikaans poet laureate, Lina Spies, sent me a poem titled *Poësie* [Poetry], after we completed the bicycle stand for the Stellenbosch Sculpture Trust. In the poem, she hints that she did not choose poetry, but that poetry chose her; it was in her DNA.

Jy wat in my gene was
lank voordat ek van jou geweet het
wat my besiel en treiter met woorde
dat geen prins my wakker soen nie.

- Lina Spies 3.2.2018 (unpublished)

Reading her poem anew made me realise that this was also the case with me and the chosen divergencies: building mud houses as a child, experiencing movement on rooftops, curating furniture for my teepee, and designing a modern cube dwelling as my first project. Making (sculpture), curating, and choreographing cinematically are intrinsic to my being.

Other practitioners would do well to reflect upon their own divergencies and the nuances revealed by their oeuvre, in order to understand how their work might be enhanced by consciously excavating the gifts of their own competencies in an explorative-divergent spirit.

C. The dualistic nature of my tactics

Dualism is an essential part of the tactics that I employ. My methods are paradoxical and ambiguous, ranging from spaces carefully planned on block paper to on-the-spot decision making. My comfort with dualism, I believe, comes from my dualistic upbringing which afforded me multiple perspectives, and from the well-developed peripheral vision which is crucial to the way in which I practice explorative divergence.

8.2.2. Recurring themes and motifs in the oeuvre

The exegesis of my oeuvre led to the discovery of recurring architectural themes which can be traced back, and categorised according to, to the three divergencies. E-D methods do not necessarily always lead to novel shapes and forms, but may, as this section will attest, refine design sensibilities and build on methods and concepts. For this reason the projects in the oeuvre share similarities that highlight how the practice has evolved over time and assimilated knowledge and tactics. In this section, I will briefly summarise those themes visually.

A. Sculpture

A.1. Facets and folds

Facets and folds are recurring elements at various scales, from large structures like the Mapungubwe mount (Figure 517), the facade of the Nellmapius Bridge and the AHMP sports pavilion (Figure 520), to the more humble koeksister bench (Figure 519) and Javett: UP reception desks (Figure 518). Faceted forms present opportunities for three-dimensional observation.



Figure 515 The AHMP guardhouse as an object building (Author 2020)

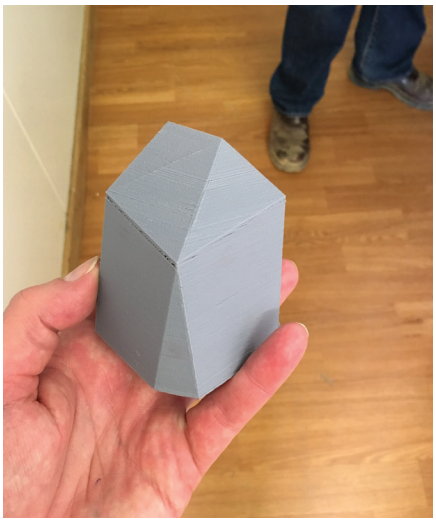

Figure 516 Model of the Javett: UP Mapungubwe structure (Purnell 2017)


Figure 517 Concrete textures at the Javett: UP (Pretorius 2018)


Figure 520 The steps of the AHMP sports-complex pavilion (Crafford 2013)


Figure 518 Reception counter of the Javett: UP (MAAA 2019)


Figure 519 Sculptural facets of the Koeksister bench (Author 2015)


Figure 521 Cinematic view towards the Rhenish Church, Stellenbosch (Kruger A. 2020)


Figure 522 Entrance door, House Geldenhuys (Author 2020)

A.2. The juxtaposition of curves with straight lines

The juxtaposition of curves with straight lines is especially visible on plan (Figure 523, 525), where a practical layout is deconstructed to create spatial tension, drawing one in and gathering space or deflecting space elsewhere. This juxtaposition adds to the sculptural qualities of buildings, whilst adding intrigue to their experiential qualities. As a technique, it is often used in mundane spaces which are usually devoid of visual interest, such as passages.

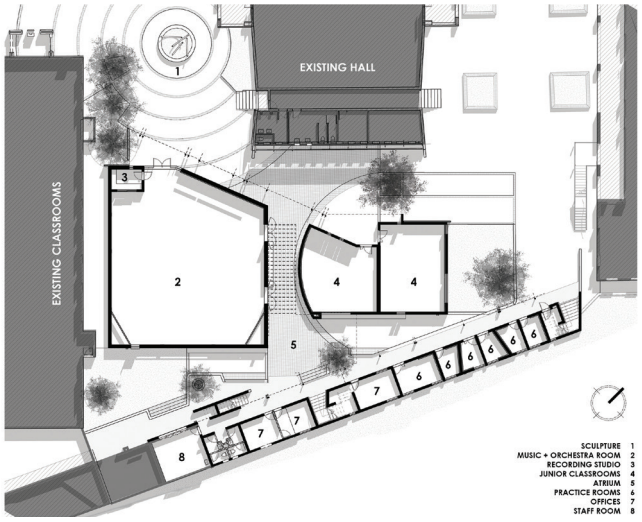


Figure 523 Ground-floor plan of the AHS Arts Campus (MAAA 2016)

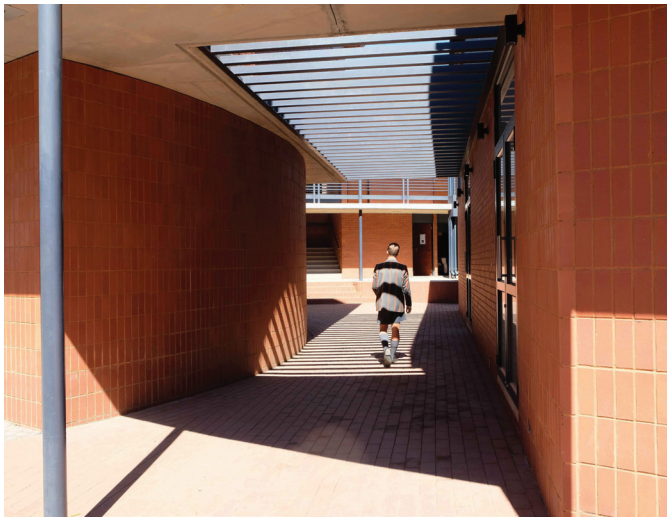


Figure 524 Temporal shadows at the AHS Arts Campus (Author 2018)

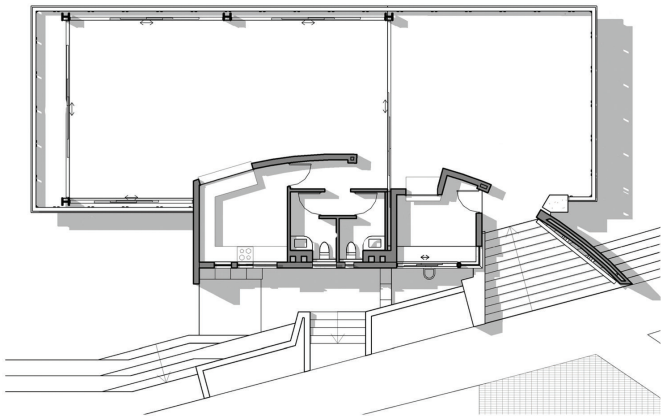


Figure 525 The plan of the AHMP sports complex illustrates the juxtaposition of the curve and the straight edge (MAAA 2013)



Figure 526 House Nixon (Unknown 2005)



Figure 527 The main administration building at North West University (Author 2021)

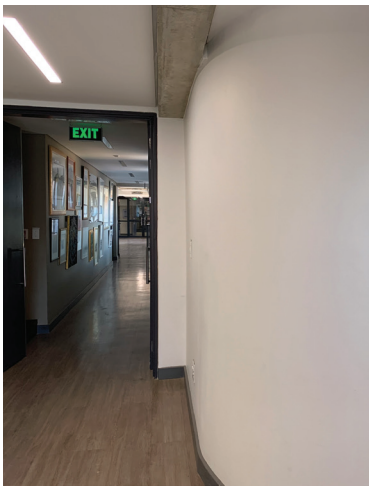


Figure 528 Interior of the NWU administration building (Author 2021)



Figure 529 Interior of the NWU administration building (Author 2021)



Figure 530 A curved wall in House Millar (Dook n.d.)

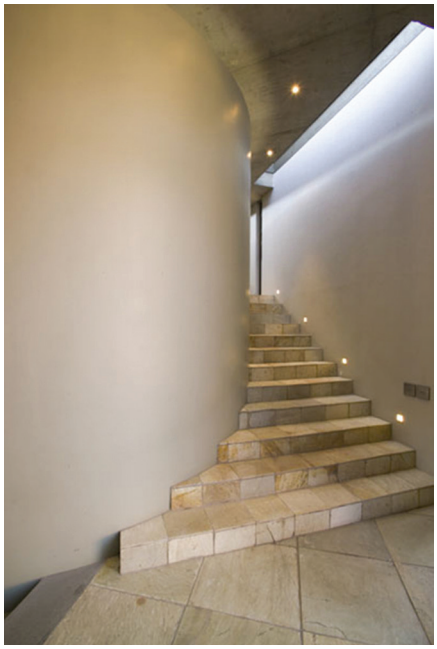


Figure 531 A curved wall in House Millar (Dook n.d.)



Figure 532 The round office and entrance to the AHMP swimming pool (Pretorius 2017)



Figure 533 The round office and entrance to the AHMP swimming pool (Author 2017)



Figure 534 Curves and straight edges as tools for facade design: Summit House (Cronje 2015)

A.3. Materiality

Patina and texture are important aspects of sculptural work; the same applies to architecture. We experiment with various finishes to enhance the forms of buildings and increase the user's tactile experience. Texture is used to differentiate between the functions of certain design components. A good example is the concrete textures at the Javett: UP, where the rough finish of the Mapungubwe mount (Figure 535) is offset against the smoother bridge panels, thereby distinguishing the space containing the most valuable exhibition from the rest of the building. Texture and tactility are important throughout our oeuvre; my interest in these sensory qualities can largely be attributed to the research I did for the book *Architexture*.



Figure 535 The concrete texture of the Mapungubwe structure (Author 2021)



Figure 536 Experimenting with textures: House Crabtree (Unknown 2004)

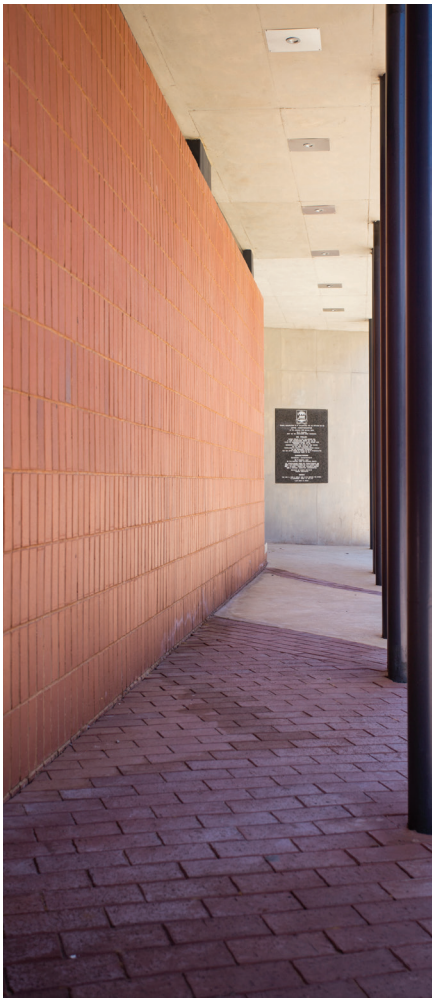


Figure 539 Soldier-course brickwork at the AHS Arts Campus (Unknown 2017)



Figure 537 Experimenting with different concrete finishes: Wonderboom Intermodal Interchange (Author 2021)



Figure 538 Curation of the Kee Enterprises façade (Unknown 2008)

A.4. Articulation of corners and connections

Articulation entails a dialogue between positive and negative surfaces. It heightens the way in which light renders architectural forms and it allows architecture to emerge as sculpture. Practical shapes and forms are moulded in the conceptual design phases to create sculptural forms. I believe the eye is always drawn to follow edges when interpreting architecture, thus the edges, corners and meeting points of elements and materials are of crucial importance. My book *Detail Housed*, published in 2007, also contributed to our practice being cognisant of how details and connections can be used to articulate surfaces and narrate the story of a site.

Corners, specifically, are carefully articulated throughout our oeuvre. Corner windows are prevalent in our residential oeuvre, and at the AHMP school hall a window folds over to become a skylight to highlight the portrait of the donor. In some instances, such as at Kee Enterprises (Figure 546) and the Hatfield Campus approach to the Javett: UP bridge (Figure 540), the corner is symbolic of the shape of the site and the nature of the context.



Figure 540 The hero shot: Javett: UP (Pretorius 2019)



Figure 541 The main administration building at North West University (Hattingh 2021)



Figure 542 Articulating the corner: Kee Enterprises (Author n.d.)



Figure 543 Structural connections at the Javett: UP (Author 2019)

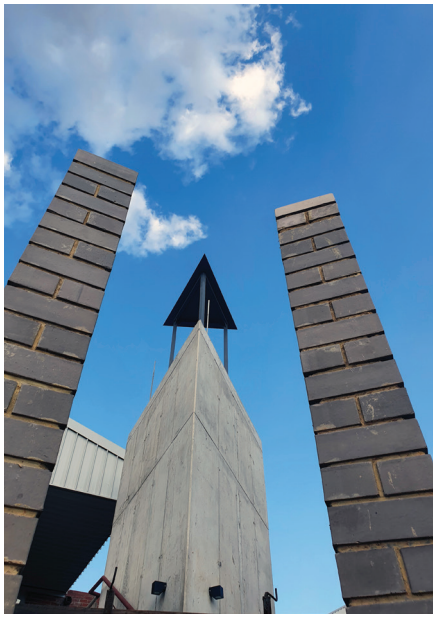


Figure 544 Articulation of corners at the NWU administration building (Hattingh 2021)



Figure 545 The disappearing corner: Rivonia Trial Memory Box Station (Author 2015)



Figure 546 The pointed roof of Kee Enterprises (Unknown 2008)

Detailing refers to the way in which materials come together. Materials can meet seamlessly, as in the work of Brancusi, or with expressive junctions, as in the work of Anthony Caro. My sculptures made of found materials for the *Form, scrap and order* exhibition dealt with the way in which disparate materials can be brought together. In MAAA's work, we experiment and join materials that are not typically joined. In my sculpture *Beast* I used driftwood, carved foam covered in resin, and a control mechanism of soldered wires (Figure 547). These materials aid the reading of the work – movement is anticipated by the positioning of the elongated legs of natural driftwood, and is further enhanced by the control mechanism of fine soldered steel wire. Sculpture has helped me to think outside the box and consider the joining of materials.



Figure 547 Artwork by the author from the *Form, Scrap and Order* exhibition (Author 2008)

A.5. Object buildings

Object buildings are often easily recognizable, rich in articulation but strong in overall form, and can therefore easily be reduced to abstracted images or icons (Figure 548).

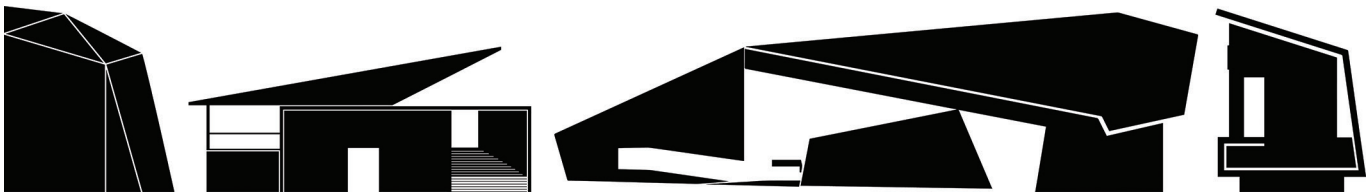


Figure 548 Object building icons (MAAA 2022)



Figure 549 The AHMP guardhouse (Author 2020)



Figure 550 The Rivonia Trial Memory Box Station (Author 2015)



Figure 551 The Mapungubwe structure as focal point (Pretorius 2019)



Figure 552 The AHMP sports complex (Crafford 2013)

A.6. The sculptural potential of services

Rather than attempting to conceal services, we employ them as one of several sculptural mediums in architecture – a technique I learnt and have taken from the Pompidou Centre. At the Javett: UP services are treated in a sculptural way (Figure 554, 556, 557). Air-conditioning ducts were also the starting point in the design for the lecture halls at North-West University's Vaal Campus, currently under construction.



Figure 553 Exposed services inside Kee Enterprises (Unknown 2008)



Figure 554 Services at the Javett: UP (Author 2019)



Figure 555 Water tanks at the Diamond Hill Toll Plaza (Cronje 2015)



Figure 556 Services at the Javett: UP (Author 2019)



Figure 557 A piece by Eduardo Villa speaks to the services on the roof of the Javett: UP (Southwood 2019)

B. Curation

B.1. Facades are composed

Facades are composed as one would compose a collage or a poster. Apertures like window and service openings are considered and curated much like a salon-style art exhibition. In a facade entirely of glass curtain wall, as used at the BRT stations (Figure 560), mullions can be curated and composed.



Figure 558 Composition of the façade of House Steyn (Sotiralis 2010)



Figure 559 The composition of the façade at Kee Enterprises accommodates a sculpture by Angus Taylor (Unknown 2008)



Figure 560 The Rivonia Trial Memory Box Station against the backdrop of the Old Synagogue (Author 2015)



Figure 561 South elevation of the AHMP sports complex (Crafford 2013)

B.2. Curated randomisation

These apertures, compositions and patterns on facades are often perceived as being random. In actual fact, randomness is achieved through careful curation of standardised objects so that they look familiar but not monotonous. The majority of the 'random' applications are the result of numerous design iterations, both in the office and on site, to achieve the correct balance between visual interest and cost effectiveness (i.e. achieved by using the same mould multiple times).

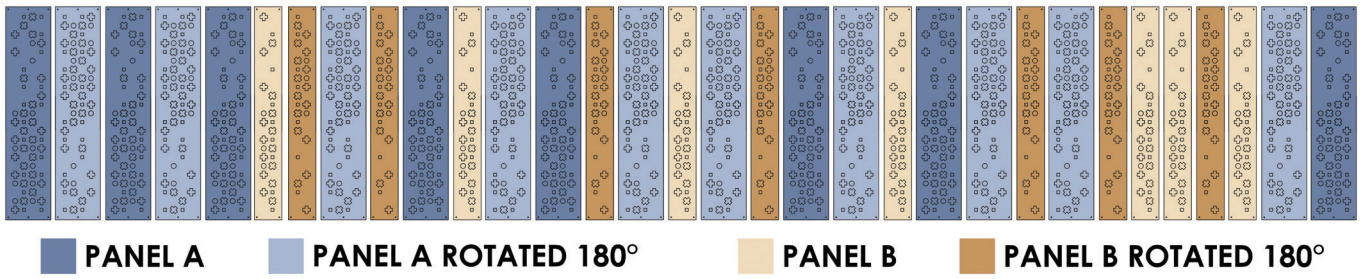


Figure 562 Diagram of the Javett: UP screens. Only two panel designs are repeated (MAAA 2022)

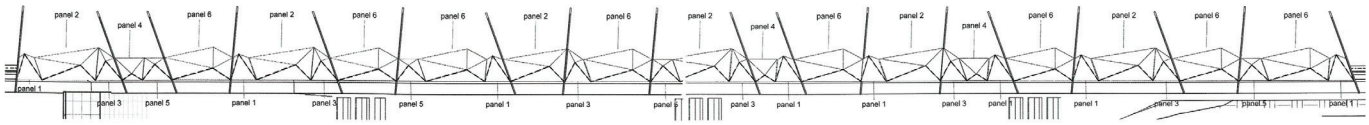


Figure 563 Façade of the Nellmapius Bridge (MAAA 2013:60)



Figure 564 Curation of the Kee Enterprises façade (Unknown 2008)



Figure 565 Randomness: handrail detail at Kee Enterprises (Unknown 2008)



Figure 566 Randomness: timber screens at Kee Enterprises (Unknown 2010)

B.3. The constraints of confined sites

"Limitations are the architect's best friend"
– Frank Lloyd Wright cited in MacKay-Lyons (2015:214).

We can dance in confined places: our projects showcase urban curation on complex and constrained left-over portions of land. The Arts Campus at the Afrikaanse Hoër Seunskool (AHS) is squeezed into a leftover portion of the site (Figure 568); at the Afrikaanse Hoër Meisieskool Pretoria (AHMP) we had little room for manoeuvring; and the Javett: UP is constructed over a road and in-between existing buildings (Figure 567). My own houses, discussed in Chapter 2, were both built on small subdivided plots. Curatorial techniques allow us to turn constraints into design tools which ultimately create a better sense of place and ensure optimum use of space.

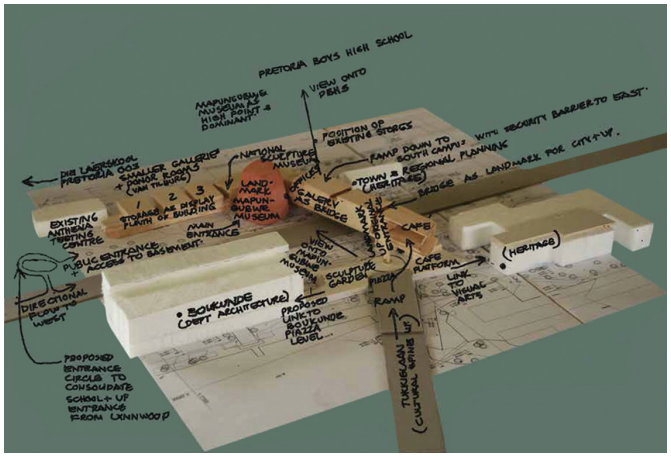


Figure 567 The constraints of the Javett: UP site (Author n.d.)


Figure 568 The constraints of the AHS campus (Unknown 2017)

B.4. Curating building and art

Buildings in our oeuvre are always viewed either as 'objects of art', or as backdrops to receive art, or sometimes as both. We create either or both of these conditions in every project due to the E-D tactics we employ.


Figure 569 The composition of the façade at Kee Enterprises accommodates a sculpture by Angus Taylor (Unknown 2008)


Figure 570 A visitor looks at the portrait of EC Steijn (Author n.d.)



Figure 571 The *Bokkie* in a more prominent location in front of the AHMP school hall on natural fieldstone (Crafford 2013)

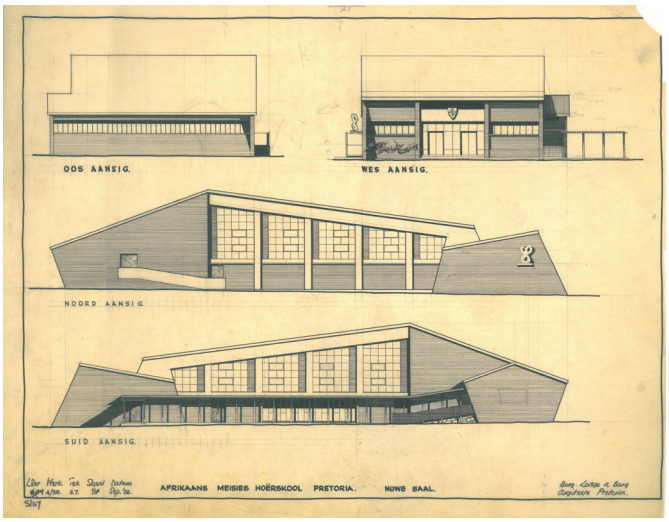


Figure 572 Original elevations of the AHMP school hall showing the Dombeya sculpture (Burg Lodge Burg 1956)



Figure 573 A close up of the Elza Dombeya sculpture releasing the dove towards the new addition (Author 2013)



Figure 574 Elza Dombeya's sculpture leading the eye towards the new addition (Johnson 2013)

C. Cinematic architectural choreography

C.1. Light and shadows

In a variety of our projects the sun was exploited to reveal narratives and to enhance the notion of movement in and around buildings. Constantly moving shadows and patterns ensure different experiences for users at different times of the day and during the seasons. The shadows of the panels at the Javett: UP make the bridge space come alive in the late-afternoon sun (Figure 580). The AHMP coat of arms is revealed when the afternoon sun causes it to cast a shadow so that the white metal frame can be differentiated from the white wall (Figure 578-579).

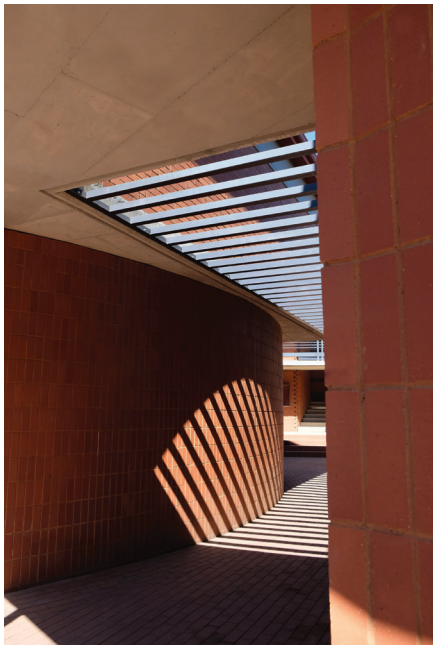


Figure 575 Shadows at the AHS Arts Campus (Author 2018)

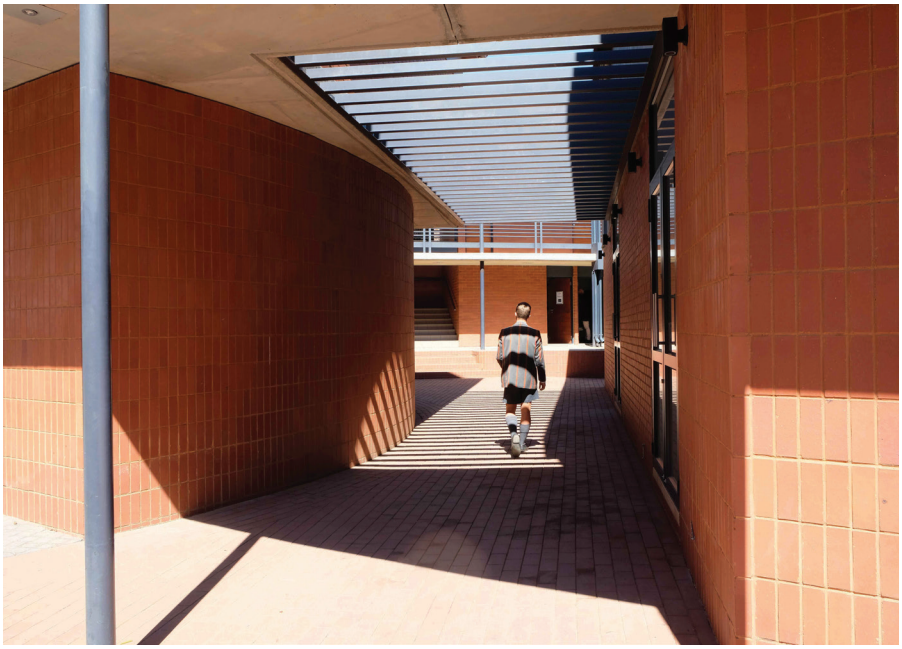


Figure 576 Temporal shadows at the AHS Arts Campus (Author 2018)



Figure 577 Cinematic shadows (Unknown 2017)



Figure 578 The AHMP emblem is hardly visible against the white wall (Unknown 2013)



Figure 579 The AHMP emblem becomes visible when the late afternoon sun casts a shadow on the wall (Author 2013)

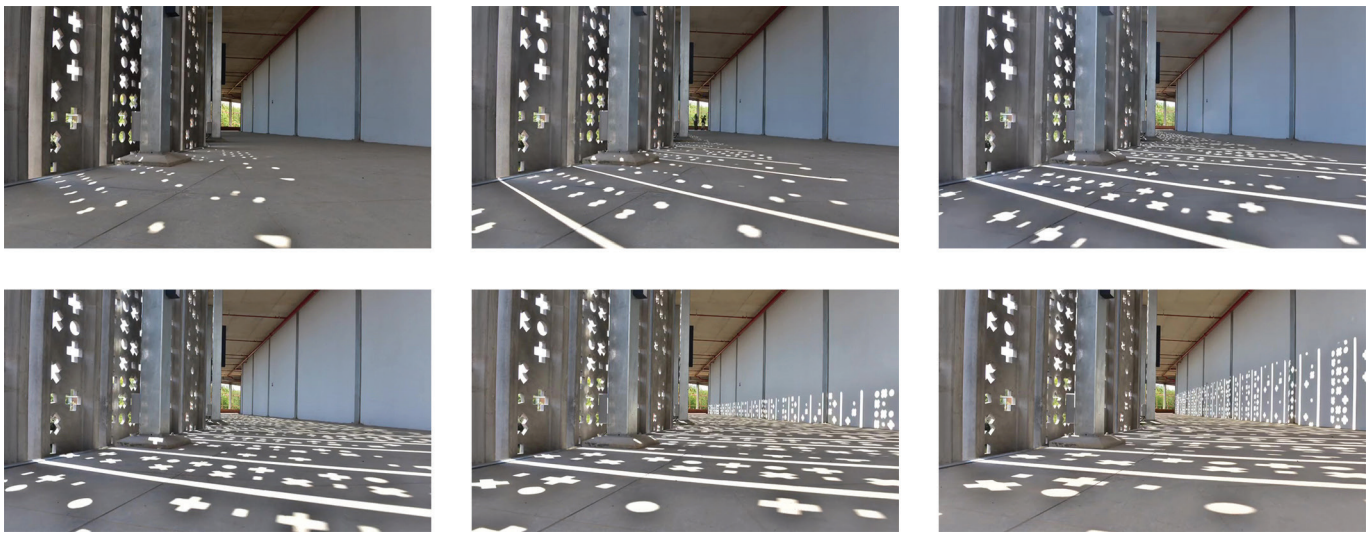


Figure 580 Time-lapse of the changing shadows on the Javett: UP bridge (Pretorius 2019)

In some instances, artificial light is also employed to enhance the cinematic experience of the architecture, specifically through the use of repetition: on the Nellmapius Bridge the repetition of angled lights makes one aware of vehicular movement (Figure 582); at the Diamond Hill Toll Plaza the tilted light girders create an awareness of moving through an element in space (Figure 581).



Figure 581 The Diamond Hill Toll Plaza at night (Cronje 2015)



Figure 582 Artificial lighting of the Nellmapius Bridge (Botha 2012)



Figure 583 The Javett: UP bridge lit up artificially from the interior (Unknown n.d.)

C.2. Emulating movement with static elements

Another tactic we use to emulate a cinematic effect is to employ fixed elements in a manner which creates an illusion of movement. Examples include the 'dancing ceiling' of the Rivonia Trial Memory Box BRT station (Figure 584), and the meandering retaining-wall seats used at the AHS Arts Campus and the AHMP Pavilion(Figure 585-587).



Figure 584 View from the interior of the Rivonia Trial Station towards the Old Synagogue (Unknown 2015)



Figure 585 Bird's-eye view of the courtyard at the AHS Arts Campus (Author 2016)



Figure 586 Steps, planters and seating at the AHS Arts Campus (Author 2021)



Figure 587 Pavilion seating at the AHMP sports complex (Author 2020)

C.3. Amplifying transitional spaces

The transition from one space to another is like one film scene flowing into the other. By amplifying the experience of the threshold, this transition is emphasised. At the Javett: UP the movement from light to darkness emphasises the sacredness of the Mapungubwe interior. At the AHMP hall, moving from the relatively dark foyer interior to the light-filled landing focuses the attention on the representation of the donor. Spaces of transition are used as narrative devices.



Figure 588 Transitional spaces at the AHS Arts Campus (Author 2021)



Figure 589 Gallery spaces at the Javett: UP (Human 2019)

C.4. The establishing shot or hero image

In cinema, the establishing shot sets the scene. As architecture becomes more visually orientated and the 'image' becomes more and more important, the single shot or image that captures the intent and the spirit of the building is an important consideration right from the outset. It is also an important marketing tool.



Figure 590 The AHMP sports complex was built on an existing tennis court (Jonsson 2013)



Figure 591 The AHMP guardhouse as an object building (Author 2020)



Figure 592 The Mapungubwe structure as focal point (Pretorius 2019)



Figure 593 The Javett: UP: approach from the main campus (Southwood 2019)



Figure 594 Kee Enterprises, the previous offices of MAAA (Author 2008)

C.5. Linking spaces and views

The cinematic narrative is enhanced by creating glimpses of spaces (both interior and exterior) to come. By hinting at subsequent spatial experiences, movement is encouraged and a temporal aspect is added to the dweller's experience of place.

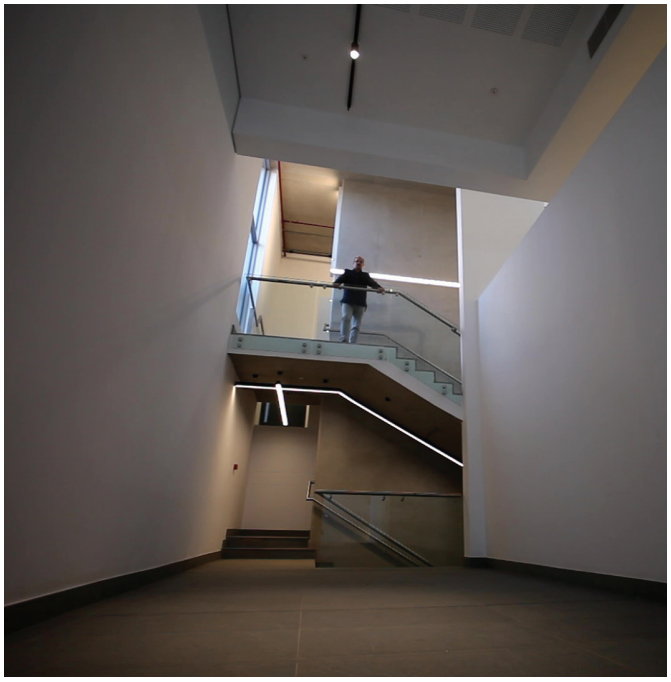


Figure 595 Linked spaces at the Javett: UP (Human 2019)

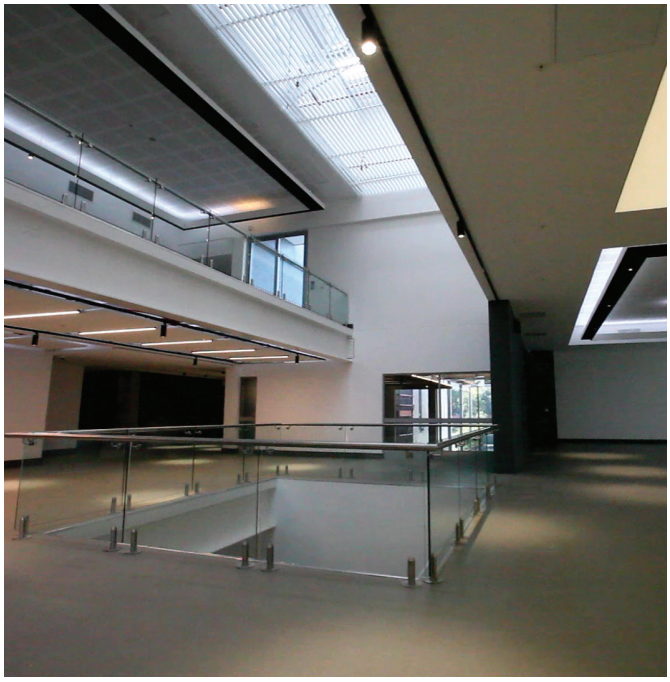


Figure 596 Linked gallery spaces at the Javett: UP (Human 2019)

D. Themes and motifs as proof of how our understanding of the gifts of E-D has developed

The recurring themes discussed above indicate how E-D methods and the gifts associated with its divergencies – sculpture, curation and cinematic architectural choreography – have become part of MAAA's design sensibilities. Tracing a specific theme throughout various projects over the years illustrates how the practice has learnt from experience, and developed or further explored the potential of each of the divergencies as it relates to architectural design. This section contains a discussion of how E-D methods create novelty by improving on and learning from the divergencies, rather than starting from zero on each new project.

8.2.3. Design methods and tactics learnt from the divergencies

In addition to the motifs and design themes deduced from the three divergencies, which can be seen in and experienced throughout the oeuvre, these divergencies have also assisted me in developing tactics and methods which are not always directly evident from the completed, built works. This section will briefly summarise these tactics and methods – which assist in the design and construction process – as examples of novel approaches open to the E-D mindset.

A. Sculptural design methods and site tactics

Sculpture taught me to think with my hands. Making allows one to explore and discover possibilities in a way that is not always possible through cognitive means. This working method forces me to start, rather than to dwell on concepts and procrastinate. This explorative approach often stands in direct contrast with the disciplined space planning a project usually requires. Again, a dualism exists between the two conceptual methods used early in the design process: thinking with the hands is the yin, while the cognitive approach is the yang. Both are necessary; both can be adapted. The important thing is to start in order to have something to work with, i.e. a catalyst for creative engagement.

Sculpting teaches one that nothing is permanent. Clay can be formed, remoulded and formed again. One should not be precious about architectural models. These are working tools and should be ripped apart in order to test new ideas. The process of exploring in three dimensions results in many model iterations. Not being precious allows one to be critical and open to adapting a more appropriate solution. I always tell the office that, the more gold is refined, the better its quality. A model is a tool for design, not an object for presentation.

In architecture, critique is an important aspect of conceptual development. We crit internally in the office, but also invite people from outside – such as sculptors – to crit our concepts and designs in order to learn from them. They contribute to our cross-disciplinary approach. We refer to our own in-house crit sessions as the 'peanut gallery'. I learnt this notion of critiquing work for the betterment of the project in my sculpture classes with Sybrand Wiechers. Actively seeking divergent opinions is a critical aspect of E-D practice.

Adhocism, a theory I discovered while working on this thesis, entails an approach that I have unknowingly applied for many years. This 'Boer maak 'n plan' attitude was fuelled by my sculptural work with ad hoc materials and my childhood make-do play with whatever was available. The Indian concept is *jugaad*: work with what you have, innovate and experiment, have a Plan B, and be prepared to modify your work in order to sidestep constraints. Innovation is made possible through a constant search for a cheaper, more doable construction method, with the materials at hand, and that will give form to the intended narrative. Adhocism is only possible if one is prepared to get one's hands dirty and to fail repeatedly in the search for the best possible solution at the time. I believe that nobody will ever know what creative work should have looked like; thus, it doesn't matter if the details change. Being open to constantly searching for alternatives is an intrinsic part of E-D practice.

Hands-on involvement in construction helps you to gain knowledge and builds your confidence as a designer. If you understand your medium, you can push the boundaries. Being involved on site affords you the opportunity to test alternatives and to allow tradesmen to assist in looking for solutions.

In the same line of thinking, it is equally important to sell your vision to those actually executing the work. We have built models of buildings and shown them only to the construction team. This helps them to visualise what your purpose is, and assists immensely in giving them purpose. By understanding your vision, they can also assist you in finding better solutions that contribute to the overall narrative.

With clients and end users the approach is often the opposite. I prefer to paint a mental picture of what we want to achieve, rather than show them a final model or render. We prime them for something extraordinary, rather than giving them the details. This works especially well with committees, as each person paints their own mental picture and it is thus easier to get their buy-in.

B. Curation as an inspiration for E-D methods

Certain principles come to the fore when discussing curation as a design method in architecture, namely the use of focal points, and achieving a balance between familiarity and difference. Curation taught me that it is important to establish focal points at the outset. When all elements are equally important, none gain significance.

Secondly, a balance needs to be struck between elements which are similar (familiarity) and elements that differ (these add intrigue). Composing a facade with multiple elements is much the same as curating a salon-style exhibition. A sense of randomness needs to be achieved. Although the final result may seem like happenstance, it is in fact often achieved through multiple iterations and intuitive insights. My experience in curating several shows for artists and sculptors gave me the confidence to translate this method to facades and architectural design.

Facades can also be curated to accommodate artworks, such as a cut-out in the Kee Enterprises facade which frames a sculpture by Angus Taylor. Voids or blanks in facades are intentional tools which create a backdrop for work by artists.

As much as curation requires careful planning, it is often also an ad hoc process which takes place on site at scale 1:1. It entails the ability to discern where something is missing, or to identify an opportunity to strengthen a narrative and implement it there and then. Oftentimes curation cannot be pinned down; it is an intuitive process which amounts to what looks good and what does not.

C. Cinematic design methods and tactics

MAAA's use of concept models highlights the overlap between the sculptural and cinematic divergencies. Where iterations of models are used to investigate form from a sculptural perspective, these same models are used and visualised in context to understand the cinematic experience that can be created. I have taken numerous models to site, held them in position and filmed them with a cellphone camera in order to try out angles and views. In the studio, investigative videos are also made to test sequence, route and narrative by filming in-between spaces at eye level. Using the phone upside down within a model allows one to capture a more realistic eye-level view and sequential experience.



Figure 597 Concept maquette for the Javett: UP, illustrating the bridge as termination point of Tukkie Lane (Author 2013)

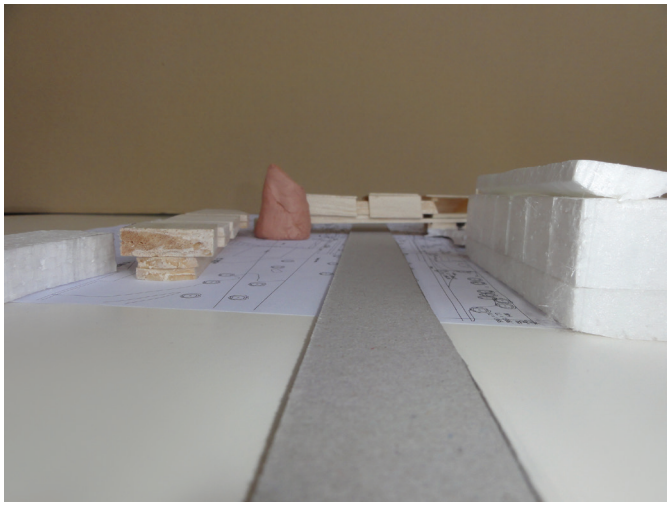


Figure 598 Visualising the cinematic approach of the user (MAAA 2013)

In order to understand the experiential route through an imagined space, the building needs to become a 'real space' in your head. You need to dream the possibilities in terms of framing, pause moments, panning, focal points, miradors, enclosure, etc, in order to choreograph these possibilities as a complex embodied experience. I once heard someone at a design conference referring to people who are able to visualise places as 'been there' people: they have been there in their minds and have visualised the story board.

In order to use architecture to enhance the user's experience, one needs to be cognisant of the possibilities offered by and meanings of various architectural elements (i.e. propositional density). For example, a curved wall gathers space inside, but deflects it outside. Similarly, a wall at an angle or a slit window at the end of a passage can direct one's view towards a focal point. On the other hand, thresholds introduce the next architectural moment or experience. Understanding these elements for their cinematic richness and designing them as a sequence can greatly contribute to the embodied experience of the end user and their understanding of the building's narrative.

8.2.4. Characteristics of explorative divergence

Having identified the influences that the divergencies exert on the methods and tactics of MAAA and the motifs present in our oeuvre, the next section will clarify and summarise general characteristics of E-D as applicable to the practice. These characteristics clarify my definition of E-D as a method of architectural praxis and, I believe, could be beneficial to other practitioners regardless of their own personal divergencies.

A. E-D is open-ended

At the core of E-D lies an open-ended approach that welcomes any solution or train of thought. E-D remains receptive to any opportunity, even if the opportunity presents itself closer to the end of a project. Design does not stop just because a concept has been signed off. In principle, the studio should establish a preference for open-ended methods that encourages exploration.

B. E-D welcomes contamination

Edward de Bono said, "There is always merit in fostering unusual combinations of skills" (De Bono 2007:110). Curiosity is key. Being curious is the starting point for developing varied interests and skills that form the backbone of E-D practice. In our case, it led to ventures in publishing, export, interior retail, corporate branding and Cool Capital. E-D is fluid and receptive to multidisciplinary and cross-disciplinary influences and approaches.

C. E-D is concerned with narrative

A crucial part of the conceptual phase of a project is the search for a narrative that can give meaning to the architectural space. To discover the narratives of place, we use any tool that peripheral vision allows, including digging up stories in archives. Archives and site histories often present historical site narratives that can be employed in contemporary designs. The need to convey a strong narrative is often a catalyst to go the extra mile, especially when our concern for a project is high. The art critic, philosopher and journalist Johan Myburg summed it up as "*argitektuur wat wees aangrypend maak*", loosely translated as "architecture that makes being thrilling " (Myburg, 2019b).

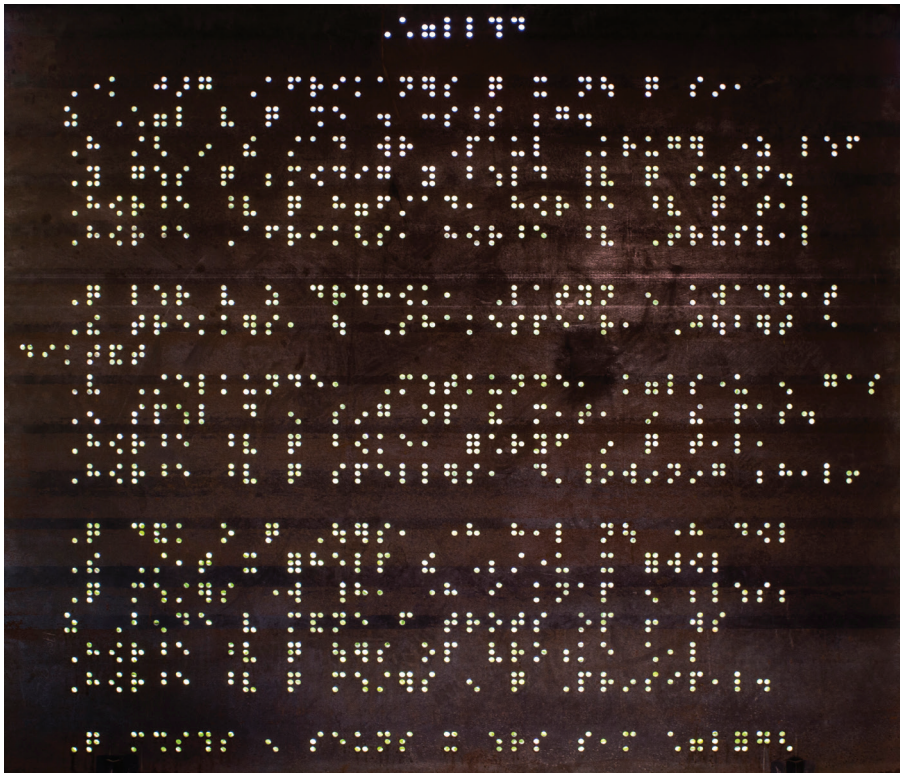


Figure 599 The braille screen at the AHS Arts Campus (Author 2017)



Figure 600 The bridge panels represent the shared heritage of South African cultures (Kruger J. 2019)

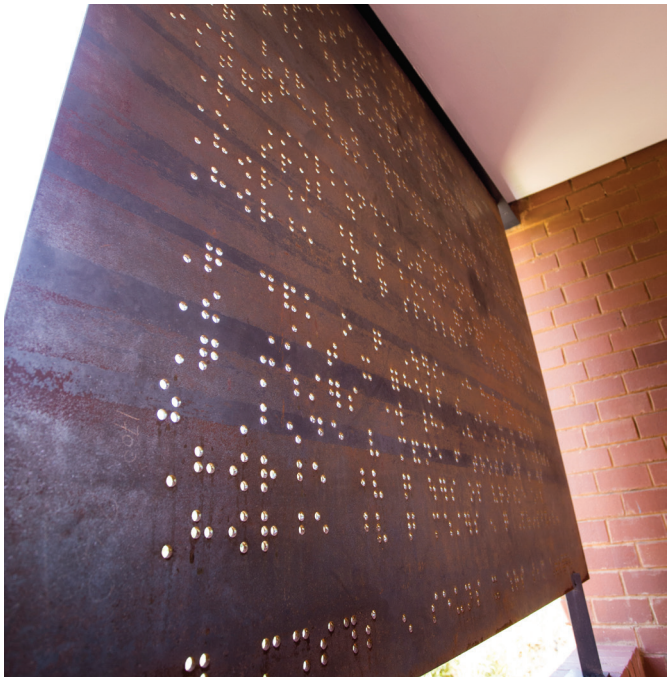


Figure 601 The braille screen at the AHS Arts Campus (Author 2017)

D. E-D has a poker face

To advance the narrative, for the benefit of the project and the end user, we hold our cards to the chest. Too many cooks spoil the broth, especially when the other cooks are a large committee. In these instances, it is good practice to insist on a small representative group rather than the full committee.

During the design phase, it is important to guide user participation in a clever, tactical way that will benefit the development of the project and the final building. According to Dushke (2012:94), Mies van der Rohe's outlook was: "Never talk to a client about architecture. Talk to him about his children. That is simply good politics. He will not understand what you have to say about architecture most of the time." Although I do not follow Mies's advice to the letter, there is truth in limiting client input in order to advance and explore a project. We give enough to entice and excite a client while leaving something for the mind to complete. This not only gives us the freedom to refine a design and elicit faster decision making, but also allows the client to state their wishes and requirements more freely. Freehand concept sketches allow us to communicate ideas effectively and get qualitative feedback at an early stage of the process. Many firms present pretty renders, but I believe in these hand-drawn sketches. Technology is oftentimes too 'honest'.

Poker faces are maintained throughout the construction and procurement process. In some instances we 'hide' funds in the bill of quantities to ensure that an amount is available for art installations. Countless designs have been reduced to the bare minimum in order to achieve 'savings', resulting in buildings being poor in experiential opportunities. Guerrilla tactics are often required to advance our concerns and achieve the required end result. We are selective about the concerns and intentions we reveal to the client. The majority of our award-winning buildings were made possible by us maintaining our poker faces.

E. E-D is receptive to opportunity

The E-D practitioner is attuned to opportunities and coincidences and makes the most of them. In the thesis, this is referred to as working in an ad hoc manner, recognizing opportunities and thinking on one's feet in order to seize the ones that present themselves. The process can also be equated with risk taking. Seizing an opportunity often means that one has to take a risk, because if one follows the bureaucratic path to the letter, the opportunity may be lost.

F. E-D does not strive for perfection

E-D praxis does not strive for perfection. Perfection is the result of doing the same thing over and over again. E-D praxis achieves the opposite: it is always experimenting, borrowing, innovating and diverging. For that reason, the outcomes of E-D practice will never be perfect. Mishaps will always be part of the process, but even these may present new opportunities that those with an open-ended stance will recognize. This approach is well-suited to working in the Third World. One needs to allow and design for tolerance. We embrace the texture and soul that comes with the imperfect finish. In the instance that a perfect finish is required, we partner with some of the best contractors (perfectionists at heart) who contribute to an award-winning portfolio.

G. E-D encourages intuitive making

The acceptance of the imperfect in E-D praxis encourages a culture of intuitive making and the exploration of various avenues. This mindset allows end products to evolve from the process, rather than the process being determined by a set end product.

H. E-D is dualistic and thrives on ambiguity

The nature of our E-D approach is dualistic, paradoxical and ambiguous. It relies on a symbiosis of opposites. I believe that it has its origin in my dualist upbringing which offered me two very different perspectives on life and problem solving.

The first paradox of E-D is the strict inlet filters that have to be in place. Having an E-D practice does not mean that any wild or 'risk' project should be taken on; rather, strict gatekeeping is necessary in order to allow E-D to flourish within a select few projects.

Another paradox of E-D is the balance that needs to be struck between function and free design. The function of a design must first be solved, and only then can opportunities and loopholes be detected where design interventions can make a difference.

The chapter on the public reading of architecture (Chapter 6) demonstrated that buildings are interpreted in different ways by different users. Ambiguous readings and post-rationalisations by the public adds to the understanding of underlying narratives. Rather than disregarding these readings, E-D celebrates them as deepening the narratives.

I. E-D is playful and spontaneous in its experimentation

Professor Theresa Hardman, the last critic in my PhD exit symposium, shared an observation that E-D is playful and spontaneous in its experimentation. These characteristics are so obvious that they had been overlooked. When one enjoys an activity and immerses oneself in it, unexpected solutions come to the fore (Symposium, April 2022). Hunt confirms play and spontaneous experimentation as valid for our E-D praxis by stating, "Often the seed of an idea sounds silly, but that's where the originality lies. It just needs time and discussion for it to evolve" (Hunt 2009 :33). This playfulness and spontaneity is a prominent feature in many of our projects, most specifically the brick workshop for the examination exhibition (detailed in Chapter 8) and the Braak Pavilion (Chapter 7).

8.2.5. E-D is an appropriate means to achieve my 'why'

From the start of my practice to my postgraduate studies in 2017, a main theme which came to the fore was a concern for the impact that buildings would have on the urban fabric and the experience they would offer their users. Architecture had to be relatable for the general public. I had a keen awareness of multiple conceptual readings of architecture and became obsessed with making architecture accessible.

I have found E-D to be a valid method which assists in achieving this goal. As a praxis method, E-D is capable of mediating or toggling between the concerns of a project (the narrative to be told) and the multiple constraints applicable to each project. Examining the exegesis of my praxis and final built outcomes for this study, I discovered that it is not a case of constant oscillation between concerns and constraints as I had initially thought; rather, the constraints tend to manifest quite clearly on and practically at the start of a project. At this stage the concerns are wispy and the constraints may seem overwhelming. As a project nears completion and the building takes form, the initial constraints tend to be forgotten and the concerns which have been addressed and highlighted are celebrated. As the press celebrates the narratives or outcomes and end-user feedback is revealed in the form of public reading and engagement, concerns become tangible – almost obvious – and tacit in the experience of the building. The narrative trumps the original constraints, albeit not always in the manner which we may have intended.

E-D is an appropriate method for revealing both concerns and constraints, as it encourages open-endedness and can deal with constantly fluctuating information and conditions. Constraints have the potential to act as catalysts to put E-D methods in motion, especially when alternatives have to be sought in challenging circumstances. E-D also allows the concerns to crystallise over time, rather than depending on fixed narratives. New discoveries can easily be incorporated into existing narratives through E-D practices. As such, E-D offers an alternative to the overspecialisation rampant in the construction industry.

8.3. The validity of the autoethnographic study method

I have found the autoethnographic method very accommodating and valuable in this study. It has helped me to take my own design sensibility (and its origins) seriously while remaining accessible to others. This is aligned with Foley's assertion, as cited by Méndez-Lópes (2013), that this method leads to a more engaging and relatable genre, which could aid in closing the gap between researchers and the general public. However, it is important to note that the use of autoethnography and narratives of self have been met with criticism and that the status of this method of research remains a point of contention. "The most recurrent criticism of autoethnographic research is the strong emphasis on self" (Méndez-Lópes, 2013:283).

Despite this criticism, I believe that this method is the most appropriate for my practice-based study, as my aim is to educate, inform, and allow other practitioners to learn from my experience. It also mirrors my intent to popularise what I see as good architecture among members of the public. Méndez-Lópes (2013:282) further supports this notion by stating that "writing accounts of research should always have the goal of informing and educating others, which is an objective that autoethnographies might accomplish through making connections with personal experiences of readers."

The aim with this study was to uncover the underlying methods which have produced our oeuvre. The autoethnographic method was appropriate to this end, as it allowed me to analyse our work from the perspective of my personal interests (divergencies), and also to understand the impact that my perspective (world view) had and still has on the manner in which I practise. By recounting stories, the similarities and recurring themes in the practice and my designs came to the fore.

Through the lens of E-D I gained new insight into my work and it made us, as a practice, more aware of the possibilities ensconced in the way we approach projects. It should be noted that our definition of E-D is specific to our practice, and that other practices may find that their own definition 'diverges' slightly.

8.4. The way forward: the influence of the study

8.4.1. How has this study influenced your practice?

On a theoretical level, the lexicon and concepts of propositional density and narrative depth has entered our office. It is now frequently used in our design method to question and improve the standard of new designs by simply asking, "How can one increase the narrative depth and propositional density of the seen and unseen, while including the deep propositions of a project?"

Apart from discovering and articulating recurring themes and design sensibilities used intuitively through the years, these are now laid bare and everyone is encouraged to design more effectively. The practice has taken cognisance of the fruits of E-D and other divergencies to enhance future projects.

Examples can be found in several of the projects that were being built and designed towards the end of this study. We have been able to identify more opportunities for E-D, such as including a narrative in the brickwork at the New Administration Building for the North-West University Vaal Triangle Campus. Here we used the entrance wall for an opportunity to tell a site-specific story. The seemingly random brickwork, in effect, represents a pixelated map pointing to the location of the building next to the Vaal River. The client was not aware that we were playing poker and we only revealed the meaning of the random brick artwork after construction. It became the new conversation starter and selling point. At the opening and unveiling of the building I showed my hand.

After persuading the Delegation of Flanders to construct a new jewel-like guard house (that was not part of the initial brief) for their headquarters in Pretoria, we used Flemish bond as reference to our own heritage but specified black brick – black being one of their national colours – to refer to the morphology of the simple Flemish barn as inspiration. The entire guard house acts as a landmark with a lightbox facing the street, and serves as wayfinding device complete with signage. The inside of the guard house was painted yellow, one of the three colours on the flag representing their national identity, to represent the prominent African sun, further enhancing the narrative depth of the project.

After my PhD exit seminar I was requested to explain our design philosophy at the inauguration of the Embassy of Belgium Delegation of Flanders in Southern Africa by the Minister President of Flanders, His Excellency Jan Jambon. In true E-D fashion, I seized the opportunity to introduce all the guests, local and international, to the concepts of narrative depth and propositional density.

We are currently designing a highly technical building to house extremely sophisticated and sensitive machinery. We had the machinery printed to scale in 3D and, combined with modular Lego, used the collective brain to learn about and understand the process the building would facilitate, while keeping in mind the sculptural potential of services learned from the Centre Pompidou (Chapter 3).

The study also introduced us to a new, practical, effective and ubiquitous design tool which we will now use more frequently to assist in quickly investigating design decisions – the humble brick (Chapter 8).

These three recent projects indicate how this study directed us towards an architecture of explorative divergence.

8.4.2. Personal reflection

During the course of this study, many paths were explored. Occasionally I found myself on interesting side paths like my family history which, although interesting on a personal level, were not as relevant in terms of the study.

The question "Don't all architects do that?" was raised several times during various symposiums. This study however proved that a culture of E-D needs to be established in the studio by the principal or lead architect. The role of the principal in the E-D practice is slightly different from what it would be in other practices. He assumes the role of film director or dance choreographer. I believe that an E-D practice cannot function under a micromanager who wants to control every aspect of the practice and its designs. The insights obtained through the study reinforced the validity of this practice method and encouraged me to consider even more ways to manage Mathews and Associates Architects as an E-D practice.

As mentioned above, the thesis broadened the design vocabulary of the studio and made us even more receptive to E-D methods.

On an individual level, I had always thought that sculpture was my strongest affinity, but I have realised through the study that the strongest divergency, which ultimately brings all the others together harmoniously, is curation.

An unintentional and perhaps irrelevant discovery was the strong influence of Jewish individuals on my career and thinking – from our Jewish family friends in Lichtenburg, my family of thinkers (William Kentridge, Elizabeth Diller and Lewis Levin) and my moment of insight at Eisenman's Memorial to the Jews, to the Rivonia Trial Station opposite Pretoria's Old Synagogue and Michael Javett who gave us the chance of a lifetime. It is a fine golden thread of influence running through my life which became clear in this study – a discovery that was unanticipated.

The autoethnographic study also gave me a renewed interest in and appreciation for my dual upbringing and Afrikaans heritage specifically.

8.4.3. Contribution to the discipline of architecture

I would like to believe that most architects have in common an intention to leave something of value behind (something which 'relates' to others) and to create meaningful places. In this thesis, I have advocated E-D as a means to assist designers in finding more evocative solutions to the set of constraints they may be faced with. Each architect has skills and interests beyond architecture, and by articulating and exploiting these their architecture will benefit.

The COVID-19 pandemic, and the economic hardships that have followed, have forced us all to look beyond architecture. As a practice method, E-D encourages architects to explore further than their profession in order to allow it to grow and flourish. It is a clarion call against narrow-mindedness and, ultimately, against the assertion and imposition of specialisation in architecture. As such, E-D is a valid future method for design and practice.

I believe that explorative divergence, as a means towards creating propositional density and narrative depth in works of architecture, offers a significant alternative approach to the practice of architecture. I believe that both narrative depth and propositional density within our E-D offers practitioners a tool to enrich their designs. It would be intriguing to reflect on the contribution that this kind of mindset could make to architectural education and practice.

8.5. Conclusion

Explorative divergence offers an open-ended, interdisciplinary form of practice, enabling architects to resist the urge towards over-specialisation. It supports the aim to create architecture which is rich in narrative connotations and dense in experimental content. As such, it offers a compelling route towards creating works of architecture with which members of the public may form rich and varied relationships, and thus towards an architecture of explorative divergence.

APPENDIX :
AN OVERVIEW OF PUBLIC ENGAGEMENT

1. Introduction

"Architecture was more a matter of relationships"
– Taute cited in Kengo Kuma (2013).

In the opening pages of this study, I stated that the driving force behind the architecture of MAAA is the wish to make architecture to which people can relate. This chapter serves to demonstrate the relationships that can be formed through an overview of artworks inspired by, photography of, articles and comments on, and nicknames given to our work by members of the public. How members of the public view architecture reveal their experiences and interpretations of our work, and are proof of the relationships they have formed with places and spaces in our oeuvre.



Figure 602 A visitor to the Javett: UP photographs the screens through the window, alongside the exhibition of Willem Boshoff's work. Rather than the museum being merely a vessel for artworks, the building itself is something to be experienced by visitors. This photo depicts that engagement (Author 2021)

This chapter contains illustrations of how the E-D mindset, and the way it has been expressed through specific divergent competencies, has assisted in creating memorable encounters for users and the public. An explanation is given on how the narratives expressed by the architecture are understood by the public. In order to measure the narrative depth experienced by the public, it has been decided that the content of this chapter will be left entirely to other voices. As such, the chapter is a focused recounting of stories picked up from end users, comments in the media, interpretations by photographers, and social-media posts, amongst others. In numerous cases people interpreted buildings in a different way from what we may have intended. I see this as positive. It adds to the narrative depth of a place. If people are able to form relationships with our architecture, in whichever way, our goal has been achieved.

The style of this chapter will differ from that of other chapters in that its presentation is serendipitous; we had limited or no control over the feedback of end users, journalists and the public in general. The structure will be loosely interpretative in order to capture the multivalent readings of our oeuvre. Sources and narratives will be ordered to reflect how the outcomes of the divergencies are understood by the public.

In this chapter I will consider sources such as (1) stories that show associations of form; (2) artists' interpretations of buildings; (3) social-media posts about buildings in the oeuvre; and (4) articles by journalists and critics that reveal or explain the narratives behind buildings.

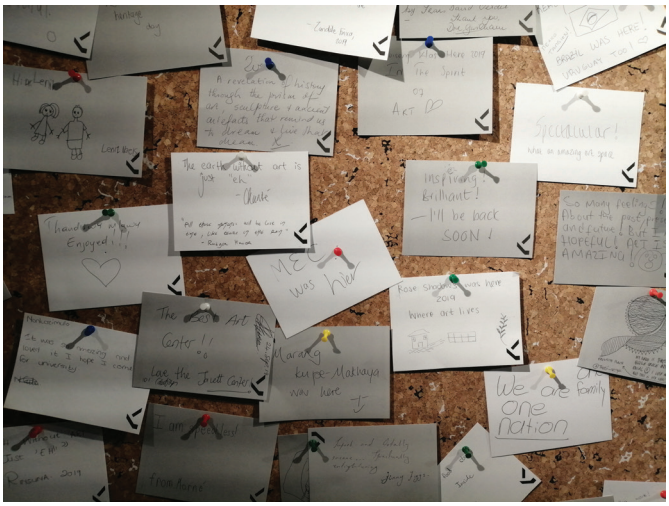
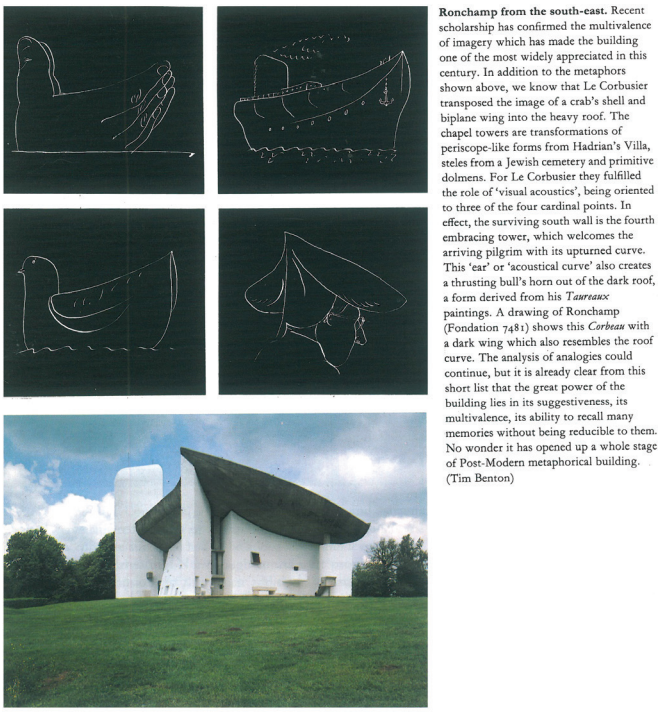


Figure 603 Visitors' comments on the Javett: UP pinboard (Booyens 2019)

2. Associations of form / In(form)al associations

Humans are quick to assign figurative qualities to inanimate objects in the process of making them more relatable. The extract from Charles Jencks' *Le Corbusier and the tragic view of architecture*, below (Jencks 1987: between 156 and 157) provides a good example of how form may be interpreted. The image shows which forms have typically been associated with Le Corbusier's Ronchamp chapel (Notre Dame du Haut) in France:

Nicknames are often the result of the personification of architecture by the public. The architecture and design critic Alexandra Lange (2012:75) states that: "[Frank] Gehry sometimes put[s] labels on buildings, but usually these are like jokes or pet names." Giving names to buildings, I believe, is a way of making places more relatable and allows narratives to stick. At MAAA we give names to our buildings in some cases, especially as an E-D tactic when presenting a scheme to a client committee, such as for the Rivonia Trial Station typology which we dubbed the 'M emory Box'. Other names we have given include the 'Baobab' tollgate and the 'Mapungubwe' and 'Pointy Roof' at the Javett: UP. Other buildings have been given nicknames by members of the public.



Ronchamp from the south-east. Recent scholarship has confirmed the multivalence of imagery which has made the building one of the most widely appreciated in this century. In addition to the metaphors shown above, we know that Le Corbusier transposed the image of a crab's shell and biplane wing into the heavy roof. The chapel towers are transformations of periscope-like forms from Hadrian's Villa, steles from a Jewish cemetery and primitive dolmens. For Le Corbusier they fulfilled the role of 'visual acoustics', being oriented to three of the four cardinal points. In effect, the surviving south wall is the fourth embracing tower, which welcomes the arriving pilgrim with its upturned curve. This 'ear' or 'acoustical curve' also creates a thrusting bull's horn out of the dark roof, a form derived from his *Taureaux* paintings. A drawing of Ronchamp (Fondation 7481) shows this *Corbeau* with a dark wing which also resembles the roof curve. The analysis of analogies could continue, but it is already clear from this short list that the great power of the building lies in its suggestiveness, its multivalence, its ability to recall many memories without being reducible to them. No wonder it has opened up a whole stage of Post-Modern metaphorical building. (Tim Benton)

Figure 604 An illustration of multivalent readings in *Le Corbusier and the Tragic View of Architecture* by Charles Jencks (1973:158)

2.1. The AHMP School Hall = Die Karavaan

The school girls call the white hall 'Die Karavaan' [the caravan] and the surrounding temporary classrooms 'Die Karavaanpark' [the caravan park]. In my speech at the opening of the hall I dwelt on this idea, stating that a caravan is a temporary home and as such it was a metaphor for the learners as a special temporary home in their lifetimes.



Figure 605 A typical caravan park in South Africa (Roux 2006)



Figure 606 A typical caravan (Unknown n.d.)

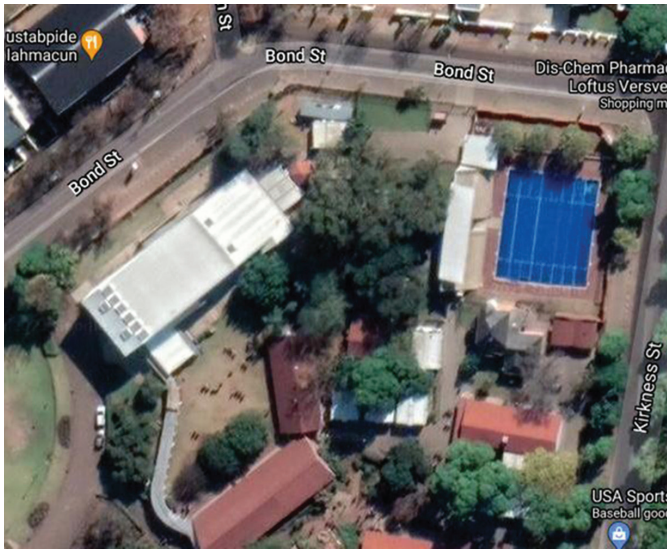


Figure 607 An aerial view of the AHMP campus illustrates how it resembles a typical caravan park (Google Maps 2022)



Figure 608 The AHMP school hall with the additions, viewed from the south (Johnson 2013)

The recognizable form of the AHMP hall was reinforced when an ex-Affies learner visited our offices. She remarked that she knew immediately she was at the right place when she saw the white box that looks just like the Caravan. This proves that associations with one building are often transferred to others.



Figure 609 Detail of the AHMP school hall (Jonsson 2013)



Figure 610 MAAA's Oaktree Studio (Dook 2017)

2.2. The Mudernist House = Die Pienk Olifant

"*Jirre, maar dis mooi! Dit lyk nes 'n pienk olifant*" [Crikey, it is beautiful! It looks just like a pink elephant!], the plasterer remarked while I was staring at my house as it was nearing completion. After six working cardboard models and hundreds of vignettes and free-hand sketches, to my astonishment I also saw a pink elephant. The plasterer's association will be forever in my mind.



Figure 611 The 'Mud'ernist house (Unknown n.d.)

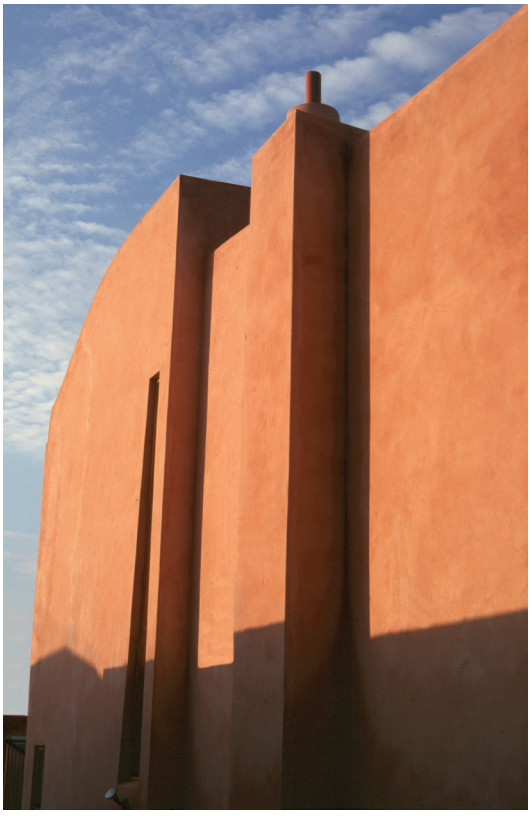


Figure 612 The Mudernist house was dubbed a 'pink elephant' (Author n.d.)

2.3. The AHMP Sports Complex = Die Jack Parow

The school girls named the AHMP sports complex after the South African rapper Jack Parow, known for his famous peaked cap with its outsized protruding visor. The reading of the traditional bonnet as headgear has been interpreted in line with contemporary culture.



Figure 613 An Instagram post of the AHMP sports centre (jukskei_girl 2018)



Figure 614 The AHMP emblem clearly shows the traditional Voortrekker bonnet (AMHP n.d.)



Figure 615 South African performer Jack Parow with his iconic cap (Unknown, n.d.)



Figure 616 The recognizable form of the AHMP sports complex makes it a landmark on the campus (Author 2020)

2.4. The Diamond Hill Toll Plaza

The Diamond Hill Toll Plaza took its cues from the agricultural vernacular of the surroundings. While editing this thesis, my colleague commented: "Oh, I had always thought the light structures were a reference to the diamond mines of Cullinan [the town nearby]." This is proof that the public's association with forms does not necessarily always correspond with the forms that inspired the architect.



Figure 617 The Diamond Hill Toll Plaza (Cronje 2015)



Figure 618 The Cullinan diamond mine in the vicinity of the tollgate (Unknown n.d.)

2.5. The Musina Hand Bridge

Not all associations are equally positive. The string of critical comments following BusinessTech's Facebook article on the Musina Hand Bridge illustrates that connotations that people attach to structures can also be negative. It all, however, adds to the narrative depth of the design.

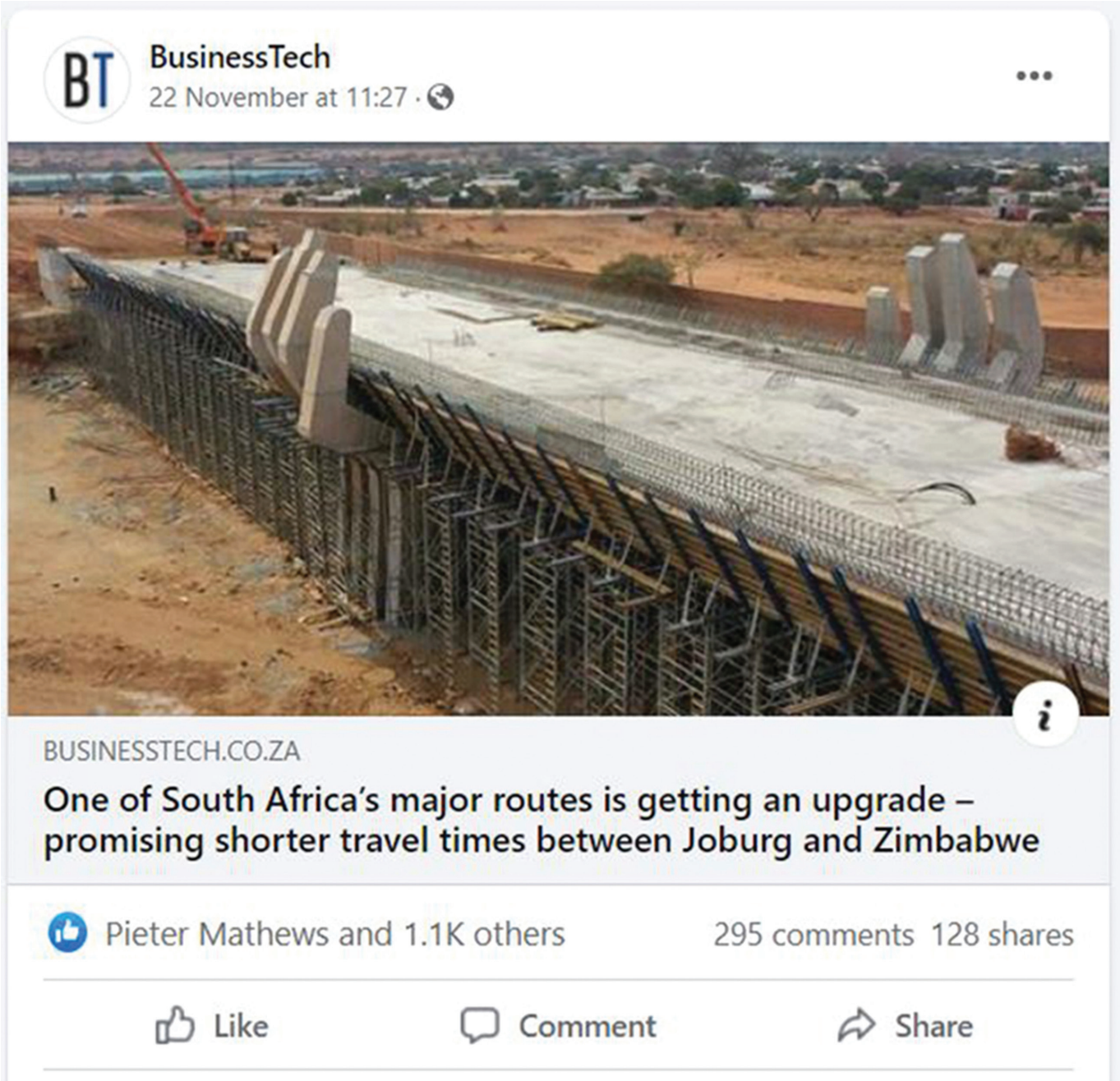


Figure 619 Screenshot of BusinessTech's Facebook post on the Musina Hand Bridge (Facebook.com 2021)

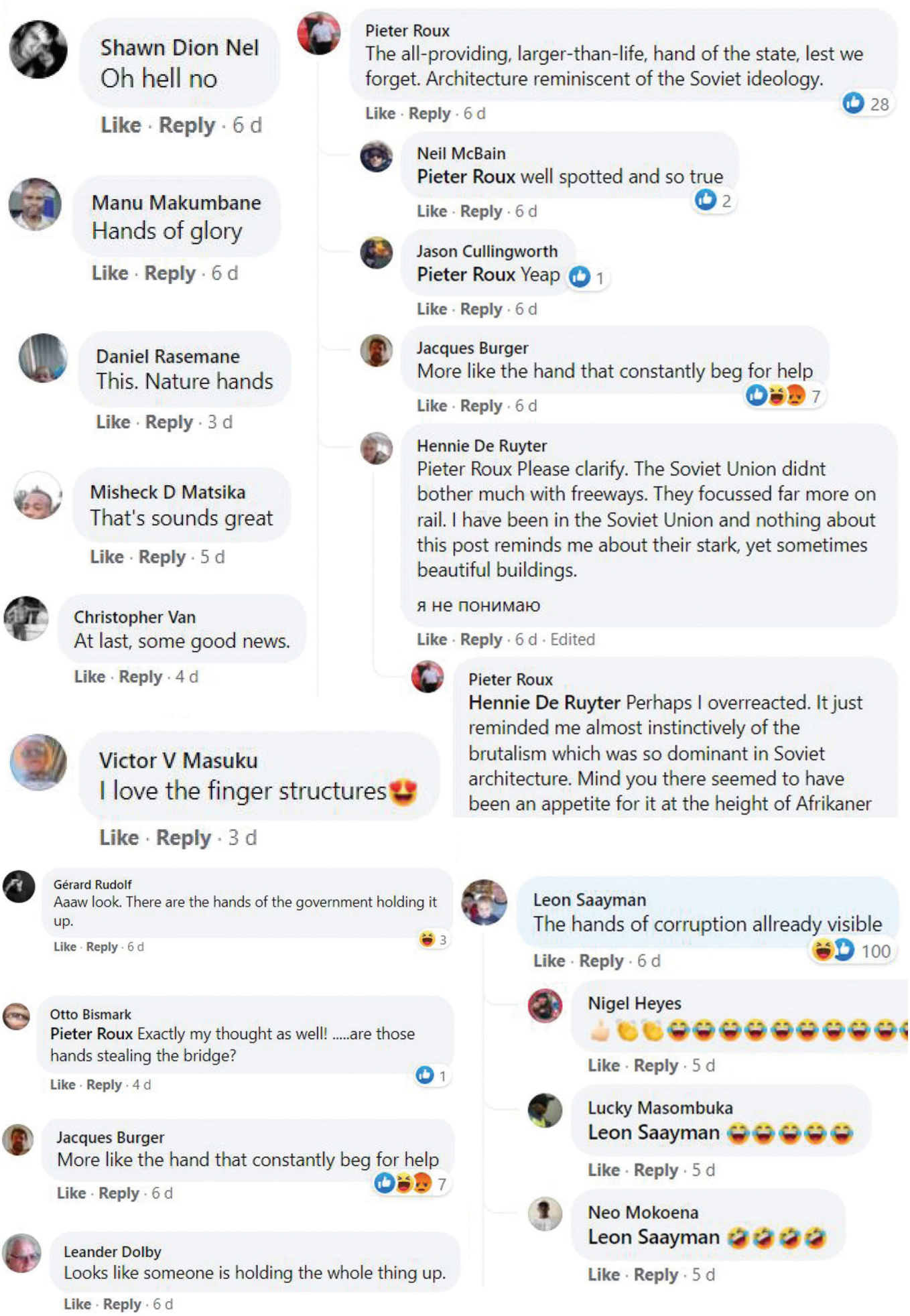


Figure 620 Social-media comments reacting to BusinessTech's Facebook post on the Musina Hand Bridge (Facebook.com 2021)

3. Artists' interpretations of buildings and concepts

The following section focuses on artworks that were inspired by our oeuvre (whether literally or through the exploration of the same themes). The fact that artists were creatively inspired in this way and were able to create new works from that inspiration is proof that a connection had been formed between artist and building.

3.1. The Javett Art Centre at the University of Pretoria

With his small sculpture inspired by the Javett: UP, Francois Visser interpreted the Mapungubwe on a smaller scale, and intentionally drew attention to the pattern made by the shuttering. The donors have commissioned a few editions of this sculpture as corporate gifts.



Figure 621 Individual sculptures by Francois Visser: interpretations of the Mapungubwe structure at the Javett: UP (Visser 2019)



Figure 622 Artistic interpretation of the Mapungubwe mountain by Francois Visser (Visser 2021)



Figure 623 Artistic interpretation of the Mapungubwe mountain by Francois Visser (Visser 2021)

Carla Crafford experiments with pinhole photography in which she places figures and inanimate objects in unexpected relation to each other. In this photo a model of the Mapungubwe mount was inserted in the composition to make it seem as if the architect is sitting on top of the object:



Figure 624 Pinhole photograph of the author with the shape of the Mapungubwe in Carla Crafford's book, Light for art's sake (Crafford 2021:176)



Figure 625 Notebooks by MAP inspired by the Javett: UP bridge panels (Author 2021)

MAP (Modern Art Projects) in Richmond presented images of the Javett: UP to their crafters who created prints of the screen patterns. These have been used as covers for hand-bound notebooks.

Artist and architect Shaun Gaylard from Blank Ink Design included a drawing of the Javett: UP in his series *RSA 365*.

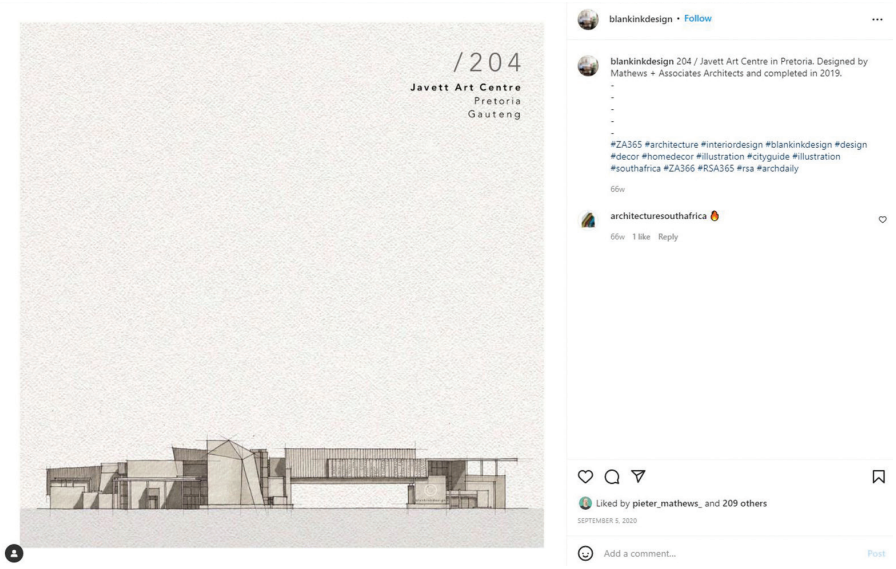


Figure 626 Instagram post on the Javett: UP façade (blankinkdesign 2019)

3.2. AHMP: interpretations of the *kappie*

Artist Rina Stutzer picked up on the theme of the *kappie* which has been used in our work on the AHMP school grounds. She installed her tent-like temporary sculpture *Vasgepende Vlietendheid II* [pinned-down fugacity] on the grounds in front of the school as part of a Cool Capital 2014 installation (Mathews & Taljaard 2015). She also gave a masterclass to the school's art department in which the learners deconstructed the *kappie* in a way similar to how we had done it in the architecture of the hall and sports complex.



Figure 627 A temporary sculpture by Rina Stutzer inspires learners to rethink the 'kappie' (bonnet) on AHMP's coat of arms (Author 2014)



Figure 628 Cool Capital school project: interpretations of the kappie (Cool Capital Catalogue 2015:85)

3.3. The Nellmapius Bridge

On visiting the annual Decorex exhibition, I came across a stall with a painting of the Nellmapius Bridge facade. An artist found the edifice worth painting and a curator saw it fit to exhibit it in this show. I went in, and the stall attendant started to talk about the painting. I quietly listened.

Tshwane University of Technology's Department of Architecture held a fashion show called *Archi-fashion* in which students interpreted local buildings as avant-garde outfits. One group interpreted the Nellmapius Bridge as a cocktail dress:

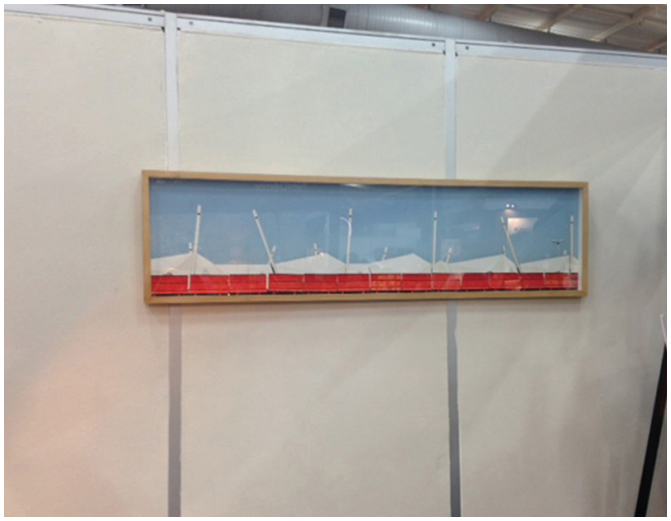


Figure 629 An oil painting of the Nellmapius Bridge (Author 2013)



Figure 630 An interpretation of the Nellmapius Bridge at TUT's Archifashion show (Unknown n.d.)

3.4. The Memory Box BRT station

Architect and artist Trevor Lloyd Evans has painted a series of Pretoria buildings. His watercolour of the Memory Box Rivonia Trial Station and Old Synagogue had been sold when I visited the exhibition at the newly renovated Department of Architecture at the University of Pretoria. I commissioned another one, but instead of creating a similar painting, Evans focused on the reflections on the façade of the station. This watercolour clearly shows all the architectural styles of the surrounding buildings. The station seems to disappear and the mirror-like quality of the glass becomes the focus.



Figure 631 Watercolour of the Rivonia Trial Memory Box Station (Evans 2020)

3.5. The Diamond Hill Toll Plaza



The image on the left depicts Lynette ten Krooden's rendition of a sunset drive through the Diamond Hill Toll Plaza, which she painted from memory after passing through it.

Figure 632 Painting of the Diamond Hill Toll Plaza by Lynette ten Krooden (Booyens 2020)

3.6. Various residential projects

The cinematic nature of my residential oeuvre was captured in a series of vignettes by artist Lynette ten Krooden. I took her to visit some previous work while assisting with the renovations of her house, and she surprised me with this artwork.



Figure 633 Ek droom van 'n Pieter Mathews huis by Lynette ten Krooden (Booyens 2021)

4. Insta worthy: experiences worth sharing

Lifestyle columnist for *Forbes Magazine* online, Arnold Andrew, observes that there is a tendency amongst consumers to "… want our lives and our design to be Insta worthy" (Andrew 2018). The *Urban Dictionary* (2014) defines "Insta worthy" as "[w]hen a picture is good enough to be posted on Instagram". Andrew (2018) argues that: "Whether we want to admit it or not, the decisions we make are influenced by our desire to curate a certain look and persona on social media." Social media posts therefore give an indication of the places and spaces that people interact with and want to be associated with. This section reflects on some of the spaces within the oeuvre of MAAA that are popular among members of the public. The comments also provide some insight into users' perspectives.

4.1. The Javett Art Centre at the University of Pretoria

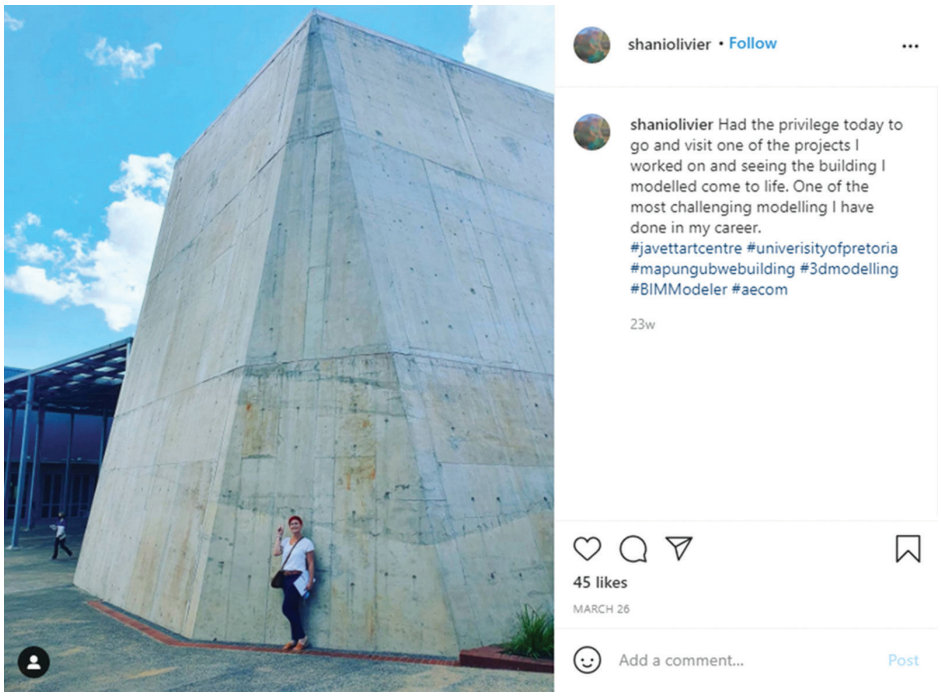


Figure 634 Instagram post (shaniolivier 2020)



Figure 635 Instagram post (delayneyartist 2019)

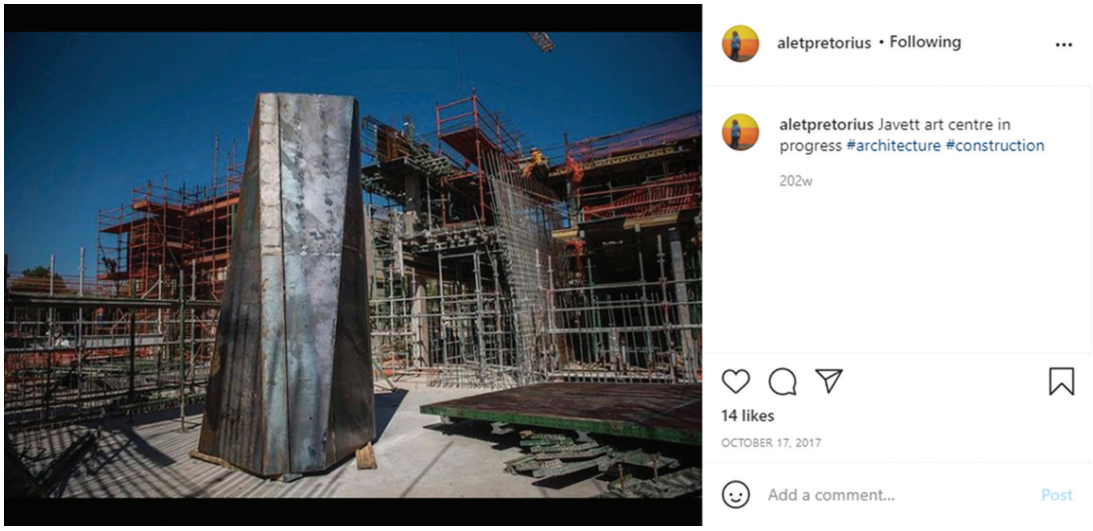


Figure 636 Instagram post (aletpretorius 2017)

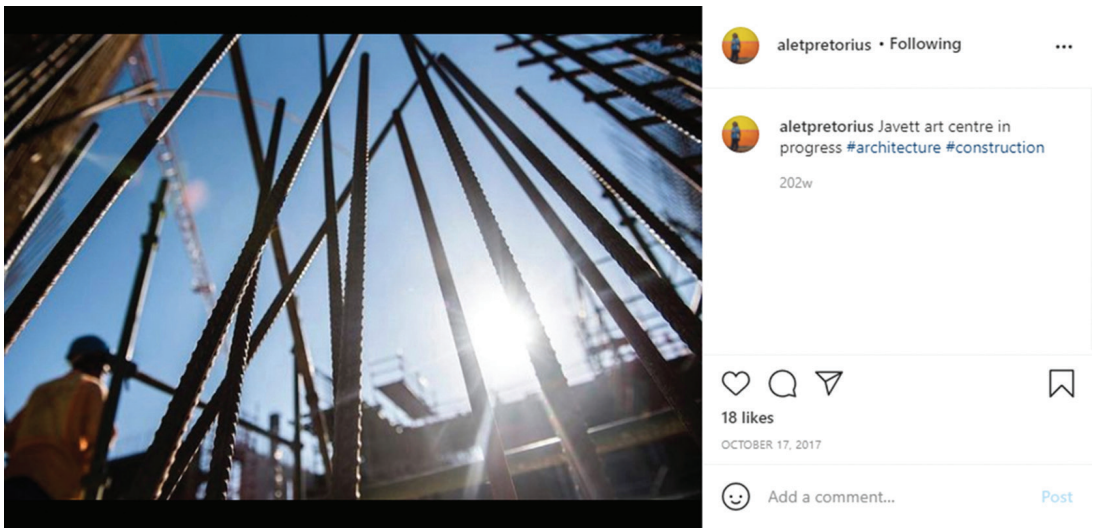


Figure 637 Instagram post (aletpretorius 2017)

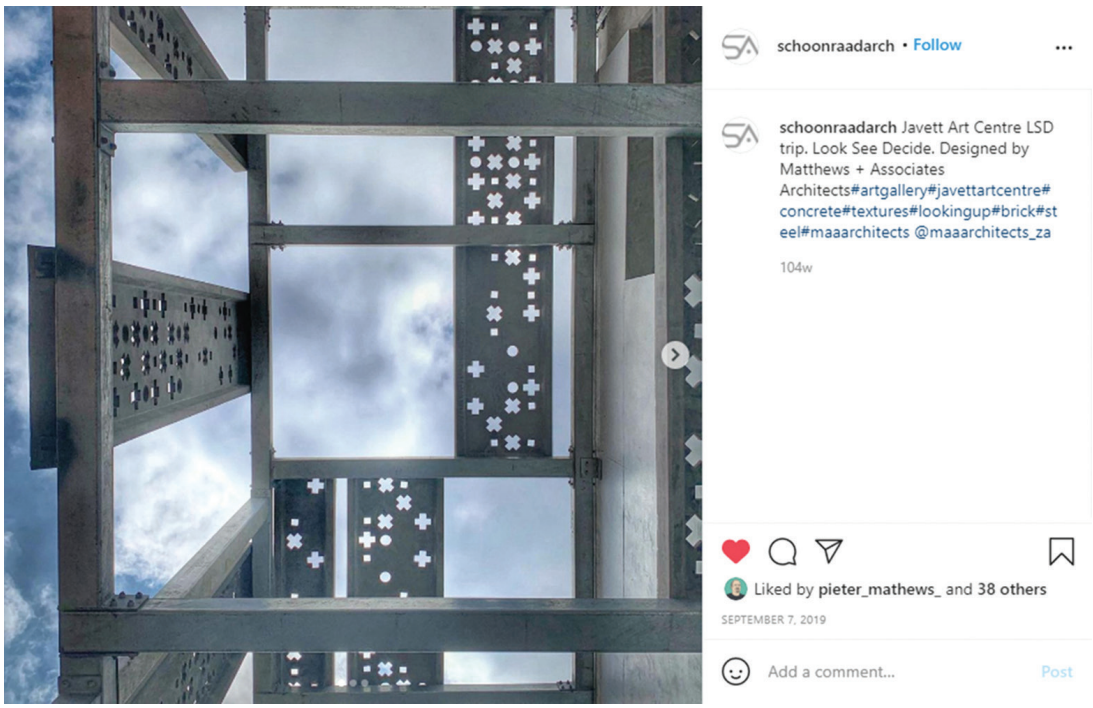


Figure 638 Instagram post (schoonraadarch 2019)

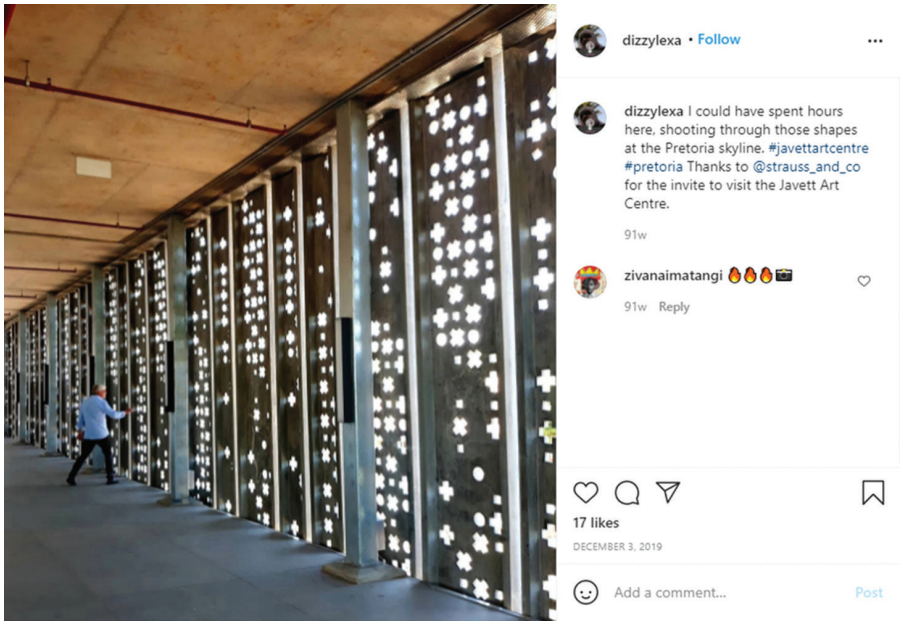


Figure 639 Instagram post (dizzylexa 2019)



Figure 640 Instagram post (dizzylexa 2019)

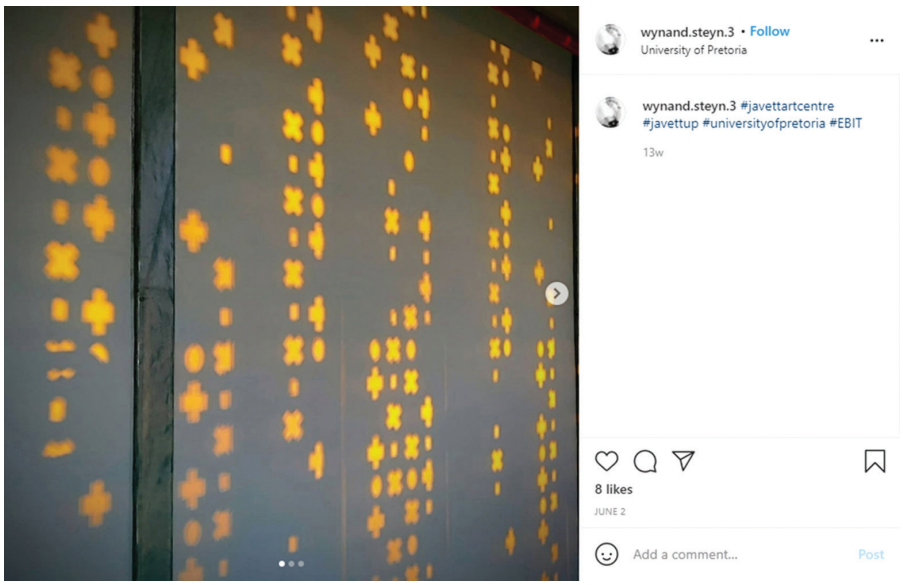


Figure 641 Instagram post (wynand.steyn.3 n.d.)

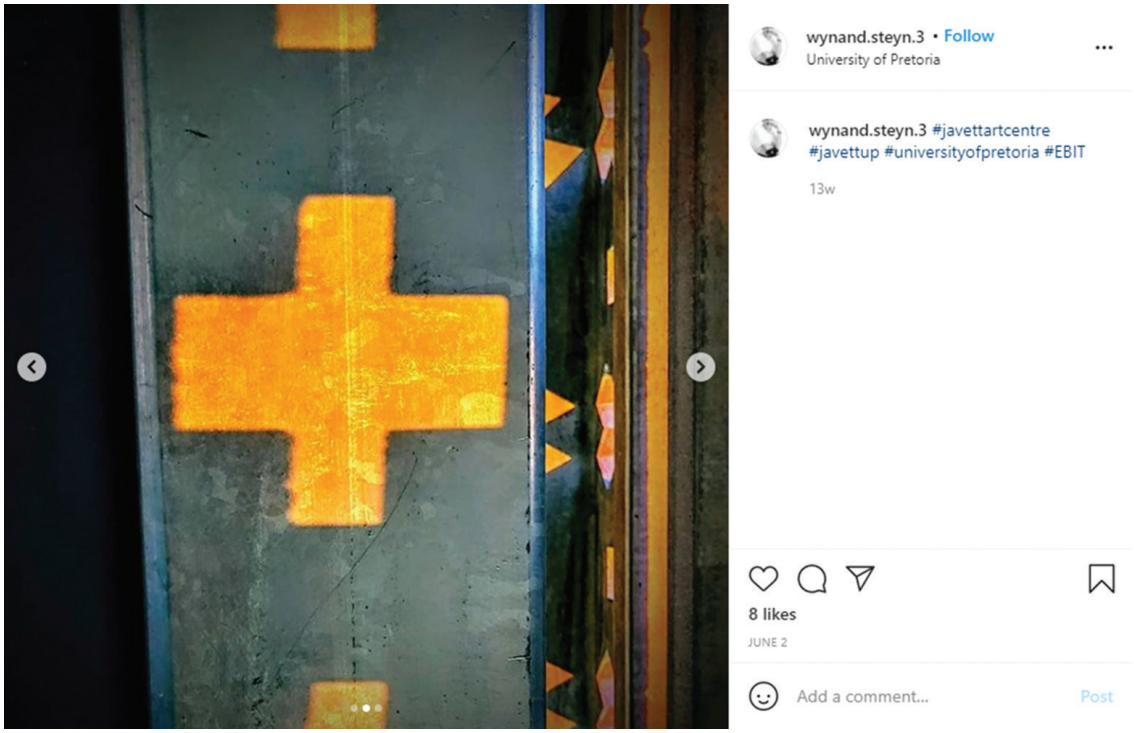


Figure 642 Instagram post (wynand.steyn.3 n.d.)

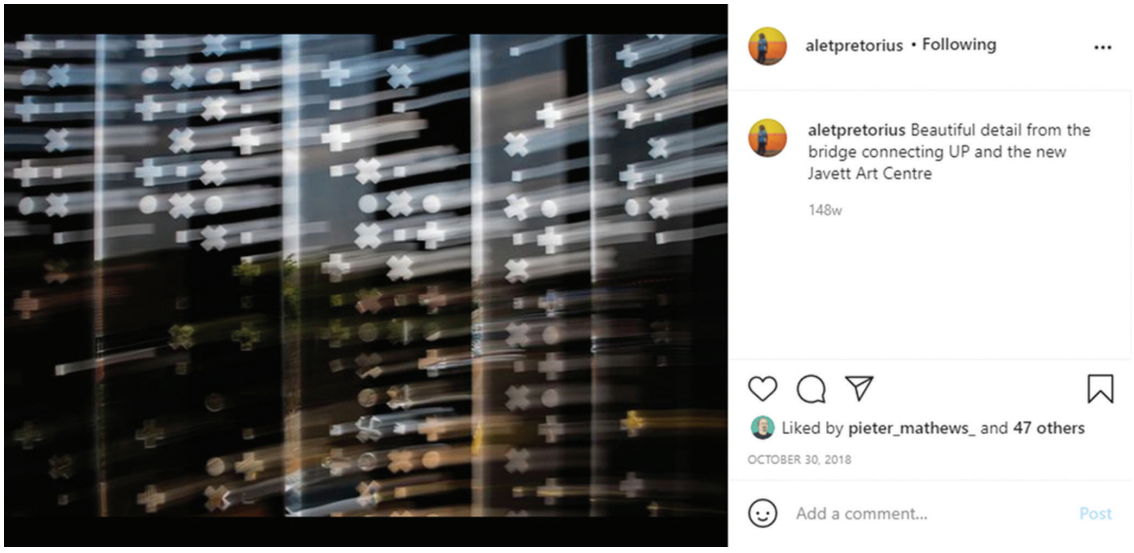


Figure 643 Instagram post (aletpretorius 2018)



Figure 644 Instagram post (aletpretorius 2018)

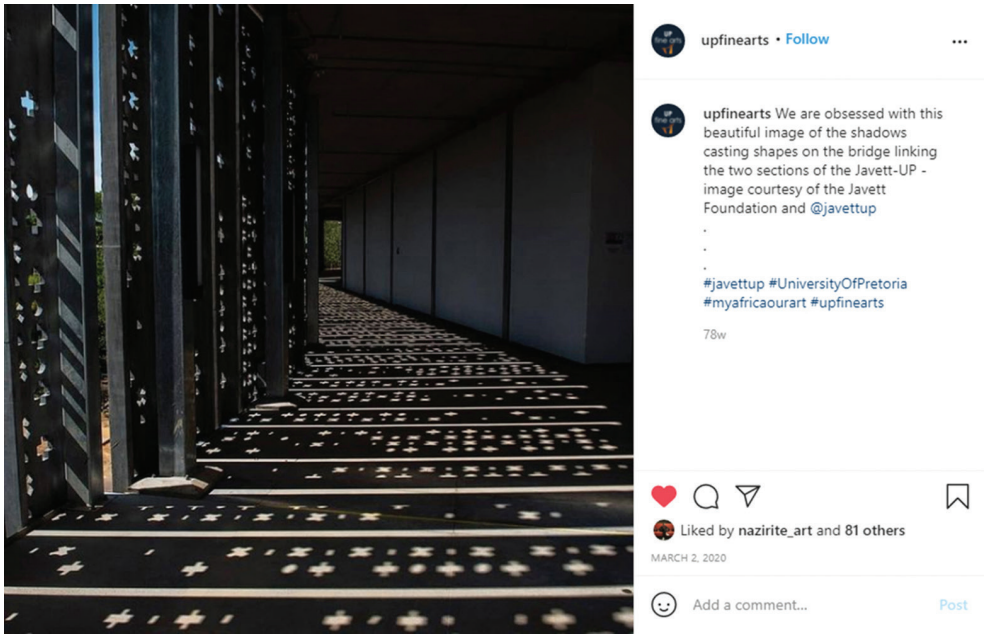


Figure 645 Instagram post (upfinearts 2020)



Figure 646 Instagram post (barendspies 2019)



Figure 647 Dressed for a ball (Unknown 2019)



Figure 648 Dressed for a ball (Unknown 2019)

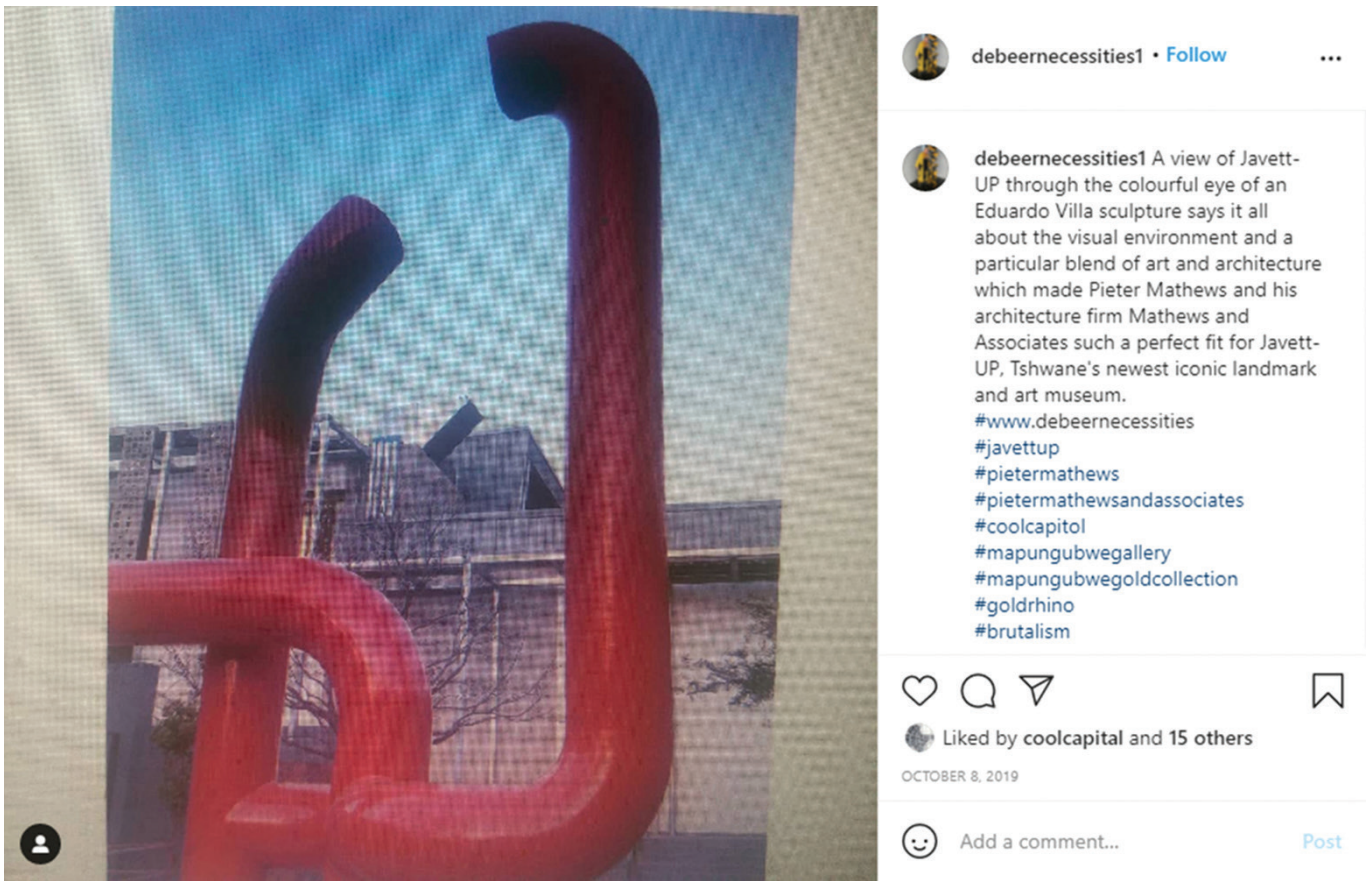


Figure 649 Instagram post (debeernecessities1 2019)

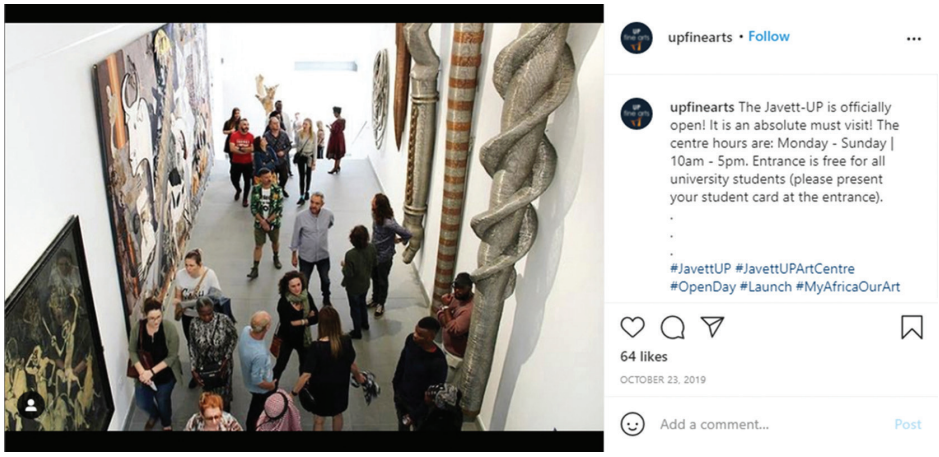


Figure 650 Instagram post (upfinearts 2019)



Figure 651 Instagram post (original_brittcoin 2020)

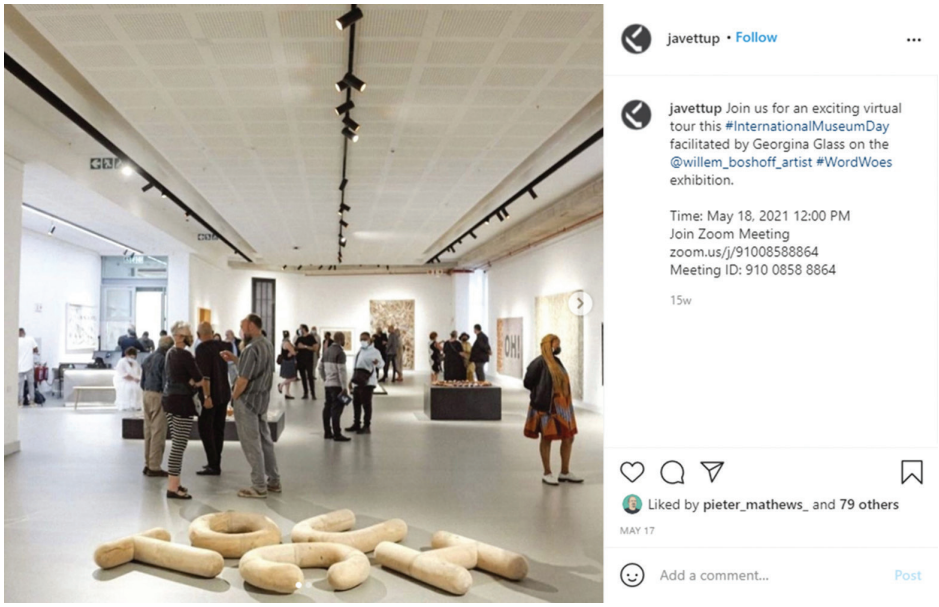


Figure 652 Instagram post (javettup 2021)

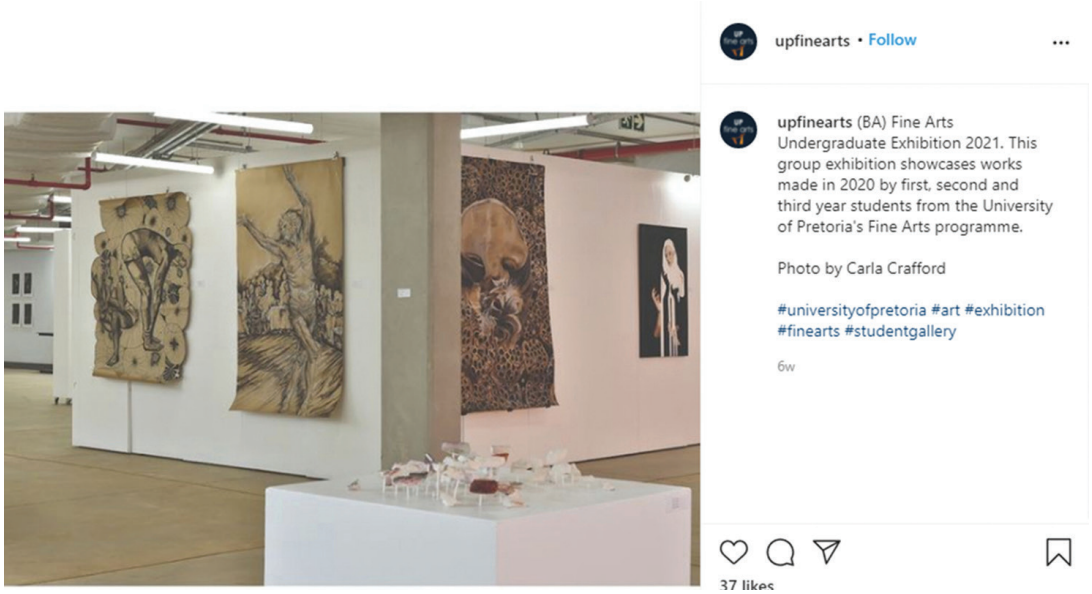


Figure 653 Instagram post (upfinearts 2021)



Figure 654 Instagram post (upfinearts 2021)

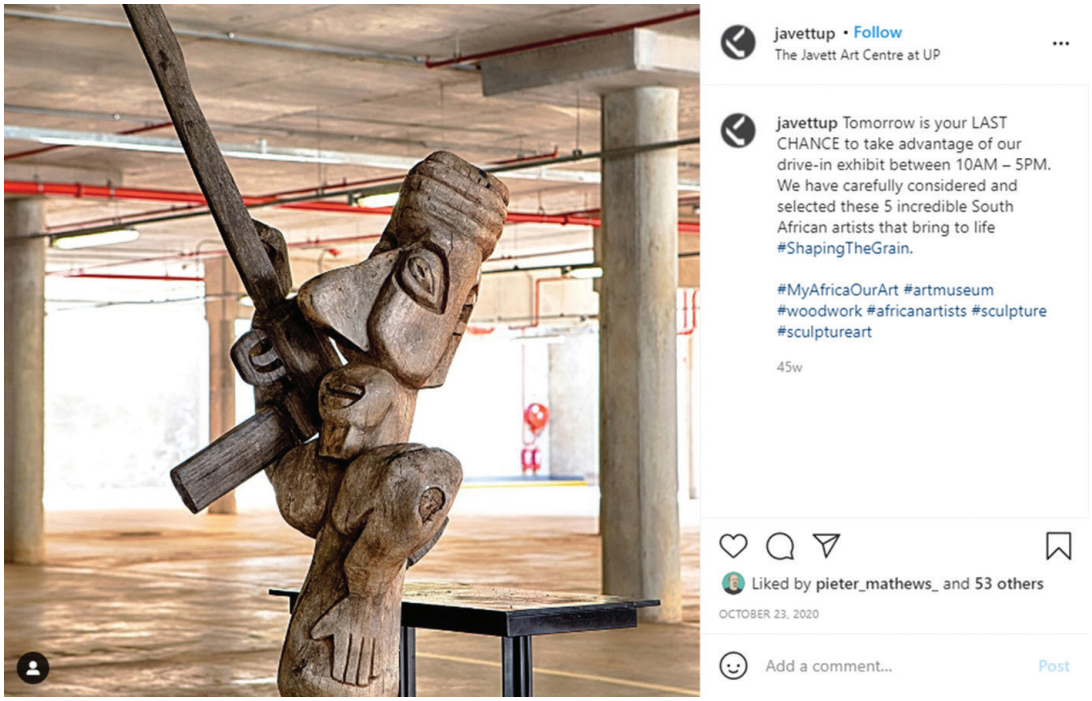


Figure 655 Instagram post (javettup 2020)

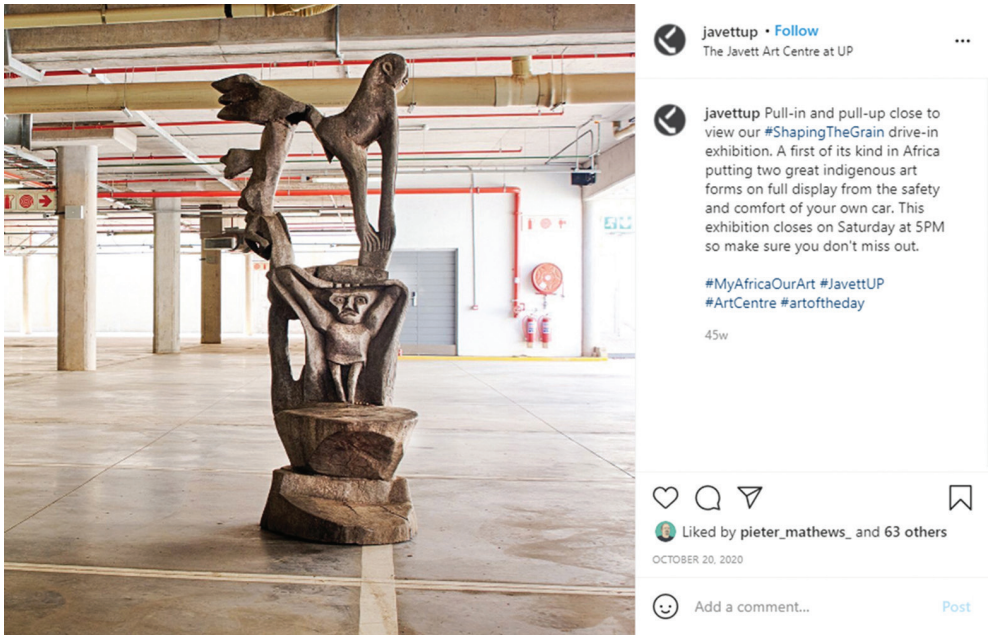


Figure 656 Instagram post (javettup 2020)



Figure 657 Instagram post (eric.duplan 2019)

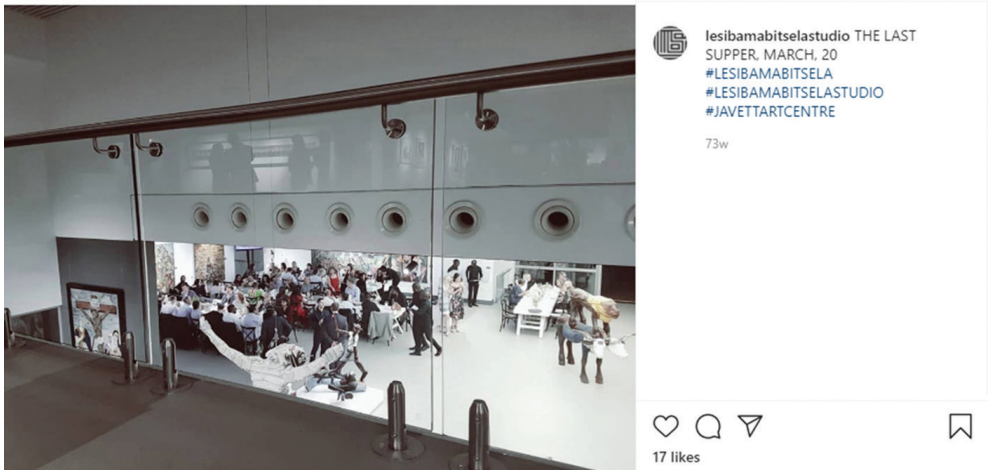


Figure 658 Instagram post (lesilbamabitselastudio 2020)



Figure 659 Instagram post (michelle.leanda.venter 2020)

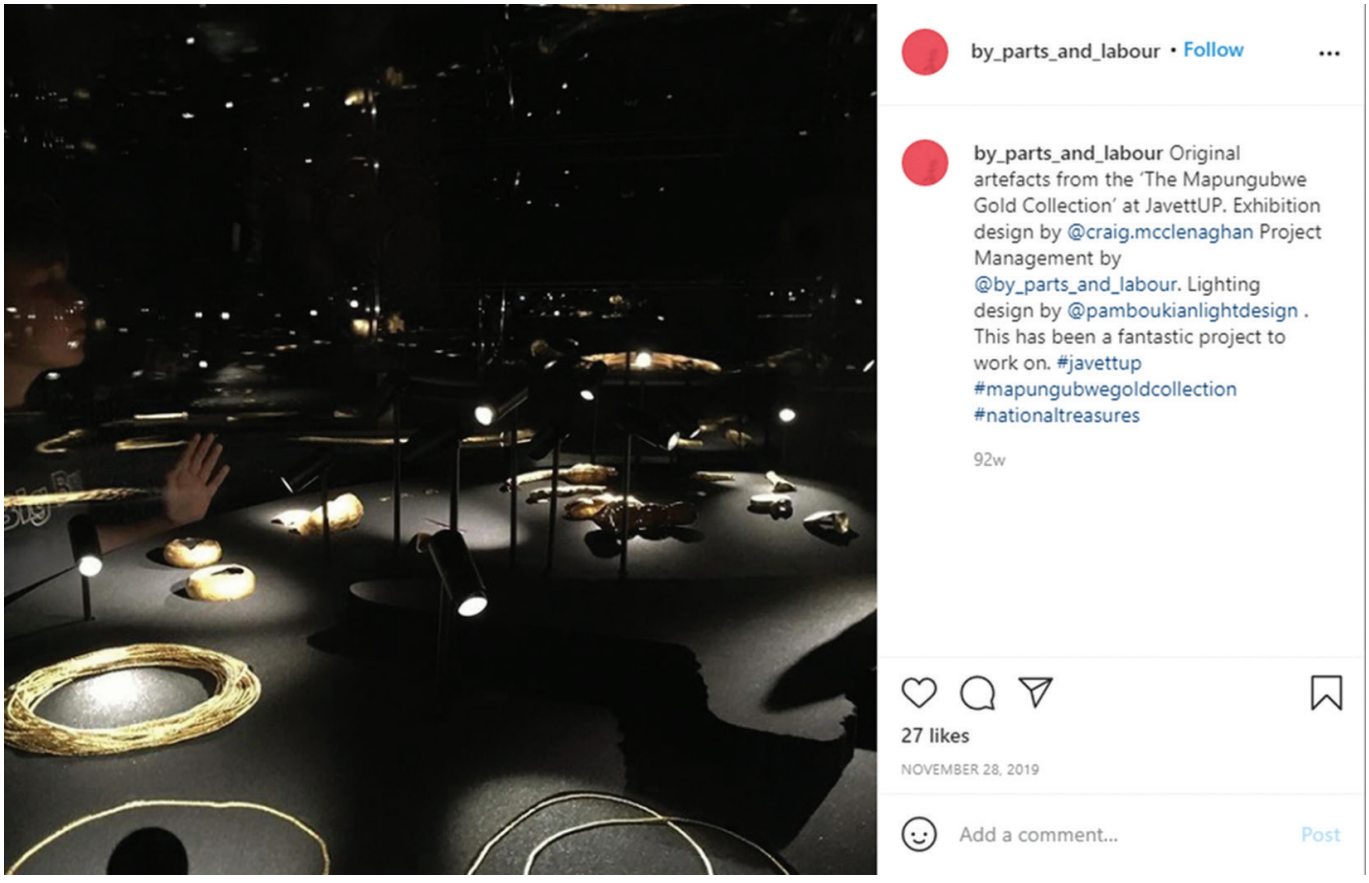


Figure 660 Instagram post (by_parts_and_labour 2019)



Figure 661 Instagram post (lesleyullrich 2019)



Figure 662 Instagram post (joburgmoments 2019)

4.2. Afrikaanse Hoër Meisieskool Pretoria



Figure 663 Instagram post (juskei_girl 2019)



Figure 664 Instagram post (juskei_girl 2019)



Figure 665 Instagram post (juskei_girl 2019)

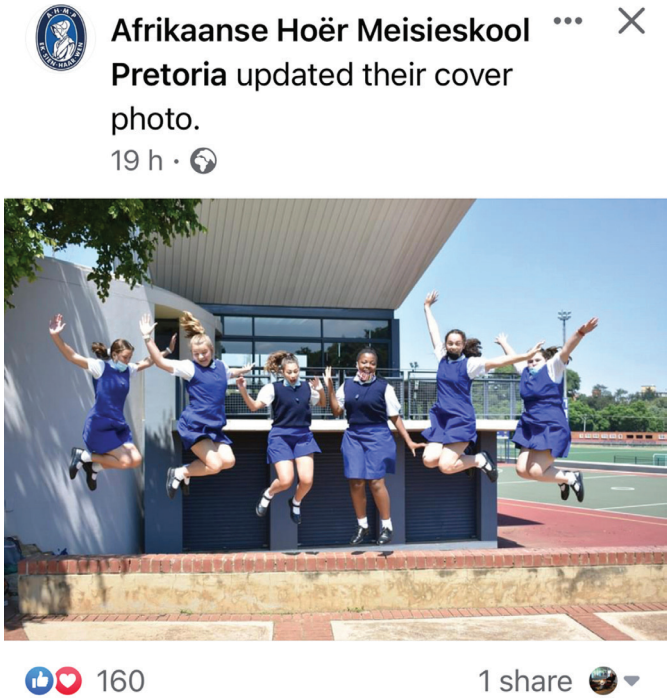


Figure 666 AHMP updated their Facebook profile with a photo with the sports complex as a backdrop (AHMP 2022)



Figure 667 Instagram post (ahmp.eksienhaarwen.vlr 2021)



Figure 668 Instagram post (ahmp.eksienhaarwen.vlr 2022)



Figure 669 Instagram post (ahmp.eksienhaarwen.vlr 2020)

4.3. Oaktree Studio



Figure 670 Instagram post (juskei_girl 2019)

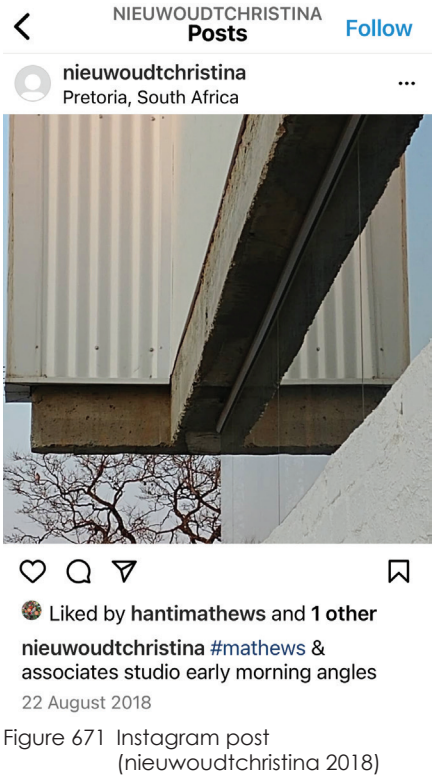


Figure 671 Instagram post (nieuwoudtchristina 2018)

4.4. Nellmapius Bridge

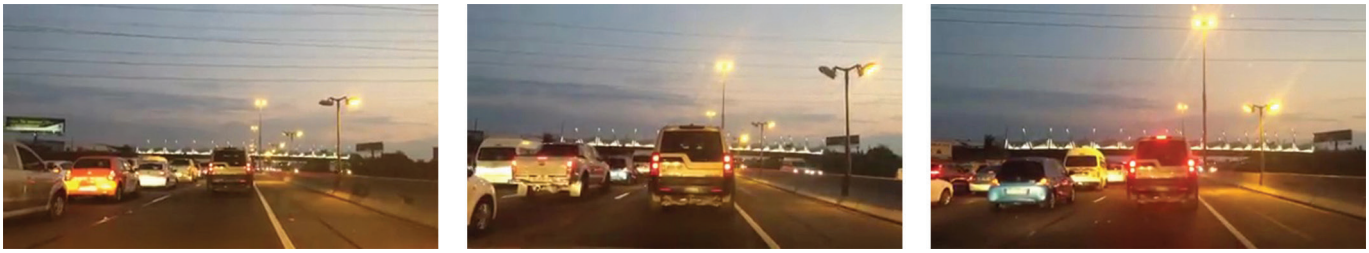


Figure 672 Capturing the experience of driving towards of the Nellmapius Bridge (Da Cruz Almeida, C 2018)

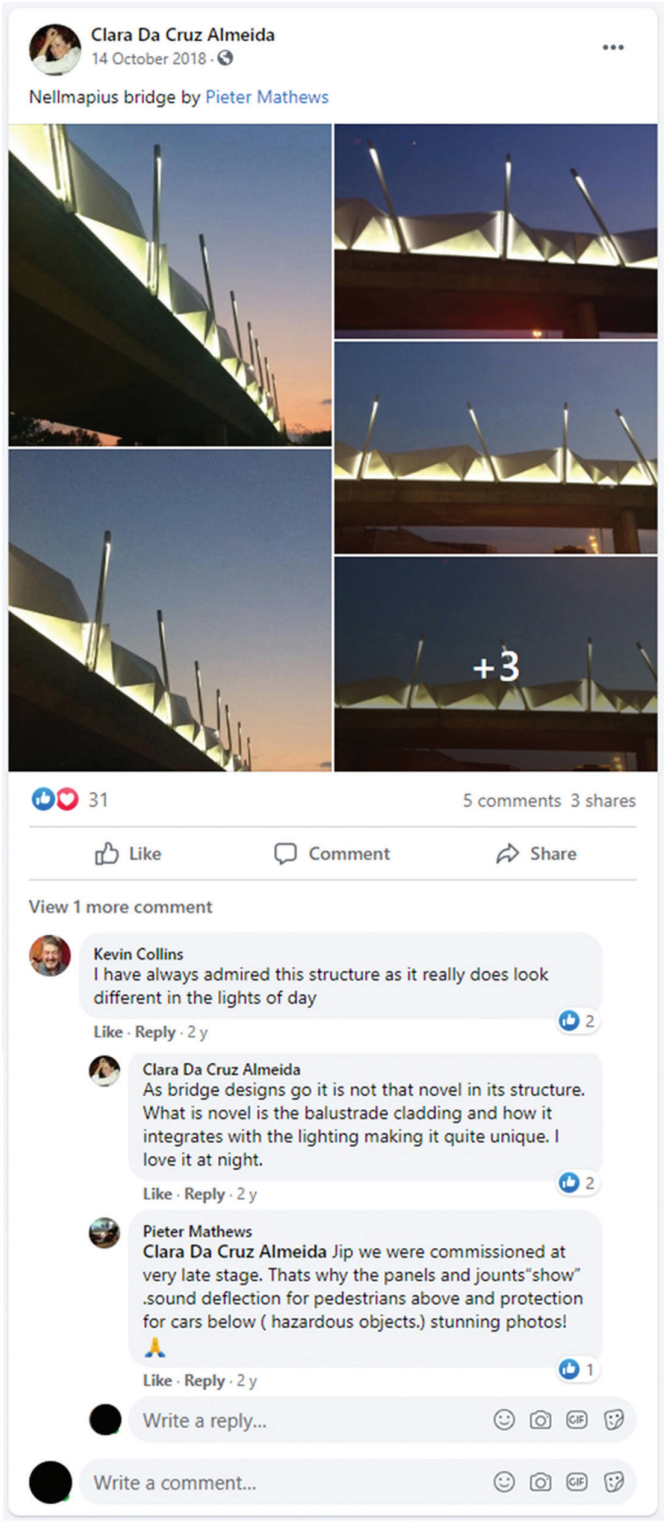


Figure 673 Facebook post (Da Cruz Almeida, C 2018)

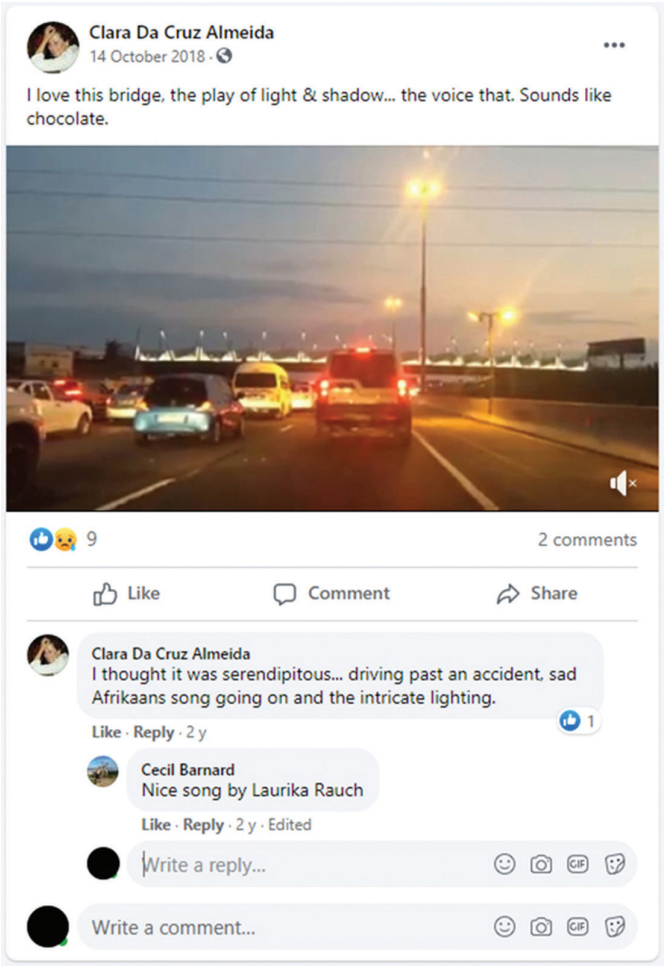


Figure 674 Facebook post (Da Cruz Almeida, C 2018)

5. Interpretations by journalists

Journalists and critics often serve as interpreters who translate architectural works for members of the public. Public opinion is often informed by what is written in the media. The following section considers some of the key articles written about our oeuvre.

5.1. House Mathews: The New Mudernism

Editor of *Garden and Home*, Mary Jane Harris, was so impressed by the novel texture and plaster celebrating the local colour of sand, that she instantly invented a new "-ism" – The New 'Mud'ernism' (Harris 1998).

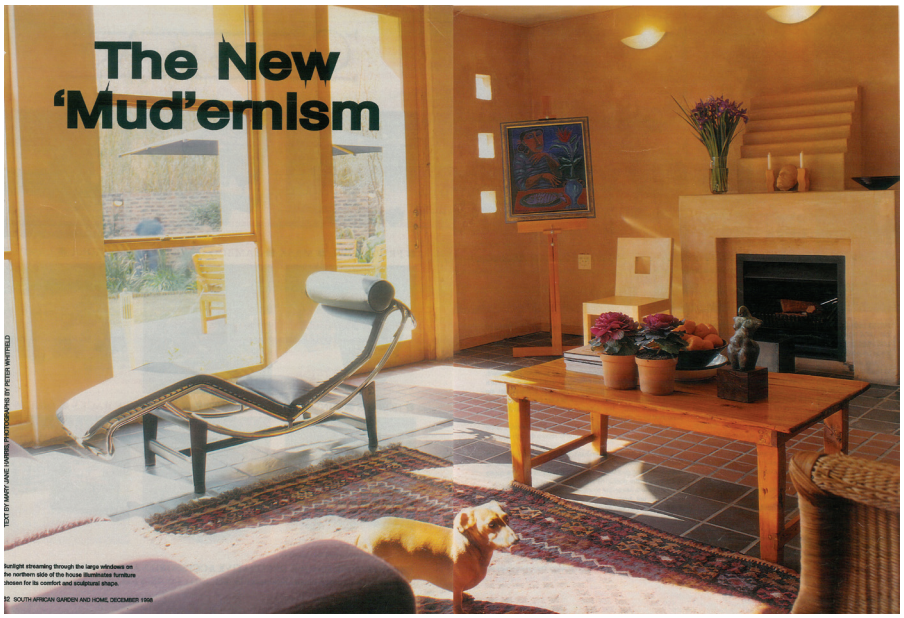


Figure 675 Article published in Garden and Home, December 1999 (Harris 1999:62-67)



Figure 676 Article published in Garden and Home, December 1999 (Harris 1999:65-67)

5.2. Kee Enterprises: concrete as a sculptural material



COVER focus on building

An archi-sculpture in concrete

"Architecture is the masterly, correct and magnificent play of volumes brought together in light" Le Corbusier

By Daniel van der Merwe

Location: Corner of Muckleneuk and Fehrsen Streets, Nieuw Muckleneuk, Pretoria, South Africa

Professional team

Client: Kee enterprises (Pty) Ltd
Architects: Mathews & Associates Architects cc
Interior design & T.I: Mathews & Associates Architects cc
Quantity surveyor: Bredell Quantity Surveyors
Landscape architects: Landshapes Design
Structural and Civil engineers: P - Design
Contractors: TF Bornman Construction
Mechanical and Electrical engineers: Sebokwa Engineering
Fire consultants: Ingplan Consulting
Photographers: Paul Evans, Pieter Mathews, Daniel van der Merwe

Brief

The brief was for a commercial office building in Nieuw Muckleneuk, Pretoria. As a commercial venture, the building had to be feasible, cost-effective and economically viable. The challenge was to create an anti-themed timeless structure, which would be durable and low on maintenance and running costs. Productivity and a pleasant working environment are interrelated, and the objective was to create a constructive working environment, which would suit the businesses of the three tenant firms: attorneys Brink Bonsma and De Bruyn, architects Mathews & Associates Architects and the coal mining company, Injula Universal Coal.

The building is situated on the corner of Muckleneuk and Fehrsen Streets, facing onto the busy Brooklyn Circle. This allows it a strong visual profile, as the traffic circle is the most prominent node in Brooklyn, the adjacent up-market, fast-developing shopping and business area of Pretoria. Unfortunately, Brooklyn is becoming another manifestation of contemporary South African architectural insecurity and its preoccupation with thoughtless and stylistic pastiche to the 'glory' of commercial architecture. As an urban precinct, the built environment lacks references to context and climate, and provides very little in the way of unique public space creation, people-friendly building edges or a sense of common identity and belonging to place. As a new landmark within this context, the building displays a refreshing honesty and sense of generosity in the way it negotiates the public street edges and maintains its own presence.

Zoning

The site tapers to a sharp point, which became the main generator of the building's layout and its resultant triangular form. By positioning the building centrally on the site, a series of outdoor spaces were mediated as support zones to the interior functions. This allows for visual clarity and an uncomplicated spatial organisation, where the vehicular and pedestrian entrance dissects the site – on axis, and in line with the main building entrance. The public space adjacent to the entrance became a hard landscape parking area, with the quieter and more protected northern edge providing a series of private garden courtyards, visually linked to the interior office spaces, and a shaded garden terrace for staff to enjoy. The building's prominent street corner dissolves into a textured landscaped base for the structure's accentuated edge and acts as a passive Zen view garden for people passing by.

The building is designed in two separate wings: the western, more enclosed side houses the private office functions and is concealed from the street view with offices having direct access to a patio lined with large trees retained during the construction process. The eastern wing has a studio space above with boardrooms downstairs, allowing for easy access while opening up to the landscaped gardens. The two wings wrap around the central entrance with its staircase ascending around a glass and concrete lift shaft and the bathroom, kitchen and services core. The plan offers maximum flexibility to accommodate up to three tenants, and permit future layout changes.

4 CONCRETE TRENDS May 2009

May 2009 CONCRETE TRENDS 5

Figure 677 Article published in Concrete Trends, May 2009 (Van der Merwe 2009:4-5)

5.3. Oaktree Studio



01 "We intended the staircase to be an orientation device as well as a landmark," says Pieter. A sculpture by Sybrand Wiechers, titled *Homunculus*, keeps watch over the landing.

02 The self-contained flat in the building opens onto a private courtyard.

03 Above the table in the meeting area, the ceiling features what Pieter calls their upside-down carpet. While the concrete was wet, he and his team pressed offcuts from a model they'd built for the Pretoria BRT station at Church Square into it (after first spraying it with cooking spray so the pieces would come away easily) and this "negative" of the model left behind a relief as a reminder of their work.

04 The city map of Pretoria was created by visual artist Eric Duplan as part of the Cool Capital initiative, exhibited at the South African Pavilion at the Venice Architecture Biennale 2016. Serving as a coffee table is a cardboard replica of the concrete Logo bench by Sunshinegun and Mathews and Associates Architects, which was also exhibited at the Biennale.

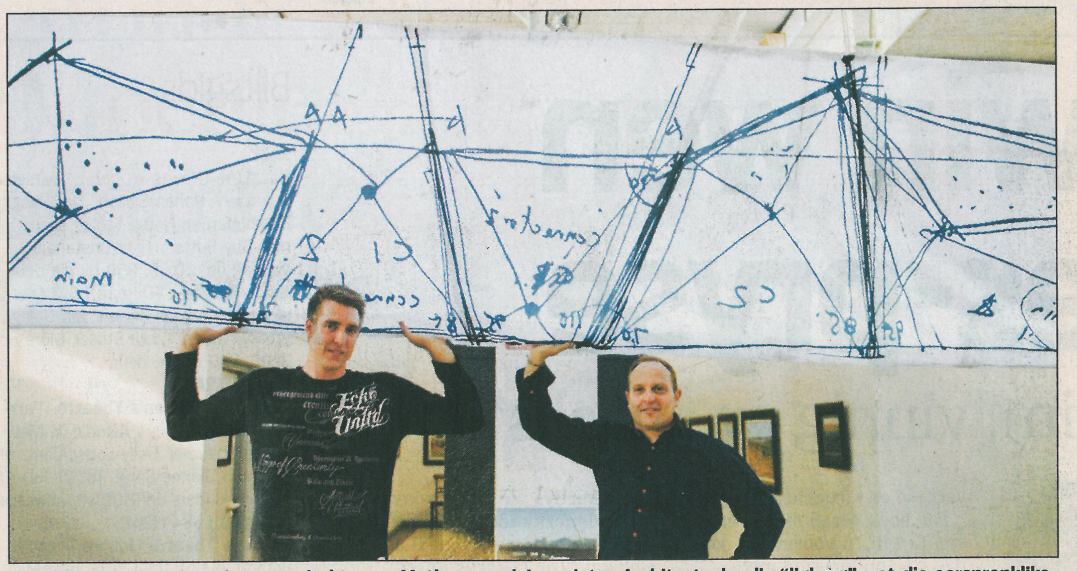
"THINGS NEEDN'T BE EXPENSIVE **TO BE BEAUTIFUL.**"





Figure 678 Article published in Visi, October/November 2017 (Crewe-Brown 2017:80-87)

5.4. The Nellmapius Bridge



Heinz Janz en Pieter Mathews, argitekte van Mathews and Associates Architects, by die "ligbrug" wat die oorspronklike rowwe ontwerpskets van die Nellmapiusrylaan-brugfasade oor die N1-hoofweg tussen Centurion en Midrand vertoon. Dié vertoonstuk word tans by die Pretoria Kunsvereniging in Bailey's Muckleneuk in Pretoria uitgestal, voordat dit in Augustus saam met die argitekspan na Venesië, Italië, sal vertrek. Foto: ALET PRETORIUS

Brug wat origami naboots, kry aftrek

Fanie van Rooyen



Die nuwe, nog onvoltooide Nellmapiusrylaan-brugfasade. Foto: PIETER MATHEWS

Die argitekte van die nuwe Nellmapiusrylaan-brugfasade oor die N1-hoofweg tussen Centurion en Midrand het met die ontwerp van dié brug, wat deur Japanse papiervoukuns geïnspireer is, oorsee opslae gemaak.

Die argitekfirma Mathews and Associates Architects is genooi om hul werk by die 2012 Argitektuurbiënnale, wat van 29 Augustus tot 25 November in Venesië, Italië, gehou sal word, uit te stal.

"Ons weet nie presies hoe die Wêreld-kunsstigting (WAF) wat die biënnale aanbied, op ons werk afgekom het nie, maar dit is 'n baie groot eer," het Pieter Mathews, die hoof-argitek, gesê.

Hy het gesê die Suid-Afrikaanse Nasionale Padagentskap (Sanral), wat die firma se uitstalling in Venesië sal borg, het hulle gevra om 'n unieke brugfasade vir die bestaande Nellmapiusrylaanbrug te ontwerp.

"Ek het die idee vir die fasade se ontwerp gekry nadat ek en my gesin tydens 'n vakansie in 'n boekwinkel vir afleiding van die gure weer gaan soek het."

Een van sy twee seuns het 'n boek oor origami, Japanse papiervoukuns, gekies en dit het toe sy inspirasie vir die brugfasade geword.

"Ek glo dit is baie gepas omdat dit die 'geordende chaos' van Gauteng baie goed weerspieël. Snags sal slegs sekere oppervlaktes van die hoekige fasade belig word, wat 'n oneweredige wit liglyn sal vorm om die hartklop van Gauteng te verteenwoordig."

Mathews het gesê hy is bly om die argitektuur van brûe in die kollig te kan plaas. "Dikwels word brûe slegs deur ingenieurs, eerder as argitekte, ontwerp. 'n Brug wat goed ontwerp is, kan werklik 'n simboliese brug tussen kulture en 'n baken in 'n gemeenskap wees."

Figure 679 Article in the Beeld newspaper of Friday 22 June, 2012 (Van Rooyen 2012:9)

5.5. The Diamond Hill Toll Plaza: services as sculptural elements



Figure 680 Article about the Diamond Hill Toll Plaza in Visi magazine (Loots 2006:70-75)

5.6. The AHMP additions

PRETORIA NEWS
THURSDAY NOVEMBER 28 2013

Facelift for Affies a bold and inspiring move

Revamp a tribute to past principal

DIANE DE BEER

IT IS THE vision of people that can change a landscape. And when Pretoria's Afrikaanse Hoër Meisieskool needed to modify its hall, sports complex and entrance pavilion to accommodate more girls, it was an old dream which came into play.

Commissioned by then principal Elizabeth C Steijn, after whom it is named, the original hall was designed by Burg Lodge Burg (now Bild Architects) in the modern architectural language of the day – the late '50s, early '60s.

Enter Pieter Mathews and his co-project architect Philip du Toit from Mathews and Associates Architects.

Their new design was a conscious decision not to mimic the architectural style of the old buildings but to take the visionary approach of Steijn – whose endowment is funding the work.

They wanted a design which was true to the contemporary architectural spirit while respecting and drawing on the values of the original building.

Though the 56-year-old hall is not protected by heritage legislation, a notification of intent to develop was submitted to heritage agencies due to the architects' passion to preserve the the memory of this iconic institution.

It was decided to place a new gallery on top of the old hall, and in that way save land and retain the 1960s façade.

"Re-used brick brings old and new together, while steel cladding reflects the material of the other school buildings' roofs, stitching the entire school together. The internal staircase has a view window and skylight at the end, illuminating the passage by day and expressing the function at night," says Mathews.

The average South African school is designed to adhere to a principal of "sameness" and this results in very uninspired architecture. In Scandinavian countries, for example, they adopt a very different set of principals. They believe that the school is a child's first and most important introduction to architecture, design and creativity.

The full brief consisted of three buildings which included the sports complex, all of which were handed over earlier this year. The idea was to project an image of independence, creativity and confidence of the school and its pupils, but they also had to acknowledge their roots.

Art and architecture went hand-in-hand in the design of the sports pavilion with the school's Voortrekker *kappie* (bonnet) used as a reference.

The school has an impressive art collection which encouraged the idea of integrating art, architecture, history and ritual. Internationally renowned artist Willem Boshoff was invited to collaborate with the architects.

Boshoff's artwork *Windrose* was translated and placed on the foyer floor where the annual farewell ceremony for the matrics takes place and they are sent off in different directions.

"Symbolism, tradition, ritual, art and architecture meet to give meaning and sense of purpose to this space," explains Mathews.

Similarly, old and new have reach out to one another. To move forward, you have to understand your past, says Mathews.

"What we did in the hall was to leave the rough concrete beams which were exposed when the original roof was removed, in their original rough state to reveal something of the past and to capture the authenticity of the building processes".

Similar homage was achieved with the line of a new passage from the old hall to the new, following the curves of the existing walkway.

The re-use of materials also forms part of the design initiative. The old entrance door for example has been given a new life. In this way, the girls entering the school now are using the same door as those who walked through those doors for many decades past.

The architecture tells a story from the mosaic panels to the photograph of the founder principal whose legacy is showcased in this latest transformation at this historic school.

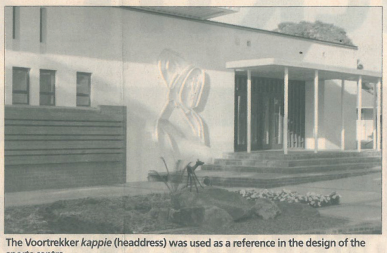
The school hall was recently awarded a merit award for architecture by the Pretoria Institute for Architecture, and the new Sport Complex also received a commendation.

"What strikes one most about this project is the sheer fun of it. It is evident that the architect enjoyed doing this design. And that is evident in the product. It is tongue-in-cheek and playful, with the roof inverted and sitting off-grid on the building like a hat," reads the recommendation.

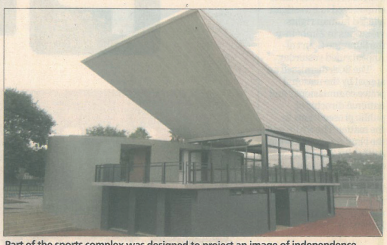
It would be wonderful if other schools would follow the example set by Affies, inspiring architects of the future.



Willem Boshoff's *Windrose* in the entrance. PICTURE: CARLA CRAFFORD



The Voortrekker *kappie* (headdress) was used as a reference in the design of the sports centre.



Part of the sports complex was designed to project an image of independence, creativity and confidence.



Homage is paid to the visionary late principal Elizabeth C Steijn whose endowmr nt funded the work. PICTURES: PIETER MATHEWS

Figure 681 Article published in Pretoria News, 28 November 2013 (De Beer 2013:6)

Beeld Donderdag 18 April 2013

Meisieskool spog met saal, kunswerke

Alet Rademeyer

Die nuwe E.C. Steijn-saal van die Afrikaanse Hoër Meisieskool in Pretoria "dien as 'n credo dat Afrikaanse skole 'n blink toekoms het".

So het die ontwerper Pieter Mathews gister gesê toe skoliere die saal ingewy het.

Die saal is grootliks met 'n erflating van dié visioenêre oudskoolhoof gebou.

Marna Jordaan, hoof, het gesê die oorspronklike E.C. Steijn-saal is in 1960 ingewy en "was 'n monument van juf. Steijn se visie en 'n produk van haar kreatiewe geldinsamelingsprojek".

"Ons vereer haar vandag opnuut, op dieselfde verhoog waar sy in 1960 gestaan het en ons haar 100ste verjaardag in 2009 saam met haar kon vier."

Die nuwe saal spog met verskeie unieke kunswerke rondom en binne-in.

Daar is *Die Bokkie*-beeld wat Elly Holm destyds in opdrag van Steijn geskep het.



Die beeld getiteld *Idealisme* deur Elza Dziomba pryk buite die Afrikaanse Hoër Meisieskool se nuwe E.C. Steijn-saal.

Sy wou 'n fyn, brose bokkie voor die saal hê.

Die beeld *Idealisme* is deur Elza Dziomba geskep en was 'n opdragwerk vir die fasade van die oorspronklike saal.

Binne-in die saal is 'n rooskompas op die voorportaalvloer van marmer geskep deur Willem Boshoff.

Die simboliek hiervan is dat wanneer matrikulante hul eksamen voltooi en by die saaldeure uitstap, hulle in verskillende windrigtings gestuur word om die wêreld te ontdek.

Daar is ook 'n gedig ("Ontkenning 3") deur Fransi Phillips aan die muur van die voorportaal. Dié bekroonde digter is ook 'n oud-Affie.

Nog 'n oud-Affie, Sanna Swart, 'n bekroonde beeldhouer, het die spesiale deurhandvatsels ontwerp wat losweg gegrond is op die blaar van die Transvaalse kiepersol. Dit simboliseer oneindigheid en organiese vloei.

Die skoolwapen, gegrond op *Boerenooientjie*, 'n beeldhouwerk deur Anton van Wouw, pryk ook op die vooraansig van die saal.

Skoliere het gister verskeie koor-, orkes-, en sangitems in die nuwe saal gelewer om die geleentheid te vier.



Leerlinge aan die Afrikaanse Hoër Meisieskool in Pretoria lewer 'n uitvoering ter inwyding van die nuwe E.C. Steijn-saal. Foto's: DEAAN VIVIER

Figure 682 Article published in Beeld, 13 April 2013 (Rademeyer 2013:6)

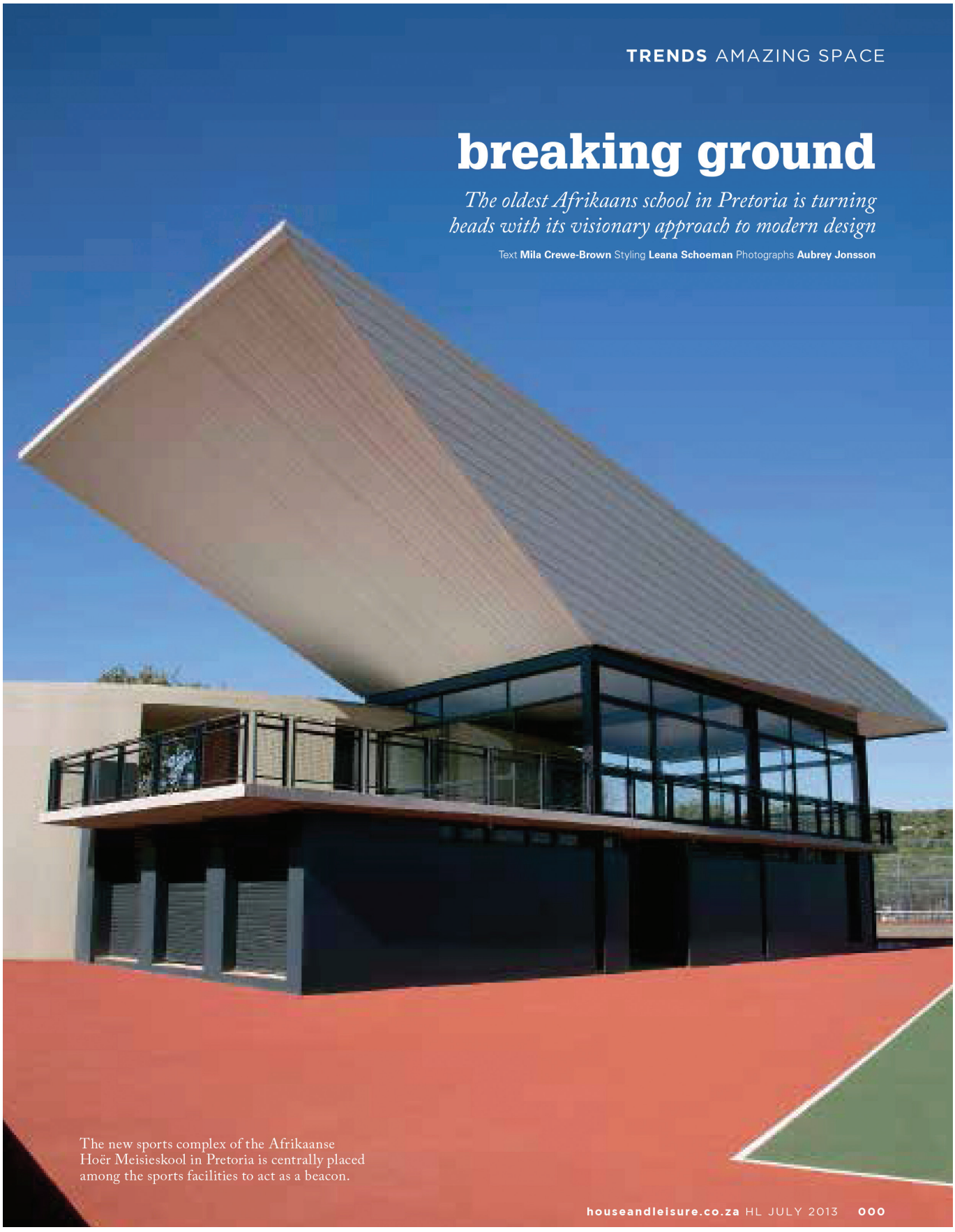
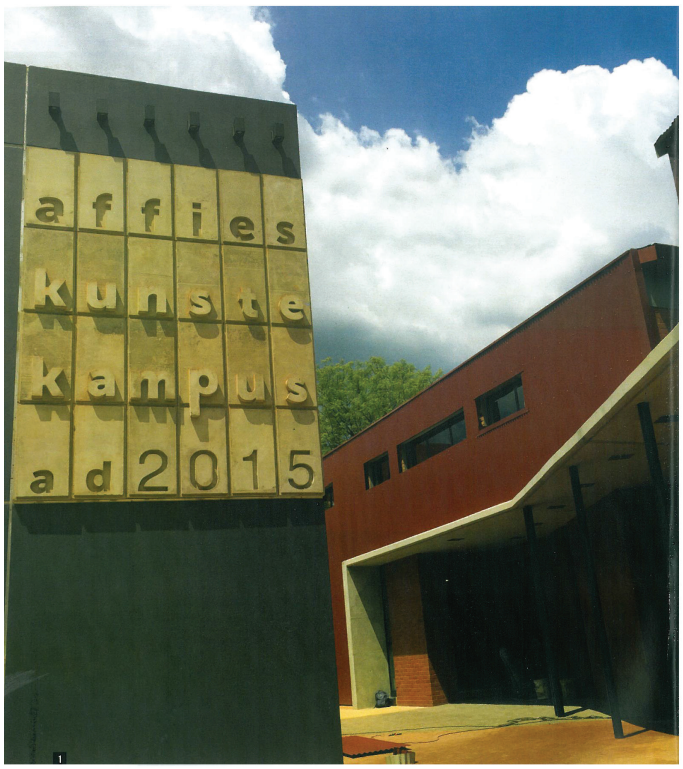


Figure 683 Article published in House and Leisure, July 2013 (Crewe-Brown 2013)

5.5. The AHS Arts Campus



COMPOSING PLACE —

A NEW MUSIC CENTRE FOR AFRIKAANS HOËR SEUNSKOOL

One might find it strange that an all-boys school known for its strong rugby traditions would invest in a new state-of-the-art music centre and art space. However, as the narrative behind the new Afrikaans Hoër Seunskool[1] music centre unfolds, this strangeness fades. In its place, emerges a considered composition of practical concerns with poetic intensions.

By: Dr Edna Peres, University of Pretoria

Various considerations comprise this most recent intervention, within the 96-year-old high school campus. The purpose of this article is twofold: to provide an overview of the resultant project, and to explore the considerations that underpin the design process, which were followed by the project architects at Mathews & Associates.

PROJECT DESCRIPTION

The new music centre emerged from a need to build hi-tech music facilities for the school's music department, which is among the largest in South Africa. The department is influential in training, on average, 240 music theory students in the art of orchestral, choir, band and ensemble performance. In particular, its classical music achievements include maintaining a full symphony orchestra, and matriculating one of the country's most successful pianists, Ben Schoeman.

The centre is located on what was once an inaccessible 'left over' space, on the 'back' edge of the school grounds. For many years, its odd shape was considered too ›

[1] Informally known as *Affies*.

1 *The main walkway and approach to the music centre.*

Figure 684 Article published in Architecture South Africa, May/June 2016 (Peres 2016:26–32)

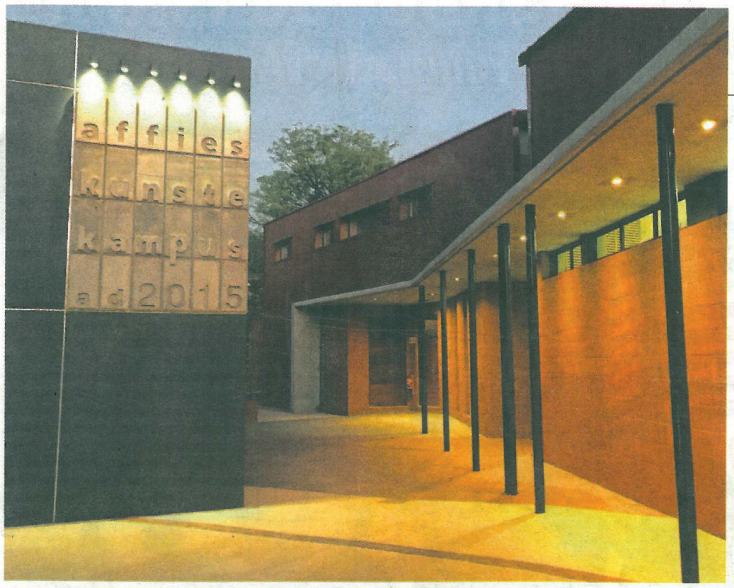
Affies kry unieke musieksentrum

Die Afrikaanse Hoër Seunskool in Pretoria het onlangs 'n groot geskenk vir sy 96ste bestaansjaar ontvang.

'n Splinternuwe musieksentrum is onlangs tydens 'n inhuldigingseremonie, wat ook die skool se verjaardag gevier het, oorhandig. Die skool huisves tans een van die grootste musiekdepartemente in die land met 240 leerlinge wat musiek as vak neem. Leerlinge kan kies tussen klavier, pyporrel of enige stryk- of blaasinstrument. Die skool het ook 'n verskeidenheid ensembles en orkeste wat leerlinge die geleentheid bied om saam met medeleerlinge musiek te maak.

Musiekleerlinge sal van nou af hul onderrig ontvang in die nuwe kunstekampus wat deur die argitekte Mathews & Vennote ontwerp is. Dié plaaslike argiteksfirma is bekend vir hul poëtiese ruimtes en die gebruik van kuns as vennoot in die ervaring van die gebou: Net soos 'n simfonieorkes bestaan uit uiteenlopende instrumente wat anders lyk en klink, is die musieksentrum ook 'n groepering van geboue met verskillende vorms en hoeke.

Die oefenkamers en klasse vorm saam met die bestaande saal 'n unieke plein, waar 'n staalkunswerk van die, kunstenaar, Strijdom van der Merwe die ereplek inneem. Konsentriese sirkels in die plaveisel dy soos klankgolwe vanuit die werk, genaamd "Kwartet". Klaviernoot-grafika vergesel 'n mens se ondervinding van die gebou op 'n speelse manier en maak 'n besoek aan die kunstekampus beslis die moeite werd.



Affies se nuwe musieksentrum is onlangs ingehuldig. Die sentrum is ontwerp deur die argiteksfirma Mathews & Vennote.

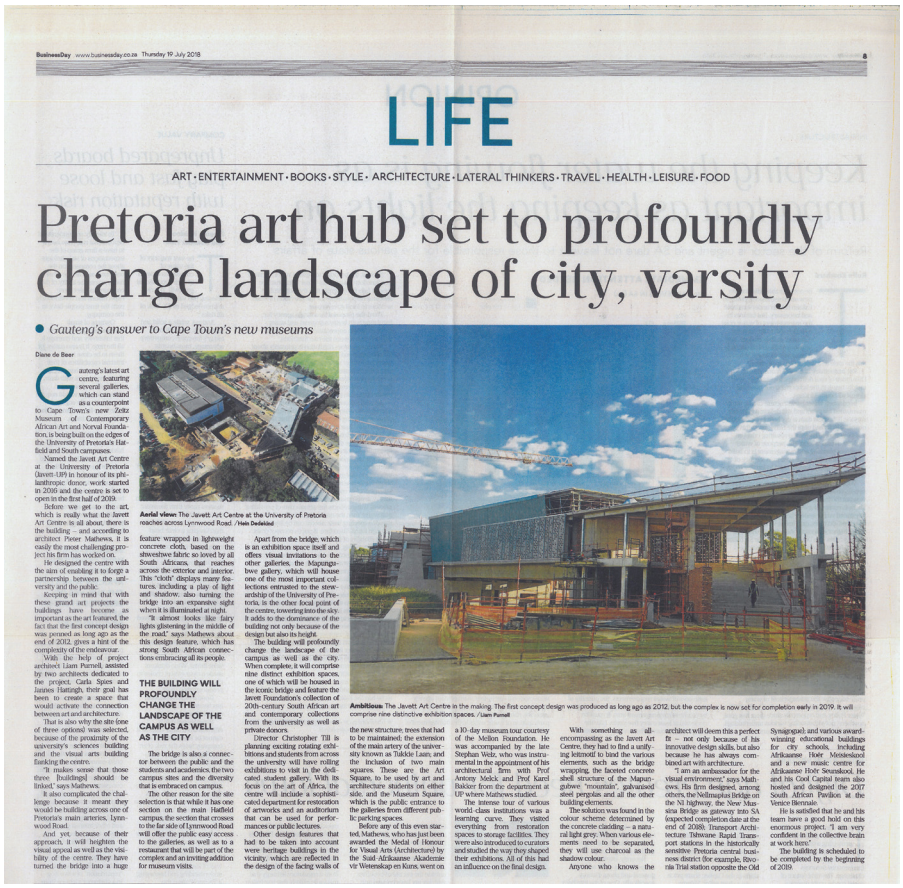
Die kunstekampus bestaan uit 20 oefenkamers, vier akoestiese klaskamers en 'n intieme konsertsaal waar die Affie-koor of -orkes vir ongeveer 200 mense konsert kan hou. Hierdie konsertsaal beskik ook oor 'n klankopnamefasiliteit van die beste gehalte.

Pieter Mathews, hoofargitek van die argiteksfirma, hoop die gebou sal nie net musikante en kunstenaars inspireer nie, maar ook by alle leerlinge sal resoneer om 'n groter waardering vir hierdie dissiplines te kweek en seuns aan te moedig om geïntegreerde mense te word.

"Hopelik is die impak van so 'n aard dat 'n volgende geslag musikante en kunstenaars inspirasie hieruit vind. En dalk, wie weet, motiveer dit iemand om argitektuur, kuns of musiek te studeer?"

Figure 685 Article published in Beeld, Wednesday 17 February, 2016 (Affies kry unieke musieksentrum 2016:7)

5.7. The Javett Art Centre at the University of Pretoria



BusinessDay www.businessday.co.za Thursday 19 July 2018

LIFE

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Pretoria art hub set to profoundly change landscape of city, varsity

● *Gauteng's answer to Cape Town's new museums*

Diane de Beer

Gauteng's latest art centre, featuring several galleries, which can stand as a counterpoint to Cape Town's new Zeitz Museum of Contemporary African Art and Norval Foundation, is being built on the edges of the University of Pretoria's Hatfield and South campuses.

Named the Javett Art Centre at the University of Pretoria (Javett-UP) in honour of its philanthropic donor, work started in 2016 and the centre is set to open in the first half of 2019.

Before we get to the art, which is really what the Javett Art Centre is all about, there is the building – and according to architect Pieter Mathews, it is easily the most challenging project his firm has worked on.

He designed the centre with the aim of enabling it to forge a partnership between the university and the public.

Keeping in mind that with these grand art projects the buildings have become as important as the art it-self, the fact that the first concept design was penned as long ago as the end of 2012, gives a hint of the complexity of the endeavour.

With the help of project architect Liam Purnell, assisted by two architects dedicated to the project, Carla Spies and James Hattingh, their goal has been to create a space that would activate the connection between art and architecture.

That is also why the site (one of three options) was selected, because of the proximity of the university's sciences building and the visual arts building flanking the centre.

"It makes sense that those three [buildings] should be linked," says Mathews.

It also complicated the challenge because it meant they would be building across one of Pretoria's main arteries, Lynnwood Road.

And yet, because of their approach, it will heighten the visual appeal as well as the visibility of the centre. They have turned the bridge into a huge feature wrapped in lightweight concrete cloth, based on the shweshwe fabric so loved by all South Africans, that reaches across the exterior and interior. This "cloth" displays many features, including a play of light and shadow, also turning the bridge into an expansive sight when it is illuminated at night.

"It almost looks like fairy lights glistening in the middle of the road," says Mathews about this design feature, which has strong South African connections embracing all its people.

THE BUILDING WILL PROFOUNDLY CHANGE THE LANDSCAPE OF THE CAMPUS AS WELL AS THE CITY

The bridge is also a connector between the public and the students and academics, the two campus sites and the diversity that is embraced on campus.

The other reason for the site selection is that while it has one section on the main Hatfield campus, the section that crosses to the far side of Lynnwood Road will offer the public easy access to the galleries, as well as to a restaurant that will be part of the complex and an inviting addition for museum visits.

Aerial view: The Javett Art Centre at the University of Pretoria reaches across Lynnwood Road. / Hein Dedekind

Apart from the bridge, which is an exhibition space itself and offers visual invitations to the other galleries, the Mapungubwe gallery, which will house one of the most important collections entrusted to the stewardship of the University of Pretoria, is the other focal point of the centre, towering into the sky. It adds to the dominance of the building not only because of the design but also its height.

The building will profoundly change the landscape of the campus as well as the city. When complete, it will comprise nine distinct exhibition spaces, one of which will be housed in the iconic bridge and feature the Javett Foundation's collection of 20th-century South African art and contemporary collections from the university as well as private donors.

Director Christopher Till is planning exciting rotating exhibitions and students from across the university will have rolling exhibitions to visit in the dedicated student gallery. With its focus on the art of Africa, the centre will include a sophisticated department for restoration of artworks and an auditorium that can be used for performances or public lectures.

Other design features that had to be taken into account were heritage buildings in the vicinity, which are reflected in the design of the facing walls of the new structure; trees that had to be maintained; the extension of the main artery of the university known as Tukkie Laan; and the inclusion of two main squares. These are the Art Square, to be used by art and architecture students on either side, and the Museum Square, which is the public entrance to the galleries from different public parking spaces.

Before any of this even started, Mathews, who has just been awarded the Medal of Honour for Visual Arts (Architecture) by the Suid-Afrikaanse Akademie vir Wetenskap en Kuns, went on a 10-day museum tour courtesy of the Mellon Foundation. He was accompanied by the late Stephan Welz, who was instrumental in the appointment of his architectural firm with Prof Antony Melck and Prof Karel Bakker from the department at UP where Mathews studied.

The intense tour of various world-class institutions was a learning curve. They visited everything from restoration spaces to storage facilities. They were also introduced to curators and studied the way they shaped their exhibitions. All of this had an influence on the final design.

With something as all-encompassing as the Javett Art Centre, they had to find a unifying leitmotif to bind the various elements, such as the bridge wrapping, the faceted concrete shell structure of the Mapungubwe "mountain", galvanised steel pergolas and all the other building elements.

The solution was found in the colour scheme determined by the concrete cladding – a natural light grey. When various elements need to be separated, they will use charcoal as the shadow colour.

Anyone who knows the architect will deem this a perfect fit – not only because of his innovative design skills, but also because he has always combined art with architecture.

"I am an ambassador for the visual environment," says Mathews. His firm designed, among others, the Nellmapius Bridge on the N1 highway, the New Mosima Bridge as gateway into SA (expected completion date at the end of 2018), Transport Architecture Tshwane Rapid Transport stations in the historically sensitive Pretoria central business district (for example, Rissik Trial station opposite the Old Synagogue); and various award-winning educational buildings for city schools, including Afrikaanse Hoër Meisieskool and a new music centre for Afrikaanse Hoër Seunskool. He and his Cool Capital team also hosted and designed the 2017 South African Pavilion at the Venice Biennale.

He is satisfied that he and his team have a good hold on this enormous project. "I am very confident in the collective brain at work here."

The building is scheduled to be completed by the beginning of 2019

Ambitious: The Javett Art Centre in the making. The first concept design was produced as long ago as 2012, but the complex is now set for completion early in 2019. It will comprise nine distinctive exhibition spaces. / Liam Purnell

Figure 686 Article published in Business Day Life, 19 July 2018 (De Beer 2018:8)



PORTFOLIO

Size: 12989m²
Completed: 2019
Client: University of Pretoria
Location: Hatfield and South Campus of the University of Pretoria

Opened officially on Heritage Day in 2019, the Javett-UP Art Centre at the University of Pretoria is an exciting new museum that promises to become a new "home to the art of Africa" and can be seen as Gauteng's counterpoint to the Cape's Zeitz Museum of Contemporary Art Africa and Norval Foundation. A partnership between the philanthropic Javett Foundation and the University of Pretoria (UP), the impressive Javett-UP is one of the largest new art museums to open in South Africa in recent years, with an exciting mandate that seeks to engage students and the public with the creativity and diversity of African art, from the ancient to the beautifully contemporary. Architecture by Mathews + Associates Architects and Landscape Architecture by GREENInc, this project truly is its own work of art.

Pieter Mathews from Mathews + Associates Architects, a Pretoria-based architecture firm, designed this exquisite building. The Javett Art Centre at the University of Pretoria consists of a public art gallery and Mapungubwe museum linked to an open museum square which includes a restaurant and outdoor exhibition space located in a publicly accessible portion of the University's South Campus. The gallery extends over Lynnwood road with a bridge gallery which includes a pedestrian concourse, stitching together the University's Hatfield Campus and South Campus and touching down on a new University Arts Square positioned above a new student gallery.

BRIDGE GALLERY STITCHING TWO CAMPUSES

The Javett Art Centre at UP provides a public showcase for our national treasures elevating art firmly into the public domain while celebrating and extending the original historic 'Tukkielaan' over Lynwood Road, strengthening the cultural spine of the University of Pretoria.

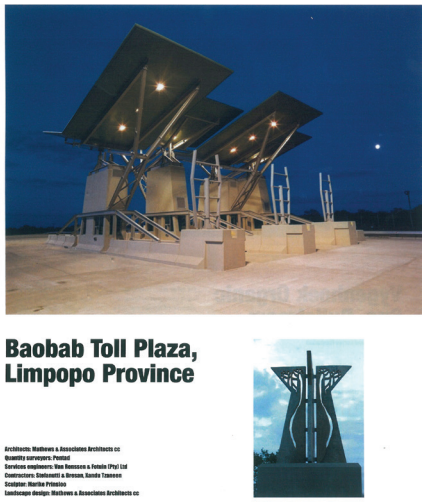
The pattern of the sunscreen panels on the western side of the bridge provides a cooling solar filter for the building, is a graphic representation of the Shweshwe cloth fabric which has been a part of South African life. This blue fabric has always been a great binding element in South Africa, proving to be very popular with people from all cultures, backgrounds and walks of life – Pedi (shweshwe), Indian (printed), English and Afrikaans (sislap).

prolandscaper.co.za | 39

Figure 687 Article published in Pro Landscaper, June 2020 (Javett Art Centre: A work of art 2020:39)

5.8. The Baobab Toll Plaza

The Baobab Toll Plaza is a metaphor for the giant trees of the area. A journalist described it fittingly with the following heading to her article: "Moving giants" (Earthyear 2002:17).



Baobab Toll Plaza, Limpopo Province

Architects: Mathews & Associates Architects cc
Quantity surveyors: Pentad
Services engineers: Voss Rossouw & Fotwin (Pty) Ltd
Contractors: Stefanutti & Bressan, Basele Tsaneen
Sculptor: Hlarhie Prinsloo
Landscape design: Mathews & Associates Architects cc

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Figure 688 Article published in Architecture South Africa, July/August 2005 (N4 Diamond Hill Toll Plaza 2005:12-13)



Figure 689 Page 129 of Contemporary South African Architecture in a Landscape of Transition (Deckler, Graupner & Rasmuss 2006:129)



moving giants

Article courtesy of Earthyear



A tale of how a major road made way for precious trees

Between Makhado and Beit Bridge, National Route 1 (N1) spans a 90km section of the national road network. Over the years, this section deteriorated badly and was in dire need of rehabilitation and upgrading, to make it safer for road users.

The main route between South Africa and Zimbabwe, the N1 also serves the northern parts of Limpopo Province, so both heavy vehicles and tourists use this road extensively. Recent traffic counts indicate that, of the approximately 1 730 vehicles entering Musina on a daily basis, 508 are heavy vehicles.

The N1 crosses the Soutpansberg mountain range to the north of Makhado and traverses the baobab tree reserve to the south of Musina. This created a major challenge for the project team: how to minimise the impact of road-widening and realignment on the baobab trees, for which the area is renowned. Some of the trees affected by the alignment are over 3 000 years old and weigh more than 100 tons.

Assessing impacts

As required by law, before any reconstruction could begin, an environmental impact assessment (EIA) study had to be done. An independent environmental consultant was appointed to do this on behalf of The South African National Roads Agency Ltd (SANRAL).

There are about 40 000 baobabs in the Musina area. Local residents regard them as natural features with a high conservation value. During the public participation part of the process, the best-known baobabs (such as the famous Lê-Boom) were identified as specimens with high tourism value, which should not be moved.

The EIA reached the conclusion that, by applying sound environmental management principles, the actual impact on the baobabs could be significantly reduced.

BY THE WAY | 17

Figure 690 Article published in Concrete Trends, October 2002 (Moving giants 2002:17)

6. Conclusion: Public Reading

In Scott Dadich's documentary, *Abstract: The art of design*, Olafur Eliasson declares "… that [he] wanted to hand over the responsibility for experiencing the artwork to the participant" (Dadich 2019). Chapter 6 demonstrated the experiences of members of the public (the participants) through an analysis of artworks inspired by, photographs of, and articles and social-media comments on our oeuvre, as well as nicknames given to our work by the public. This chapter illustrates how the E-D mindset, and the way it has been expressed by MAAA through specific divergent competencies, has assisted in creating memorable encounters and explains how the narratives expressed by our work are understood by the public. In some cases, interpretations are different from what we intended. I see this as positive. It confirms what my architect-colleague Henri Comrie said (after I wrote a citation for the Free State Institute of Architects regional merit awards on URBA's lecture hall for the Sol Plaatje University in Kimberley): "Buildings should speak for themselves. The synthesis of what architecture should be must be experienced by the average Joe" (Comrie 2019).

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GLOSSARY

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ABSA

ABSA stands for Amalgamated Banks of South Africa, founded in 1991. The banks that merged to become ABSA were United Bank, Volkskas Bank, Allied Bank and Trust Bank.

Adhocism

Improvising through the use of materials and human resources which are at hand.

A Re Yeng

The name of a public bus rapid transit (BRT) service in Pretoria, rolled out in 2014. A Re Yeng means "Let's Go" in Setswana.

Afrikaans

One of the 11 national official languages in South Africa, and the author's home language. Afrikaans developed from 17th Century Dutch spoken in South Africa , and was influenced by European, KhoiKhoi and Cape Malay languages. The Genootskap van Regte Afrikaners [Society of True Afrikaners] was launched in Paarl, Western Cape, in 1875 to gain recognition for the language.

Afrikaanse Hoër Meisieskool Pretoria (AHMP)

A public Afrikaans-medium high school for girls founded in 1920 and situated in the suburb of Clydesdale in Pretoria.

Afrikaanse Hoër Seunskool (AHS)

A public Afrikaans-medium high school for boys founded in 1920 and situated in the suburb of Clydesdale in Pretoria.

AMCU trade union

The Association of Mineworkers and Construction Union was formed in Mpumalanga, a South African province, in 1998.

Andi Norton

The organiser of the 2020 Stellenbosch Triennale who is also a board member of the Stellenbosch Outdoor Sculpture Trust (SOST).

Andrew W. Mellon Foundation

Based in New York City in the United States, the Andrew W. Mellon Foundation, simply known as the Mellon Foundation, is a private organisation with five core areas of interest, and endowed with wealth accumulated by banker, industrialist and philanthropist Andrew Mellon of the Mellon family of Pittsburgh, Pennsylvania.

AngloGold Ashanti Barbier-Mueller Gold of Africa Collection

This collection was begun in 1922 by Joseph Mueller, a Swiss art collector, and formed part of the collection of African art he assembled over a fifty-year period. His daughter and son-in-law continued his passion for collecting art, establishing the Barbier-Mueller Museum in Geneva, Switzerland which, with its diverse collections, has become world-renowned. The collection is currently on loan to and displayed at the Javett Art Centre at the University of Pretoria.

Angus Taylor

Pretoria-based South African sculptor known for powerful, and often monumental and realistic, sculptural works.

Annemarie Meintjes

The Johannesburg bureau chief and deputy editor of Visi design magazine. Its head office is based in Cape Town.

Anthony Melck (Professor)

Principal and Vice-Chancellor of UNISA (University of South Africa) from 1999 to 2001, and subsequently a member of the Executive Committee of the University of Pretoria until 2018.

Anton van Wouw (1862–1945)

Dutch-born South African sculptor regarded as the father of South African sculpture. He resided in Pretoria. Some of his works include the statues of Paul Kruger, Jan Hendrik Hofmeyr and Martinus Theunis Steyn, as well as Woman and children, located at the Voortrekker Monument, Pretoria.

Arts on Main complex

A mixed-use creative hub in Johannesburg's urban regeneration precinct called Maboneng. The precinct consists of artists' studios, galleries, eateries, shops, etc .

Association of Arts, Pretoria

An association, based in Pretoria, to promote local artists and sculptors.

August, The

Bicycle race initiated by the author's father in 1952. It became a major event at the University of the Free State and took place annually until 2007.

Baker & Fleming

The partnership, based in Johannesburg, between Sir Herbert Baker (1862–1946) and Francis (Frank) Leonard Hodgson Fleming (1875–1950). Baker is the renowned English architect of the Union Buildings as well as the government complex in New Delhi, India.

Barrisol

A patented architectural product for which fluorescent tubes covered by stretched ceiling film are used to create the illusion of natural light (established in 1969).

BASA

Business and Arts South Africa (BASA) is a public benefit organisation with the aim to promote the arts. It acts as a joint initiative between government and the private sector.

Bernard Akoi-Jackson

Dr Bernard Akoi-Jackson is a Ghanaian academic, artist and writer. He was one of the eminent African curators of the 2020 Stellenbosch Triennale.

Boer maak 'n plan

An Afrikaans phrase referring to a boer (pioneer), the colloquial name for Afrikaner, making a plan to find a solution to a problem. Similar to the Indian jugaad, meaning a flexible approach to problem-solving that makes use of available local resources in an innovative way.

Bokkie

Directly translated into English it means "little buck" . The title of a bronze sculpture by Elly Holm (1911–2000), currently on permanent display at the AHMP.

Botha and Van Rouendal

A partnership between the late Peet Botha and Larry van Rouendal. The firm was based in Lichtenburg, South Africa. The author worked for the firm as a student.

Boukunde

The name of the building that houses the Department of Architecture at the University of Pretoria. Afrikaans translation for Building Science .

Braak, Die

A piece of land in the centre of historic Stellenbosch, South Africa. The name is derived from the Dutch word for "fallow land".

Braak Pavilion

A temporary architecture pavilion designed by Mathews and Associates Architects for the 2020 Stellenbosch Triennale on Die Braak.

Brian Sandrock (1925–1990)

This eminent architect's firm, Brian Sandrock Architects, was responsible for numerous public buildings in Pretoria, such as the University of South Africa and several buildings for the University of Pretoria.

Britti

Name of a commercial company that specialised in clay products throughout South Africa. The factory was closed before the turn of the century.

Brooklyn Circle

A prominent traffic circle in Brooklyn, a suburb of Pretoria.

BRT

Abbreviation for Bus Rapid Transit.

Burg Lodge Burg

A partnership formed in 1936 between Johannes Rienk Burg (1874–1960), Clement Scarr Lodge (1910–1967) and James Stadler (Jimmy) Burg (1907–1989), with offices in Springs and Pretoria (both in Gauteng).

Business Day

National South African news publication based in Johannesburg. Available in print and online. Part of the Arena Holdings Group.

CB Swanepoel

Architect, researcher and perspectivist Charles Bilson Swanepoel (1932–2004), better known as Swanie , was a lecturer at the University of Pretoria and practised in the same city.

Christelle Webb Joubert

South African journalist and presenter of an Afrikaans arts series for RSG Radio, run by the public broadcaster SABC.

Citi Golf

Five-door hatchback manufactured in South Africa by Volkswagen from 1984 to 2009.

Clinton Harrop-Allin

Art historian and academic at UNISA. Author of Norman Eaton, Architect: A study of the work of the South African architect Norman Eaton 1902–1966, published by Struik Publishers in 1975.

CNC

CNC stands for Computerized Numerical Control, a computerized manufacturing process in which pre-programmed software and code controls the movement of production equipment.

Coert Steynberg

Coert Laurens Steynberg (1905–1982) was a renowned South African sculptor, and medallist, who worked in stone, marble, bronze, copper and wood.

Conrad Thys

An artist of colour who made a name for himself during the apartheid era and beyond. In 1984 he held an exhibition of his work at the Association of Arts in Lichtenburg. It sold out.

Cool Capital

A guerrilla biennale that took place in Pretoria in 2014 and 2016, founded by the author and organized by Mathews and Associates Architects. Some installations became part of the official South African Pavilion at the 2016 La Biennale di Venezia.

Corobrik

A major national manufacturer and distributor of clay bricks, pavers and other building materials. Multiple factories are located across South Africa.

COVID-19

The coronavirus disease (COVID-19) is an infectious respiratory disease. The coronavirus was first detected internationally at the end of 2019 and has been declared a world-wide pandemic by the World Health Organization.

CS Property

A Stellenbosch-based South African construction company, which served

as contractors for the 2020 Stellenbosch Triennale.

DEKAT

A well-known award-winning Afrikaans design and lifestyle magazine, published by Elzilda Becker in South Africa.

Decorex

Annual trade show, held in Johannesburg and Cape Town, focussing on decor and interior design.

Design Indaba

Annual South African design conference to expose local designers to international trends across the design disciplines.

Diamond Hill Toll Plaza

Toll plaza on the N4 (National Roadway 4), designed by the author with Karlien Thomashoff and completed in 2004. It derives its name from the largest gem-quality diamond ever found, discovered in the nearby town of Cullinan.

Die Rapport

An Afrikaans-language weekly Sunday newspaper in South Africa, published by Media24.

Dieter Holm (Professor)

Dietrich (Dieter) Holm, head of the Department of Architecture at the University of Pretoria from 1986 to 1996, is one of the forerunners of sustainability in architecture. He was a partner and founding member of Holm Jordaan Holm where the author completed his practical training.

Jan van der Merwe

Dr Jan van der Merwe is an installation artist and academic at the Tshwane University of Technology (TUT) in Pretoria.

DS+R

Diller Scofidio + Renfro (DS+R) is a design studio whose practice spans the fields of architecture, urban design and installation art in New York City.

DSTv

Abbreviation for Digital Satellite Television. DSTv, launched in 1995, is a Sub-Saharan African direct-broadcast satellite service owned by MultiChoice.

Ductal®

A Lafarge Holcim registered concrete-fibre-reinforced product used for sculptural concrete effects.

Durban July Handicap

A South African horse race for thoroughbreds, held annually on the first Saturday of July since 1897 at Greyville Racecourse in Durban, KwaZulu-Natal.

Dutch Reformed Church

The Dutch Reformed Church was established in South Africa with the arrival of Dutch immigrants. This church represented the largest Christian denomination of the Netherlands and, for many years, of Afrikaners.

EC Steijn

The late Miss Elizabeth C Steijn was the former principal of the Afrikaanse Hoër Meisieskool Pretoria (AHMP). She bequeathed part of her estate towards the building of the school hall.

Elzilda Becker

Award-winning South African publisher, producer and owner of DEKAT, a well-known Afrikaans design and lifestyle magazine.

JT Kemp

Johannes Theodorus (Joe) Kemp (b. 1941, ret.) was an architect and educator specialising in the technical aspects of construction in the Department of Architecture at the University of Pretoria.

Fibrecrete

A construction-grade concrete, consisting of a uniformly blended and properly proportioned mixture of aggregates, cement, admixtures and special synthetic reinforcing fibres.

Form, Scrap and Order

The name of an exhibition held at the Association of Arts in Pretoria where the sculpture works and assemblages by the author and his sons were exhibited in 2011.

Fransi Phillips

South African philosopher with published works mostly in Afrikaans in various genres, including fiction, poetry and prose.

Free State

One of nine provinces of South Africa. Previously the Orange Free State (OFS), its capital is Bloemfontein, where the University of the Free State is situated.

Fried Contemporary Gallery

Contemporary art gallery in Brooklyn, Pretoria, founded by Prof Elfriede Dreyer. It closed during the COVID-19 pandemic.

Frieda van Schalkwyk

The late Frieda van Schalkwyk was a gallerist and curator of the Guild Gallery at Holm Jordaan Holm's offices, which later became the Old Arts Gallery at the University of Pretoria.

Gauteng

Gauteng is one of the nine provinces of South Africa. The name, derived from the Sotho-Tswana languages, means "place of gold". Situated on the Highveld, Gauteng is the smallest province in size with the highest GDP.

Gauteng Freeway Improvement Project

Launched in 2007, the Gauteng Freeway Improvement Project was implemented to ease the increasing congestion on roads in the province.

Gegrond

Afrikaans translation for "grounded" or "well-founded".

General Koos de la Rey

Jacobus Herculaas de la Rey (1847–1914), better known as Koos de la Rey, was a South African military officer who served as a Boer general during the Second Boer War. De la Rey also had a political career and was one of the leading advocates of Boer independence.

Gerard Moerdijk

Gerard Leendert Pieter Moerdijk (1890–1958) is a well-known South African architect. He is best known for designing the Voortrekker Monument, built in honour of the Afrikaans Voortrekkers. His firm was also responsible for numerous church buildings throughout South Africa. The author was christened in one of these churches.

Gladys Steyn

Gladys Evelyn Steyn (1890–1989) was the first female advocate in South Africa. She was the daughter of the Orange Free State's last presidential pair, Marthinus Theunis and Rachel Isabella Steyn.

GREENinc

An award-winning South African landscape architecture and urbanism consulting studio based in Johannesburg, managed by Anton and Annamari Comrie and Andrew Kerrin.

Grietjie Lee

South African artist based in Pretoria and specialising in cementitious relief panels and artworks.

Groenkloof

A suburb of Pretoria. The name is Afrikaans for "green gorge".

Gus Gerneke

Architect and author Carl (Gus) Gerneke is a former lecturer at the University of Pretoria's Department of Architecture who inspired the author and many others to think outside of the box.

Hans Wegelin

Hans Willem Wegelin (b. 1940) is a retired South African architect and lecturer (later professor) at the Department of Architecture of the University of Pretoria. Author of Construction specifications & standards for southern Africa and the Construction Primer for Southern Africa (2009).

Hatfield Campus

Main campus of the University of Pretoria, located in Hatfield, a suburb of Pretoria.

Hazelwood

A suburb of Pretoria.

Hector Pieterson Station

A BRT (bus rapid transit) station named after the struggle hero, Hector Pieterson, who was shot during the Soweto uprising in 1976.

Heinrich Kammeyer

South African architect and academic with a PhD in Architecture . His field of expertise includes urban and landscape design. He lectured at the University of Pretoria and the University of Witwatersrand (Wits).

Henri Comrie

Henri Pierre Comrie (b. 1965) is a minimalist South African architect at URBA Architecture, Urban Design and Master Planning. He is a contemporary of and studied with the author.

Henry Pretorius

Architect, academic and former head of the Department of Architecture at the University of the Free State in Bloemfontein. Principal of the firm Typology Architects who designed the alterations and additions to the building of the above department.

Hoërskool Waterkloof

A public Afrikaans-medium co-educational high school situated in the eastern suburbs of Pretoria in the Gauteng province.

Holm Jordaan Holm Architects

Architecture practice founded by Dieter Holm, Albrecht Holm and Gerrit Jordaan. The Pretoria-based architecture firm specialised in urban design, restoration and sustainability. The author completed his internship at this office. The firm later merged with Gary White Architects and currently practices as NEWURBAN Studios, also based in Pretoria.

Huis Abraham Fischer

Huis Abraham Fischer, or Vishuis as it is also known, was the first hostel on the University of the Free State Campus. It is named after Abraham Fischer (1850–1913), prime minister of the Orange River Colony in South Africa.

Impala Platinum Holdings Limited (IMPLATS)

Platinum mining company based in Rustenburg, South Africa, with the Royal Bafokeng Nations as the largest shareholder.

Impala

Medium-sized antelope that roam the savannah and woodlands of eastern and southern Africa.

Ischia Ortner

Pretoria-based architect and former president of the Pretoria Institute for Architecture.

Jack Parow

Zander Tyler, better known under his stage name Jack Parow, is a South African rapper.

Jacques Gerber

Former partner of the author (Mathews & Gerber Architects) who currently practices architecture in the United Arab Emirates.

JAG

The Johannesburg Art Gallery is situated in Joubert Park in the city centre of Johannesburg, South Africa. It is the largest gallery on the African continent, but had to close due to the decay of its urban surroundings.

Jeremy Rose (1963–2015)

Acclaimed South African architect and principal of Mashabane Rose and Associates CC (MRA), formed in Johannesburg in 1995.

JHGC

The Johannesburg Holocaust & Genocide Centre is a non-profit museum raising awareness of the Holocaust and the 1994 genocide in Rwanda.

JTB Theron (Professor)

Former academic and member of the executive at the University of Pretoria.

Kappie

The Afrikaans word for "bonnet", a type of cloth hat that had been used by the female Voortrekkers (pioneers) for protection against the sun.

Karel Bakker

Prof Karel Anthonie Bakker (1956–2014) was for many years a lecturer at, and later the head of, the Department of Architecture at the University of Pretoria. His fields of specialisation were urban and architectural conservation, urban regeneration, heritage theory, heritage impact management, interpretation and presentation of heritage, shared built heritage, African built heritage and architectural history and pedagogy.

Karl Jooste

The Pretoria architect Karl (Karel) Jooste (1925–1971) was also employed by Nel, Nel, Storm and is known for his brutalist architectural approach.

Karlien Thomashoff

Pretoria-based architect who partnered with the author for the design of the Diamond Hill Toll Plaza. Currently co-director at Thomashoff & Partner Architects.

KEE Enterprises

A South African commercial property development firm based in Pretoria and Stellenbosch.

Kengo Kuma

Kengo Kuma (b. 1954) is a Japanese architect and professor in the Department of Architecture at the University of Tokyo.

Khanyisile Mbonga

Main curator of the 2020 Stellenbosch Triennale. She is currently based in Cape Town.

Khoisan

The Khoisan people were the first inhabitants of southern Africa and one of the earliest distinct groups of Homo sapiens. They endured centuries of gradual dispossession at the hands of every new wave of settlers, including the Bantu, whose descendants make up most of South Africa's black population today.

Kiepersol

The name of an indigenous tree, also known as the cabbage tree. This tree with its unique beauty and unusual shape proliferates in the Lowveld area.

Klipkerk

The Afrikaans translation for a church built from dressed rock or stone. The name the inhabitants of Lichtenburg gave to the local Dutch Reformed Church.

Koshuis

Afrikaans translation for a hostel or students' residence.

Kovsies

Derived from the Afrikaans name Kollege Oranje Vrystaat. Kovsies is the colloquial name for the University of the Free State.

Kruithuis

The Dutch/Afrikaans word for a building where gunpowder and ammunition is stored.

Kunstekampus

Translated from Afrikaans it means "art campus", and refers to the Art Campus at AHS (Afrikaanse Hoër Seunskool) in Pretoria.

KykNet

A South African Afrikaans-language television channel. It was launched on the DSTv satellite service in October 1999.

Laerskool Pretoria-Oos

An Afrikaans-medium primary school situated in the suburb of Brooklyn, Pretoria, opposite the University of Pretoria.

Lafarge

Lafarge is a French industrial company specialising in three major products: cement, construction aggregates and concrete.

Lewis Levin

South African architect known for the design of Africa's third holocaust museum, the Johannesburg Holocaust & Genocide Centre (JHGC). He currently resides in the Netherlands.

Lichtenburg

A farming town situated in the North West province of South Africa, and the author's home town.

Lichtenburg Association of Arts

A disbanded satellite affiliate of the Association of Arts in Pretoria, which was based in Lichtenburg in the Willem Allandale Gallery.

Lientjie Wessels

Chef and restaurateur who studied fine arts. She is based in Pretoria.

Lizzy Staunton

South African film director for Top Billing, a lifestyle magazine programme for the South African Broadcasting Corporation (SABC).

Lynette ten Krooden

Professional artist based in Pretoria and specialising in painting.

MAAA

Mathews and Associates Architects.

Mamelodi

Part of the City of Tshwane Metropolitan Municipality, located northeast of Pretoria in Gauteng, South Africa. The township was set up in 1945 by the then Apartheid Government.

Mapungubwe

The Kingdom of Mapungubwe was a medieval state, located in modern South Africa at the confluence of the Shashe and Limpopo rivers, south of Great Zimbabwe. The name is derived from either TjiKalanga or Tshivenda, and might mean "hill of jackals".

Mapungubwe Gold Collection

A collection of gold artefacts recovered from a royal grave on Mapungubwe Hill in 1932 by archaeologists from the University of Pretoria. The most well-known artefact, the golden rhinoceros, is made from wood and covered in thin sheets of gold.

Marthinus Versfeld

Marthinus Versfeld (1909–1995) was a South African philosopher. From 1937 to 1972 he taught at the University of Cape Town. He was celebrated as a researcher, enjoyed the recognition of the South African literary community, and was known as an opponent of the apartheid system.

Mathews & Gerber Architects

Partnership between Jacques Gerber and the author, established in 1995 and dissolved in 2000. This firm was based in Pretoria.

Memory Box stations

The name given by the author to the TRT (BRT) stations that were designed for sensitive heritage precincts around Pretoria.

Michael Javett

Michael Javett is a retired businessman who studied law at the University of the Witwatersrand and practiced as an attorney at Webber Wentzel. He is the seed donor for the Javett Art Centre at the University of Pretoria.

Middelburg

A large farming and industrial town in the South African province of Mpumalanga.

Mieliebelt Motors

Car-service centre in Lichtenburg in the North West province. Mieliebelt is Afrikaans for an area where maize farming takes place.

Mike Mavura

Trustee and deputy curator of the 2020 Stellenbosch Triennale. He holds a PhD in International Relations from Rhodes University and currently works as a Change Agent and Lecturer in the Visual Studies Department at the Stellenbosch Academy of Design and Photography.

Modern Art Projects (MAP)

Founded by Harrie Siertsema, architect turned chef, and patron of local contemporary and modern art in South Africa.

MoMA

The Museum of Modern Art located in Midtown Manhattan, New York City . It plays a major role in the development and collection of modern art, and is often identified as one of the largest and most influential museums of modern art in the world.

MT Steyn (President)

Martinus Theunis Steyn (1857–1916) was a South African lawyer, politician and statesman. He was the sixth and last president of the independent Boer republic, the Orange Free State, from 1896 to 1902.

Musina

Musina is the northernmost town in the Limpopo province of South Africa. It is located near the confluence of the Limpopo and Sand rivers and the border with Zimbabwe.

N1

The N1 is a national route in South Africa that runs from Cape Town through Bloemfontein, Johannesburg, Pretoria and Polokwane to Beit Bridge on the border with Zimbabwe.

Narrative depth

Narrative depth is achieved by revealing the narratives of sites and cultures by conveying stories through architectural elements, thereby making buildings contextual.

National Party

The National Party, also known as the Nationalist Party, was a political party in South Africa founded in 1914 and disbanded in 1997. It was ethnicity-based and promoted Afrikaner interests in South Africa.

Nel, Nel, Storm Architects

A partnership between Philip Nel, Theodorus Cornelis Nel and Gideon Storm. The firm, previously Philip Nel & Vennote, was based in Pretoria. The author and Gideon Storm formed the last partnership of the firm.

Nicholas Clarke

Dr Nicholas John Clarke (b. 1976) is a practising architect, academic, lecturer, heritage practitioner and writer. In 2021 he received his PhD from TU Delft. He currently resides in Utrecht in the Netherlands.

Nieuw Muckleneuk

A suburb of Pretoria.

Norman Eaton

Norman Musgrave Eaton (1902–1966) was a South African architect, based in Pretoria, who is best known for his design of banks and houses.

North West province

North West province is an inland South African province that borders Botswana. It includes parts of the former Transvaal, Cape Province and Bophutatswana.

Norval Foundation

An art museum and centre for research, education and the exhibition of 20th- and 21st-century visual art from South Africa and beyond. Located in the Steenberg area of Cape Town.

NWK (Noordwes Koöperasie)

A farmer's cooperative specialising in the agricultural maize sector with its headquarters in Lichtenburg, South Africa.

Ocean I

A South African manufacturer of furniture made from recycled materials.

Old Synagogue

The old Jewish synagogue in Paul Kruger Street, Pretoria, bought by the Apartheid Government's Department of Justice and converted into a courthouse for the Rivonia Trial (see below).

Orange Free State

The Orange Free State was an independent Boer sovereign republic under British suzerainty in Southern Africa during the second half of the 19th century. It surrendered and ceased to exist after it was defeated by the British Empire at the end of the Second Boer War in 1902.

PC amount

Prime cost amount, used as a place keeper in the quantity surveyor's bill of quantities for an unknown amount such as the price of tiles, to be used at the stage of construction.

Peaked cap

Headgear or hat made of cloth, usually with a visor or peak. Also called a baseball cap.

Peter Rich (b. 1954)

Eminent South African architect. Winner of various international awards and member of the American Institute of Architects (AIA), amongst others.

PIA

The Pretoria Institute for Architecture, a voluntary association to promote architecture.

Pierneef

Jacobus Hendrik Pierneef (1886–1957) was a South African landscape artist, generally considered to be one of the best of the South African old masters. His distinctive style is widely recognised, and his work was greatly influenced by the South African landscape.

Pieter Greyvensteyn

Design lecturer at the Tshwane University of Technology (TUT), Department of Architecture.

Pinhole photography

A simple camera without a lens but with a tiny aperture. It effectively consists of a light-proof box with a small hole in one side. Light from the scene to be photographed passes through the aperture and projects an inverted image onto the opposite side of the box; this is known as the camera obscura effect.

Plascon

Well-known South African paint manufacturer and distributor.

Pretoria Boys High School

A semi-private English-medium high school for boys situated in the suburb of Brooklyn in Pretoria.

Propositional density

"The relationship between elements of a design and the meaning they convey" (Lidwell, Holden & Butler 2003:190).

RAW Studios

South African furniture designer and manufacturer based in Pretoria. Also known as RAW Modular.

Rina Stutzer (b. 1976)

A South African contemporary artist working in the collective art studio Dionysus Sculpture Works, based in Pretoria.

Rivonia Trial

The Rivonia Trial took place in South Africa between 9 October 1963 and 12 June 1964. The trial led to the imprisonment of Nelson Mandela and the others among the accused who were convicted of sabotage and received life sentences at the Palace of Justice, Pretoria.

Rirkrit Tiravanija

A Thai contemporary artist.

Roger Fisher

Professor Emeritus Roger Charles Fisher (b. 1951, ret.) is a well-known South African architect, author and heritage practitioner. He is a former head of the Department of Architecture at the University of Pretoria.

RSG

Radio Sonder Grense, i.e. Radio Without Borders, is an Afrikaans-language radio service run by the South African Broadcasting Corporation for the whole of South Africa.

Rustenburg

A mining town at the foot of the Magaliesberg mountain range. Rustenburg is the most populous city in North West province.

Saadjies

Afrikaans translation for "seeds" or "grains of seed". The aim of this Cool Capital initiative was to make sculpture more accessible to the viewer and the artist. The uncurated collection of more than 100 small sculptures was formally exhibited in five South African locations, and sculpture-bombing took place in more than eight international cities.

SABS

The South African Bureau of Standards (SABS) is a South African statutory body that was established in terms of the Standards Act, 1945 (Act No. 24 of 1945). It continues to operate in terms of the latest edition of the Standards Act, 2008 (Act No. 29 of 2008), and serves as the national institution for the promotion and maintenance of standardisation and quality in connection with commodities and the rendering of services.

SAIA

The South African Institute of Architects.

Sanna Swart

South African steel sculptor based in Pretoria. She was also a founding member of Boudiccea Productions, the first female-run foundry in South Africa.

SANRAL SOC Ltd

South African National Roads Agency.

Schalk le Roux

Professor Schalk Willem le Roux (b. 1945, ret.) is an educator, writer, publisher and former head of the Department of Architecture at the University of Pretoria.

Sculpture-bombing

The prank-like placing of small pieces of sculpture in unexpected places and positions in towns and cities, and then documenting them with photographs. Initiated at the 2016 Venice Architecture Biennale as a statement against the over-regulation and bureaucracy of the Biennale Foundation.

Second Anglo-Boer War

Also known as the War, the Anglo-Boer War, or the South African War, it was fought from 1899 to 1902 between the British Empire and the two Boer republics over the Empire's influence in Southern Africa.

Shukran

The name of the Indian suburb in Lichtenburg, established after the Group Areas Act was enforced. Translated from Arabic it means "thank you very much".

Sieg de Beer

The late Sieg de Beer graduated at the Department of Architecture at the University of Pretoria. He was a Pretoria-based architect who was also employed by Nel, Nel, Storm as designer. The author was the last partner in this firm.

Silwerskerm Fees

A South African Afrikaans film festival launched to support the local film industry. It is usually held in Camps Bay, Cape Town.

South African Party

The South African Party (SAP, later the United Party) was established in 1910 by General

Jan Smuts, General Louis Botha and Barry Hertzog. Smuts lost against Dr DF Malan in the election of 1948.

South Campus

The southern campus of the University of Pretoria, located across from the main campus on Lynnwood Road in Hatfield, Pretoria.

Soweto

A township of the City of Johannesburg Metropolitan Municipality in Gauteng. The name is geographically derived from, and an English syllabic abbreviation of, South Western Townships.

Spray and Cook

Brand name for a type of sprayable cooking oil.

Stand van Poësie

A sculptural bicycle stand designed by Mathews and Associates Architects for the Stellenbosch Outdoor Sculpture Trust that is permanently exhibited at the Pniel Museum. Directly translated into English it would mean "state of poetry".

Stephan Welz (1943–2018)

The renowned South African auctioneer and founding member of the auction houses Stephan Welz & Co (Cape Town) and Strauss & Co (Johannesburg).

Strijdom van der Merwe

A South African award-winning land artist who uses materials he finds on site to create his artworks.

Struik

South African publishing house based in Cape Town, currently knowns as Random House Struik (Pty) Ltd.

Sunday Times

The Sunday Times is South Africa's biggest Sunday newspaper. Established in 1906, it is distributed all over South Africa and in neighbouring countries.

Sybrand Wiechers (1970- 2022)

A third-generation South African sculptor based in Pretoria. His grandfather is sculptor Coert Steynberg and his mother is artist Isa Steynberg (b. 1942).

TC Nel

The late Theodorus Cornelis Nel joined the practice of Nel, Storm to form Nel, Nel, Storm. After his death the author was invited as partner in his place.

Theresa Hardman

Adjunct Associate Professor at the University of the Free State, academic at Nelson Mandela University, and architect from Gqeberha (formerly known as Port Elizabeth).

The Sample Workshop

An exhibition that took place in the basement of the Javett Art Centre at the University of Pretoria whilst the art centre was still under construction. Some of the artworks have remained in the basement, whilst others were removed after construction had been completed.

Top Billing

Top Billing was a South African lifestyle television programme that aired weekly on SABC 3 .

Transvaal Provincial Administration (TPA) building

The administrative headquarters for the Transvaal province of South Africa, before 1994. Now vacated, it is located near Church Square, Pretoria.

Trevor Lloyd Evans

Pretoria-based architect and educator well known for his architectural water colours.

TRT

Refers to the Tshwane Rapid Transit system, which is the equivalent of international BRT or Bus Rapid Transit systems.

Tshwane

The Tshwane Metropolitan Municipality represents the local government of northern

Gauteng province in which Pretoria is situated. The metropolitan area is centred around the city of Pretoria, with surrounding towns and localities included in the local government area.

Tukkie Lane

A major pedestrian artery on the University of Pretoria main campus. The walkway connects the Old Arts Building with Boukunde and the Department of Visual Arts, thus forming a cultural spine.

Tuscan Style

A faux style developed after 1994 in South Africa to emulate the architecture found in the Italian countryside.

TUT

Tshwane University of Technology is an institution of higher education in Pretoria, serving the greater Tshwane Metropolitan Municipality.

TWA

Terminal for Trans World Airlines, New York, designed by Eero Saarinen.

Typology Architects

South African architecture firm based in Bloemfontein in the Free State, responsible for upgrading the building for the Department of Architecture at UFS.

United Building Society

The United Building Society South Africa was included in the amalgamation of United Bank, Volkskas Bank, Allied Bank and Trust Bank, which became known as Amalgamated Banks of South Africa, currently ABSA.

UP

The University of Pretoria.

URBA

URBA Architecture, Urban Design and Master Planning is a South African architecture firm based in Cape Town. Henri Comrie and Amálie Comrie are the directors.

Urban acupuncture

A design approach promoting urban regeneration at a local level, supporting the idea that interventions in public space don't need to be ample and expensive to have a transformative impact.

Vasgepende Vlietendheid

The title of a temporary sculpture by Rina Stutzer that was located at the AHMP. Translated from Afrikaans into English it means "trapped ephemerality".

Venice Architecture Biennale

The Venice Architecture Biennale is an international cultural exhibition hosted bi-annually in Venice, Italy, by the Biennale Foundation. The first Venice Architecture Biennale took place in 1980.

Visi

A South African design, architecture and lifestyle magazine. It is available in print and online.

Volkskas Bank

Volkskas was a South African bank founded in 1934 as a cooperative loan bank. It became a commercial bank in 1941. In 1991 it was bought out to amalgamate with 3 others banks to become the current ABSA Bank.

Voortrekkers

Boers who took part in the Great Trek identified themselves as Voortrekkers, a Dutch/Afrikaans word meaning "pioneers" or "pathfinders" (literally "fore-trekkers") in English.

Waterkloof

An upscale suburb of Pretoria.

Western Transvaal

The western part of the Transvaal, a province of South Africa from 1910 until 1994. A new constitution subdivided it following the end of apartheid. The name "Transvaal" refers to the province's geographical location to the north of the Vaal River.

Willem Boshoff

One of South Africa's foremost contemporary artists who regularly exhibits nationally and internationally. Prof Boshoff (b. 1951), who serves as a mentor for postgraduate students at the UFS Department of Fine Arts, is also a researcher and achieved an NRF 1 rating in 2022. He resides in Johannesburg.

Willie Meyer

Willem Olaf Meyer (1935–2006) was an eminent South African architect who graduated from the University of the Witwatersrand. Founder of Meyer Pienaar and Partners.

Wim Botha (b. 1974)

South African sculptor, trained at the University of Pretoria, who currently has a studio in Cape Town.

Yolandi Vorster

Professional South African Architect at YV Ateljee. She was previously employed by Mathews and Associates Architects, and assisted with the 2016 Venice Biennale and the Braak Pavilion in 2020.

ZAR

The Zuid-Afrikaansche Republiek (in Dutch), abbreviated ZAR; the South African Republic in English; and Suid-Afrikaanse Republiek in Afrikaans. Also known as the Transvaal Republic, it was an independent republic in Southern Africa which existed from 1852 until 1902.

ZCC Church

The Zion Christian Church is one of the largest African-initiated churches operating across Southern Africa.

Zeitz Museum of Contemporary Art Africa (MOCAA)

The Zeitz Museum of Contemporary Art Africa is a contemporary art museum located in the Silo District of the V&A Waterfront in Cape Town, South Africa. It is the largest museum of contemporary African art in the world. The museum opened on September 22, 2017, and was designed by British architect Thomas Heatherwick.

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Mathews and Associates Architects are well known for dabbling in a wide variety of endeavours that often venture beyond what is usually understood as architectural practice. Within an ever more specialised construction industry, some could see this as an unacceptable risk. However, this kind of open-ended, interdisciplinary form of practice and design has equipped the firm in unexpected ways and has enriched their practice and contributed to a growing sense of design awareness.

In this PhD, Explorative divergence is formulated and presented as an open-ended, interdisciplinary working method, enabling architects to resist the urge towards over-specialisation and cultivate a more receptive mindset. It supports the aim to create architecture which is rich in the symbiosis of two core ingredients, namely propositional density and narrative depth.

The experimental interplay between these ingredients offer a compelling route towards creating works of architecture with which members of the public may form rich and varied relationships, aiming to increase their bias for meaningful or good architecture.

To unearth the characteristics of explorative divergence as it pertains to the practice and its oeuvre the focus will be on three dominant divergencies or core competencies as lenses through which it can be understood: curation (composition, judgement, and intuition); sculpture (referring to aspects of making, form, materiality, texture, material and construction, and innovation); and cinematic architectural choreography (investigations into sequence, routes, movement, framing and temporal experience). These divergencies where scrutinised by means of an anecdotal autoethnographic method to show how tacit knowledge has informed the oeuvre and opened a way towards an architecture of explorative divergence.