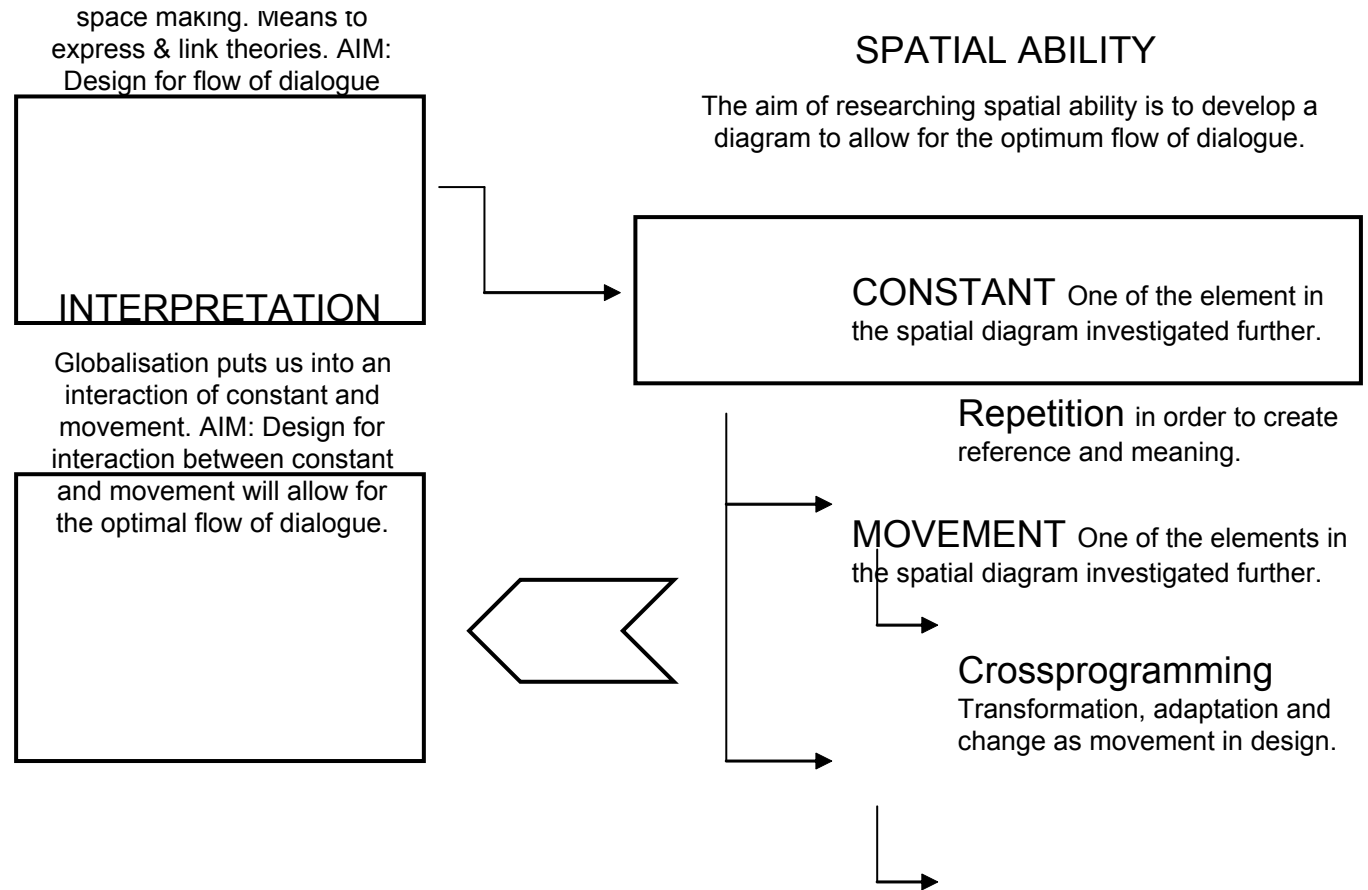


contents

University of Pretoria etd – Novellie, J (2007)

list of illustrations >>	4	
list of abbreviations >>	17	
introduction >>	11	
theoretical exploration >>>	14	introduction
		dialogue
		spatial ability
		spatial expression
		interpretation
context >>	22	
precedent studies >>	52	
design investigation >>	67	
technical investigation >>	88	
design proposal >>	108	
conclusion >>	117	
addendum a: schedule >>	121	
references >>	125	

Theoretical Exploration



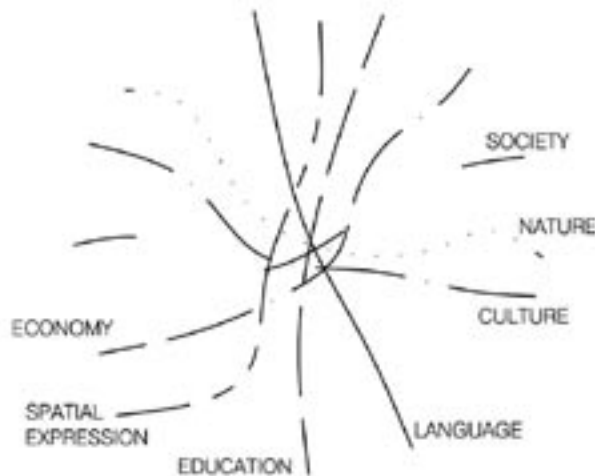
The diagram serves as a table of content and illustrates the theory investigation process that follows.

2.1 Dialogue

2.1.1 Introduction

In their book, *A Thousand Plateaus* (1993:21-23), philosophers Gilles Deleuze and Felix Guattari introduce the concept of a “rhizome”. They explain the rhizome as a system of strands that “connects any point to any other point”. (*ibid.*) Within the rhizome the strands are in dialogue with each other in a non-hierarchical manner and where they meet a “plateau” is formed. The “plateau” refers to an area of intensities usually found in the middle of the rhizome.

The characteristics of a rhizome is explored by drawing a diagram. The rhizome illustrated in the diagram is that of modern existence of a city dweller. This is presented as strands of culture, economics, society, language, education, nature and spatial expression. These strands are in ‘dialogue’ with each

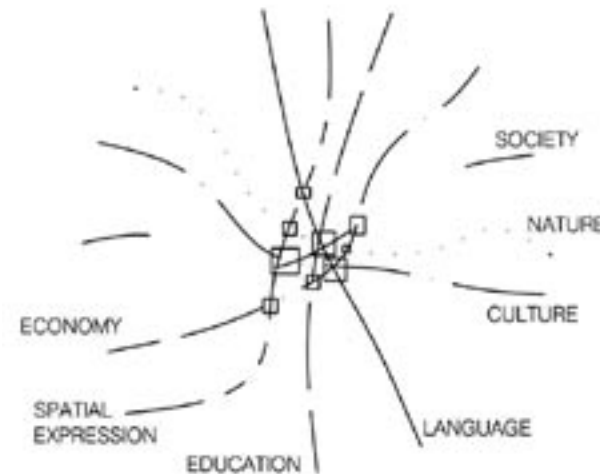


other when they connect with another.

2.2.2 Investigating the “rhizome” and its “plateau”

RHIZOME

The diagram illustrates strands of a rhizome encountered in everyday existence of a city dweller. In the centre where the strands connect a plateau of intensities occur. This is where the dialogue between the strands is most vibrant.



INTENSITIES

The points of interaction are clustered around the plateau forming an area of intensity. This model can be used in the design of an urban area or building. By analysing the intangible qualities of a site, a map of the strands and their interaction points can be identified. The design should accommodate the interaction between strands and therefore allow for a flow of dialogue between the strands.

2.2.3 Problems with the dialogue

In order to survive and contribute in our society, it is important to understand the flow of dialogue or the *zeitgeist* of the time. Not understanding the dialogue can render a person outside the social network he finds himself in. A break in dialogue can occur due to illiteracy where a person is unable to read the world that surrounds him. Author Godwin Sogolo, *Foundations of African Philosophy, A Definitive Analysis of Conceptual Issues in African Thought* (1993:26), writes about the translation of African literature. The original meaning of a text is often lost or changed during the process of translation because one language cannot accommodate the full potential of the other. This is an example where a break in dialogue can occur.

There are many Institutes for African Language Studies abroad, especially in the United States of America. Even the main archives for African languages are situated in Massachusetts. The language institutes situated in Africa have very little interaction with the institutes abroad. This can be seen as a break in dialogue as research is not shared. This project will aim to be a point of interaction between the institutes.

The break in dialogue can also be translated into space making principles. For space making to evolve it is important for one generation to build on a previous generation’s knowledge. If this pattern is broken a loss of heritage will occur.

Theoretical Exploration

2.2.4 Objective

The following dialogues will be investigated in the design process:

- Dialogue between the user and the building
- Dialogue between users
- Dialogue between the building and its context
- Dialogue between the building and culture
- Dialogue between African languages
- Dialogue between African and other languages
- Dialogue between the tangible and the intangible
- Dialogue between constant and transformative

The aim of a rhizome is to attach any point to any other point. Care must be taken not to isolate any one of the dialogues. The objective is to allow them to interact without hierarchy.

2.2 SPATIAL ABILITY

2.2.1 Theoretical background

In the book, *African Nomadic Architecture: Space, Place and Gender* (1992:125), Labelle Prussin discusses the understanding of spatial qualities by different cultures. This is called “spatial ability” and refers to how well a person can present knowledge about space and organise spatial information. Cross-cultural psychologist, J.W. Berry, discusses a test for spatial ability called “field dependence/independence”. (Berry 1992:124-129)

“Field-dependence” is the term used for persons who show a reliance on external and visual cues, resulting in a stronger

consciousness of boundary and limitation. This cognitive style shows a literal interpretation of space.

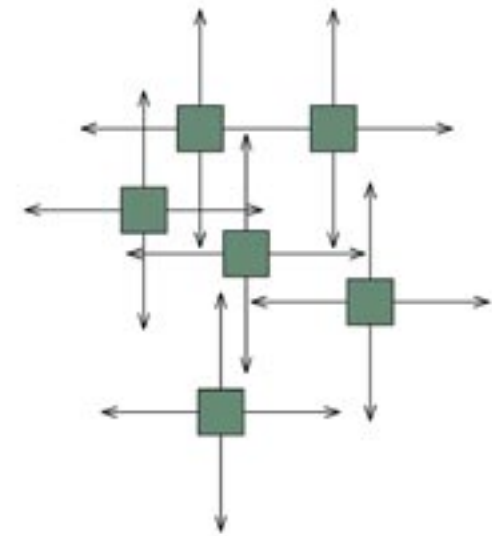
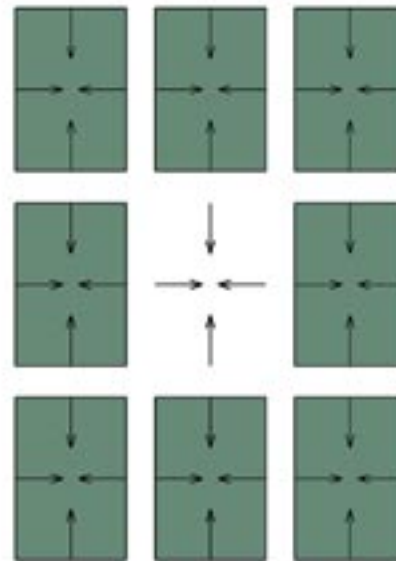
A greater understanding of space is called “field-independence”. This is achieved when the individual expresses such a grasp of space that he/she can think beyond the natural boundaries. Field-independence occurs when the person thinks about a space from within and relies on bodily cues within themselves to perform the tests.

John Berry concludes that sedentary people show field-dependent tendencies where people with a more nomadic (or in this case transformative lifestyle) show field-independence.

Neil Leach, *Forget Heidegger in Designing for a Digital World* (2000) criticises Heidegger for having principles applying to a sedentary society when he states that the way in which we engage with architecture can no longer be seen as “a static condition, but a dynamic process.” (*ibid.*:26)

Leach’s argument is supported by the concept of globalisation transforming the world into a state of change and adaptation. City dwellers are becoming nomadic and our cities and buildings should take on ‘nomadic’ characteristics.

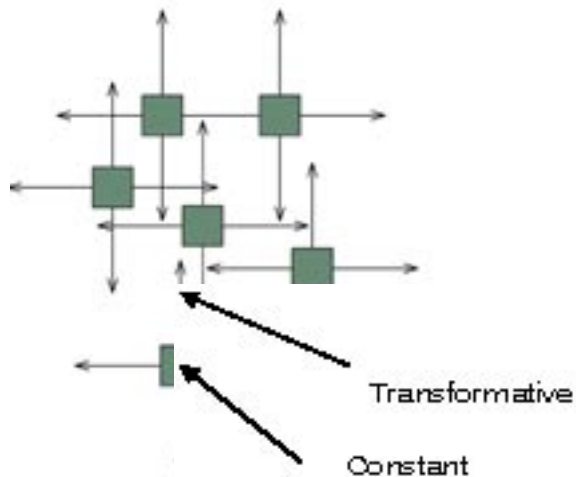
The main characteristic of nomadic architecture, according to Labelle Prussin, is that it is a “process”, reacting to the changes in environment and need, and not an end product. (*ibid.* p.42)



When considering the two diagrammes devised from the field-dependence/independence test, it is clear that the independent model will allow for a dynamic process and a greater flow of dialogue. For that reason the field-independent diagramme is chosen as a guideline in the analysis of the site and the design process.

The field-independent diagramme allows for the optimum flow of dialogue by focussing on the strands and their interaction with each other. This diagram can be used as an analytical tool as seen in 2.2.2. The diagram will be investigated further in 2.3.

2.3 SPATIAL EXPRESSION



Space making principles as well as language develop through a combination of sedentary and transitional movements. In almost all South African cultural groups there is a strong history of movement and settling from where a new culture, language, space-making technique and all other elements in the dialogue is created.

The following investigation is an exploration of staying and movement in space making principles:

2.3.1 CONSTANT

2.3.1.1 Characteristics of a Constant in Architecture

REPETITION
CONSISTANT
REFERENCE
STATIC

Labelle Prussin maintains that meaning is given by repetition. (1995: xxi) Prussin discusses how nomadic movement can allow for a constant to occur through repetitive behaviour. Places visited by East African nomadic tribes on a regular basis become significant.

Archaeologist, Bruce Chatwin, refers to the same phenomena in the Aboriginal people of central Australia. Aboriginals record the characteristics of a landscape in songs which are repeated each time the area is visited. If tribes include an area in its songs, this becomes a sacred place. (Chatwin, B. 1987: 119)

In a sedentary context too, areas used regularly over time show a pattern of significance and convenience. It is therefore important to identify areas of repetition and to preserve them as they can serve as a reference for transformative elements developing

around them.

2.3.1.2 Constant as generator of design

Further investigation calls for an analysis of the constants on the site and its surroundings. A constant can be identified by investigating use. Areas showing a high amount of activity over time are constants. Activity can refer to movement patterns, density and layers of history. These will be used to analyse the site to identify the constants.

2.3.2 MOVEMENT

“Our nature lies in movement, complete calm is death.” Pascal, Pensees (from Chatwin 1987:183)

In an article titled ‘Anywhere out of this world’, Baudelaire makes the following observation:

“I think I would be happy in that place I happen not to be, and this question of moving house is the subject of a perpetual dialogue I have with my soul.” (Chatwin 1987:183)

2.3.2.1 Characteristics of Movement in Architecture

CHANGE
ADAPTATION
DYNAMIC
TRANSFORMATION

2.3.2.2 Movement as generator of design

“Mobility in space necessitates a set of architectural transformations that enhance and hone spatial awareness.” (Prussin 1995:188)

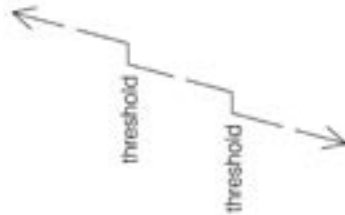
Theoretical Exploration

Thus, a change in perception of a space will allow for a greater grasp of the individual's position in the space and therefore will lead to field-independence.

Uninterrupted flow = movement as a constant



Interrupted flow = movement as transformation



Thresholds allow for conscious transformation of spaces and a dialogue between different spaces.

2.3.2.3 Bernard Tschumi's "Cross-programming"

Bernard Tschumi's principles of "cross-programming", as explained in *Architecture & Disjunction* (1994: 253-254) will be used to investigate transformation in architecture. In this publication he proposes principles of adaptation and change.

'Architecture is the combination of space, events and movement without any hierarchy.' (*ibid.* 162)

S	E	M
Space	Event	Movement

Tschumi's concept of cross-programming refers to two aspects:

- Activities must be able to overlap.
- Building must be able to adapt to different programmes over time.

Both of these concepts will allow for a flow of dialogue by emphasising transformation, adaptation and change as movement in design.

Overlapping of the programme within a design will allow for users to cross paths and for vibrant urban interchange. The unexpected interaction resulting from this is the very life of a building.

In accordance with the above theory, a building should be designed for a wide range of events. When this is done from the design process it should have a much longer lifespan and will be more sustainable.

Dialogue between function and form results in spaces of urban interchange. In this way the flow of dialogue is not only increased between the different users of the building, but also between the users and the building/urban surroundings.

2.3.2.4 UN Studio's "Systems" and "Kaleidoscope moments"

UN Studio's Ben van Berkel and Caroline Bos present their concept of "deep planning" in *Domus* (2002 p.100-105). They state that architecture for today should allow for movement and flow. To them a project should not result in a "thing" but should be a "system" of continuous development. An analysis

of movement as done by UN Studio would consist of the following:

- Types of movement and direction of the various trajectories,
- Their prominence in relation to other transportation means on the site,
- Duration, and
- Links to different programmes and interconnections. (*ibid.*)

This connection between movement and duration is what they refer to as "deep planning".

Van Berkel & Bos also refer to "kaleidoscope moment" where density of movement occurs or where flows of movement intersect.

2.4 INTERPRETATION

2.4.1 Conclusion

The process of globalisation and integration has brought the world closer to us. We, as city dwellers, have the opportunity to interact with other cultures from within our own niche. This act of densification of cities has also resulted in the densification of dialogue, as we are now faced with compacted and layered sets of dialogue.

Individuals are now faced with a dialogue which changes constantly. This means that globalisation has placed us into a state of transformation, even if we are sedentary.

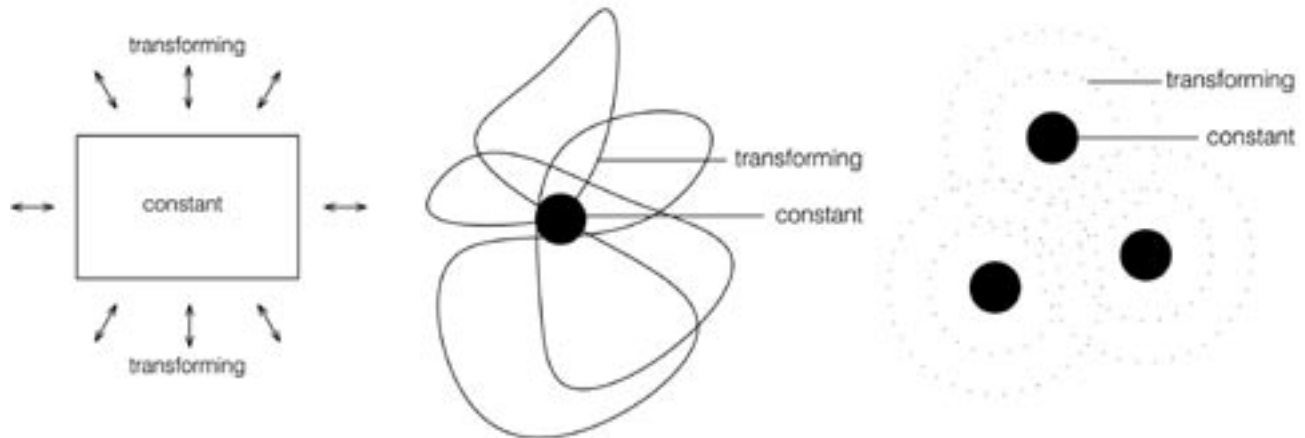
For this reason we no longer have only an 'African Dialogue'

but have changed to having a dialogue in Africa. Therefore we should also aim not to develop African Space but space in Africa.

A space acknowledging this will allow for a balance between elements of consistency and elements with an adaptive, transformative nature. The interaction between these opposites will brake down the dualistic thinking by expressing the dialogue between the two.

Dutch Architect, Ben van Berkel, of UN Studio, remarks that “it’s not enough to design for movement only: you have to build in spaces, activities and intersections where people will leave the flow.” (2002:105) To explain this statement he refers to Schiphol Airport. An area of seating was removed to accommodate a new corridor of shops. The result was a decrease in business for both the new and the existing shops because the movement through the corridor was now too fast for people to stop and shop.

2.4.3 Exploration of interaction between constant and transformative



2.4.4 Exploration of interaction into architecture

