

CHAPTER 7 RECAPITULATION, ACHIEVEMENTS, DELIMITATIONS AND COUNTER-ARGUMENTS, CONCLUSION AND OPPORTUNITIES FOR FURTHER RESEARCH

7.1 RECAPITULATION

This study was initiated by the identification of the properties of various spatial and physical phenomena of the riverain region of the northern Sudan. These characteristics were then intuitively grouped into categories: historical, geographical and cultural settings. The last category is the theoretical setting pertaining to accepted academic paradigms, schools of thought and research methods.¹ This descriptive, pre-iconographic interpretation allowed for the articulation of the main problem of the dissertation. The inquiry required an identification and articulation of an appropriate philosophical approach, and an eco-systemically based description and analysis of the tangible and intangible features of an identified context. Interdisciplinary interpretation was deemed imperative to this approach.

The second level of interpretation, iconological, was speculative. Through initial intuitive gestalt perceptions it was decided that there needs to be a reason behind the frugal physical manifestations of the culture of the specified area. It was then hypothesised that associative, iconographic interpretation can show that there is deeper meaning rooted in an approach to life derived from religious beliefs. This is believed to be a form of architectural expression. A comparison between the tangible and intangible remains of the Funj kingdom and of the earlier kingdoms of Nubia was seen to be a possible method of testing the above statements. A framework could then be constructed that allows further research and facilitates the teaching of architecture in the northern riverain Sudan.

¹ Correspondence was detected among some of the theoretical sources accessed that may not be obvious initially. The author acknowledges various influences in thinking, the major ones being Ecosystemic approaches to architectural history as articulated by Fisher (1992) and applied by Bakker (1999), the interpretative hierarchy of pre-iconographic, iconographic and iconological interpretation as developed by Panofsky for understanding Renaissance art (1967) and adapted by Fisher for use in architectural interpretation (1992), Rapoport's approach to vernacular architecture through the concept of Multiple Characteristics (1990) as well as Habraken's categorizing the environment into various identifiable levels and agents of control (1998).

The main problem and hypothesis were then broken down into 5 sub-problems and hypothesis as shown in the table below, where the final column indicates whether the problems were solved and the hypothesis supported:

<p>Sub-problem 1 Despite the large amount of literature on vernacular architecture, there is no relevant interpretative framework with which to study the selected region, with its particular characteristics. Definitions of architecture exclude vernacular contexts. A philosophical approach thus needs to be identified, and a theoretical base articulated, so that architecture can be viewed eco-systemically within prevalent paradigms of thought and practice.</p>	<p>Hypothesis 1 In a study of the architecture of the northern riverain Sudan, where little architectural interpretation has been attempted and where institutional architecture is almost non-existent, there is relevance in approaching an architectural inquiry from an eco-systemic, inter-disciplinary viewpoint. Architectural theory, which resonates with the realities of a context, may be the basis for a framework for architectural study relevant to the selected region.</p>	<p>Conventional approaches to architecture have been challenged and this approach has been supported by a literature review. A definition of architecture is achieved. A theory base for the study of the architecture of the region is set up. Thus, the problem has been addressed and the hypothesis supported.</p>
<p>Sub-problem 2 The study context needs to be identified eco-systemically. This needs to be initiated by the articulation of social, political, cultural and religious descriptions and the identification of the recurring themes in the literature of the region.</p>	<p>Hypothesis 2 It is believed that through the eco-systemically based identification of recurring themes in the literature of/on the region, essential and incidental attributes of the place and culture can be articulated. This can become a tool in interpretation of tangible/ intangible artefacts, spatial interventions, and social practice.</p>	<p>An eco-systemic construct of the region is achieved through the identification of recurring themes. Thus the sub-problem has been addressed. This is acknowledged as a useful tool of interpretation. Therefore the hypothesis has been supported.</p>
<p>Sub-problem 3 Relevant tangible artefacts need to be identified with a focus on the built environment. This analysis progresses from the level of the body/clothing and is extended to the scale of shelter/house and finally the village/urban centre.</p>	<p>Hypothesis 3 Careful and purposeful selection and analysis of a group of tangible artefacts that refer to the recurring themes can articulate the characteristics of the delineated context on the scale of the body, the shelter and the village, and be used in revealing the meaning inherent in the built culture.</p>	<p>Artefacts, at a variety of scales, have been selected and analysed. Thus the problem is addressed. Scrutiny of the stated problem has led to a deeper understanding of the underlying order in space-use patterns. The reasons behind the tangible manifestation of the culture have been exposed.</p>
<p>Sub-problem 4 Relevant intangible artefacts of the culture of the northern riverain Sudan, need to be identified and analysed to enable further reflection on the meanings behind certain physical and spatial manifestations of that same culture.</p>	<p>Hypothesis 4 Careful and purposeful selection and analysis of relevant intangible artefacts can articulate the hidden characteristics of the built culture of the northern riverain Sudan region and elaborate on the themes that guide this study.</p>	<p>A structure of intangible phenomena is designed. This has allowed reflection on the mean inherent in environmental expression. Thus the problem is resolved. The themes of the study have been elaborated using this structure and influence of the intangible construct on tangible manifestations has been substantiated. The hypothesis has been supported.</p>
<p>Sub-problem 5 Relevant tangible and intangible artefacts of the culture of the northern riverain Sudan need to be placed into an eco-systemic framework for use in architectural interpretation, research and education. This framework must enable articulation of structural relationships between intangible and tangible aspects of built culture and place making in the northern riverain Sudan.</p>	<p>Hypothesis 5 An understanding of the built culture of the northern riverain Sudan requires the identification of significant relationships between tangible and intangible aspects of the region. Inclusion of the studied relationships into an eco-systemic framework will expose the role of intangible culture in space appropriation patterns and its implication on the character of place making in northern riverain Sudan, where a rich culture is expressed through architecture.</p>	<p>An eco-systemically based interpretative framework is constructed, thus addressing the sub--problem. Spiritual beliefs are established as a major motivator behind spatial intervention. A general comparison between various historical periods further illustrates this statement. Thus the hypothesis has been supported.</p>

Table 7.1 Sub-problems, hypothesis and outcomes.

From the culmination of the achievements indicated in the above table, it can be stated that the main hypothesis is supported and main problem resolved. Throughout the process, it was found that some of the themes identified had immense influence on the built culture of the region; some of them had more subtle influence. All of the information found, relevant to the initial research question asked, is given whether or not the results are in accord with the initial assumptions. None of the hypothesis above were defeated yet some of the themes emerging out of the literature review did not have as profound an influence on the built culture of the region as initially assumed by the author. In some cases this may simply be a question of insufficient information. This is explained in more detail in the table below that portrays achievements.

7.2 ACHIEVEMENTS

The following table breaks down the achievements of this research in terms of the initial themes identified in Chapter 3.

Identified themes in literature	Tangible and intangible manifestations	Aspects for special consideration
Social conscience	Extensions of social conscience, religion and ethics onto day-to-day activities and space appropriation have been elaborated in Chapter 4. This has been broken down into various themes and patterns that determine place-making activities in Chapter 5. These are further translated into cultural/natural space perceptions, levels/agents of control and abstract imitation of original forms. In Chapter 6, ethics as an externalised force determining ritual and unifying people is recognised.	This aspect of northern riverain Sudanese culture has been determined as a major constituent of a framework on research into the architecture of the region. Traditional visual homogeneity that has resulted from social conformity is acknowledged. This is validated as a major driving force in spatial intervention and material expression. Though the initial assumption that social conscience plays a role in place making has been supported in this study, it still provides further opportunity for research.
Social interaction systems	Social conscience influences place making through the social interaction systems that it generates. This is broken down in the social networks of men and women in Chapter 4 where interaction and space interventions are understood in terms of body images and extensions of these onto clothing, shelter and urban developments. This is further articulated in Chapter 5 where community networks are explained as well as the dissolution of boundaries between public and private and men and women zones. In Chapter 6, the transience and fluidity of the places created to host social and religious rituals is acknowledged as a prevailing approach to 'place'.	This, again, has proved to be a major determinant of place making and is another constituent in this framework. Systems of interaction are very elaborate and complex, yet their material/spatial manifestation is very simple and understated. Thus, one of the initial conjectures of the thesis regarding the frugal expression of the culture has proved to be correct.
Kinship systems	The kinship systems of this region have been identified as being complex. This permits the recognition of socio-economic differences. It is speculated in Chapter 4 that there are certain patterns of interaction between people generated by kinship. These do not necessarily always coincide with religious decree. This determines peoples'	This issue is still largely speculative and is based on personal observation and experience. It provides an opportunity for further investigation.

	dress forms and movement within a house to a significant degree. This issue emerges again in the discussion on social systems in Chapter 5.	
Slavery	The historical reality of the slave trade is acknowledged as well as its generation of racist attitudes prevalent till today. In Chapter 4, it is seen how these attitudes influence the seclusion of women in terms of dress forms and movement within the home. It is also debated whether slavery had any manifestations in house form or urban layouts regarding class segregation. The socio-economic set-up is further articulated in Chapter 5, where slaves are identified in the hierarchy of importance during the regions' main historic episodes. It is seen that, again, despite its deep cultural influence, racism and separatist attitudes are not so visible on house forms and urban layouts today as they probably were in the pre-Islamic eras.	This issue is acknowledged as a major component of this framework and offers excellent opportunities for comparative studies and case studies. Lack of information has led to some of the conclusions being speculative and tentative.
Trade routes	Migratory patterns are highlighted. The routes used for movement determined the future places of settlement as well as foreign influences. In Chapter 4, it is seen that many centres of learning, that is later towns, developed on trade routes. Chapter 5 illuminates how the passing of caravans affected the daily activities of people and the location of the suq area.	This aspect is a valuable addition to the framework. Its importance has been justified through the research. Morphological documentation of urban centres, as case studies, which could have been used to further develop the argument is lacking.
Harsh environments	The environment is looked at in terms of climate and landscape. The northern riverain Sudan is generally perceived as a harsh land. The maintenance of thermal comfort using garments and shelter forms is acknowledged in Chapter 4. Environmental control is also looked at in terms of movement patterns in courtyards, determined by sun rotation. Another vital aspect explored in Chapter 5 is the influence of climate on power structures in a society. Centralised and decentralised systems of power are seen to have greatly influenced the material culture of the region.	This factor has proved to be of pivotal importance in the study of material culture in the region. This has been substantiated considerably through reference to current literature. It perhaps provides one of the richest prospects for further research. It may answer many questions about the drastic changes in the material culture of the region through time. It also brings to light pertinent queries as to what extent climate change has influenced human behaviour in the past, and how humanity will face future climatic deterioration.
Sufism	Sufism is determined as a major driving force in the region. Its form is similar to that of Sufism in other regions, but it has many uniquely Sudanese qualities. This is clearly manifested in urbanisation patterns as seen in Chapter 4. The existence of the 'other world', that of the spirits and their hierarchical progression, is explained in Chapter 5. The influence of this on peoples' spatial perceptions is deemed crucial.	The importance of Sufism in the cultural set-up is corroborated through the literature and analysis. This makes it an important component of this framework. The Sufism of the region is a vehicle for the amalgamation of the African and the Islamic. This is confirmed through the available data and subsequent analysis. An aspect that needs further inquiry is the influence of Sufi hierarchy, line of ascendancy, on spatial hierarchy. This can be studied through the analysis of the <i>madeeh</i> , for example.
Shaykh's cult	Sufism is expressed through the <i>shaykh's</i> cult. This is marked by the <i>shaykh's qubba</i> , the importance and characteristics of which are explained in Chapter 4. Spatial implications determined by the socio-cultural-economic positioning of the shaykh in society are looked at in Chapter 5. Appropriation of spaces for the cult rituals has proved to be an aspect of extreme importance.	Life rotates around the shaykh, thus the <i>shaykh's</i> cult is an important part of this framework. The <i>halaqa</i> as the most sacred construct of the cult is acknowledged and this provides for an exciting opportunity for research into whether its spatial influence has been broader.

Table 7.2 Themes particular to the northern riverain context and aspects for special consideration.

It can be seen that various assumptions and hypotheses have been validated, while others require further research. This is based on the context, as it exists today, yet in the thesis different eras have been looked at to validate certain points.

7.3 DELIMITATIONS AND COUNTER-ARGUMENTS

The delimitations of this study have been listed in Chapter 1.

The area under investigation has been restricted to the northern riverain region. This delimitation has been substantially supported in the study. It refers to an “idea” of a homogenised place and people rather than a politically sub-divided country. The inclusion of Egyptian Nubia may have been more accurate in terms of a unified identity, yet the problems that would have arisen in terms of the literature search would have complicated this research. It must also be noted that certain peoples of the north still maintain their strong Nubian identity, that is, as it was before the Arab infiltration. They maintain many of their cultural traits and language. These may be better identified with the Egyptian Nubians. This has not been dealt with in this study.

It was stated initially that there would be no specific time limit to the study and no chronological order in the design of the thesis: this has proved problematic as it has led to some confusion as to what is located in the past as compared to present practices and beliefs. This aspect is perhaps a flaw in the research procedure.

It was also indicated that the artefacts to be examined will be selected at the discretion of the author and are not intended to be exhaustive. Existing conclusions and interpretation of artefacts influenced the selection of these artefacts. Interpretation is inextricably interwoven with analysis – sometimes it becomes a special aspect of analysis rather than a distinct operation.

The built environment is looked at in its totality rather than as individual buildings. This has been a successful approach as it has enabled the researcher to expose hidden forces that structure the use of space and place making activities in the region. Non-quantified data has therefore been subjected to analysis, quantification and categorisation. This would not have been achieved through the analysis of individual buildings.

Another aspect that may be critically viewed relates to the philosophical premise of the study: the superimposition of a rationalist structure on an existential inquiry may be seen as a contradiction. This is a possible aspect for further research.

7.4 CONCLUSIONS: INTERFACE: ISLAM MEETS AFRICA

The contact of the carriers of Islam with the northern riverain culture of the Sudanese was not one of dominancy, but of interaction. This dynamic resulted in the character of the Sudanese of the northern riverain region as it is today.

Interdisciplinary interpretation has been used to address the issue of how people interact, or have historically interacted, with the environment and how they shape their spaces at the micro and macro levels. An eco-systemic 'construct', a 'reading' of the context as it exists today was articulated to identify the milieu within which the 'artefact' exists and how it developed within a framework of people's beliefs and social interaction systems. The term artefact was defined as any cultural agent and, for the purpose of this study, is not restricted to mean a physical object but has been expanded to include ritual, social practice and linguistic agents and these are explored within their contextual settings.

The selected artefacts cover a progression of scales, from the level of the village/urban centre, houses and the body and clothing forms. This was not decided on from the outset, but rather developed as links emerged through the research between these different forms of expression. From these broad guidelines, linguistic terms became apparent, social practices and sayings that elaborated on the preliminary concepts. The research evolved out of issues pertinent to the area rather than out of an abstract theoretical assignment that may be irrelevant to the region.

The social set-up, religious beliefs and cultural practices evident in the area mean that the accepted categories referring to the built environment could not be clearly identified from the outset. It is difficult to draw the line between public and private. The three domains of dwelling merge: that is the collective dwelling, public dwelling and private dwelling. Collective values dominate rather than individual values, even within the home.

The daily activities, schedules and routines 'make' place and define the architecture. *Mujamalat* and *wajibat* (duties and socialising) are important environmental structuring agents. The line between them appears to dissolve. There is also a thin line between religious and social ritual. Social associations or interactions comprise a vital part of the map that identifies the culture and the people. This has implications on the community unit with which the architectural environment can be identified and interpreted. People share a repertoire of meanings, which they strategically bring into action in the form of social practice. This ultimately influences space appropriation patterns. The multi dimensionality of architecture is inevitable.

It has been found that space and place making are better understood by broadening conventional definitions of architecture. People, activities and networks are seen as the basic canons of architectural place making. As pieces of a puzzle, the tangible and the intangible, can all address the theme of models of habitation. Western social evolutionary theory has been found inadequate when interpretation of the area is attempted. The assumed rise in social complexity that leads to internal stratification and central authority is inaccurate. It was found that social complexity is not necessarily expressed through central authority or more sub-divided spaces in this particular context.

The initial observations of the context led the author to the assumption that there must be some reason for the frugality evident in the physical manifestations of the culture. The economical and restrained forms of expression sometimes appear crude and insipid. Uniformity in form and colour creates a built environment that merges with the surrounding earth tones. The lack of detail or ornament seems to result from an elusive mindset that is hard to grasp or comprehend. Strict compliance to social laws seems to compromise individuality. Through a process of structured inquiry, it has become evident that social structure, which greatly influences the configuration of built form, reflects the character of the natural environment to a great extent. Thus, architectural expression has taken on different forms through time, especially when comparing different eras with drastically different climates.

The physical expression of collective, public or private dwelling, as a concept, results in buildings that become micro cosmos of their surroundings, reflecting the ground, sky and the horizon. The traditional northern Sudanese house, for example, is a

continuum of materials and activities. Nothing is absolutely fixed. The interior surfaces are the exterior surfaces, which are of the earth. Functions alternate easily between in and out, and even between neighbouring houses as well as between the house and the street. The house, courtyard and street have been perceived as a continuum creating an uninterrupted series of spaces and activities. The house alternates between its private and public functions. The street becomes the house when more space is needed for functions usually associated with the private home such as sleep, eating or receiving guests.

Place making activities are guided by people's ability to come to terms with their environment. There is a degree of homogeneity in the built environment of the context under study and personal expressions through the form of the buildings or the use of colour or pattern are only evident in moderation and in a subtle manner – This has been linked quite strongly to communal restrictions – a wish to conform – as well as a belief in frugality. In traditional village contexts, individual houses blend in form and colour with the natural landscape and the surrounding buildings. They express unity with others. Traditional building practice has been elevated and studied with respect to the knowledge embodied within it.

This dissertation studies, from an architectural point of view, one African setting's interaction with Islam. It has proved to be an important interface for the two cultures. From a phenomenological perspective, lived experience is prior to abstract reflection. Whenever we reflect intellectually on experience, we have to go back to the lived world of our experience prior to that reflection.² On submitting that experience to reflection, we make it cognisant. It is acknowledged that on embarking with the study, it was not clear as to what would be achieved: An ecology as the one studied transcends a total understanding. Also, many aspects and relationships may remain concealed due to the limitations of any one analytical perspective or intellectual structuring device.

This study has been an attempt to find a way of partially exposing what is concealed and to put it in a usable format for future researchers.

² According to Popper, without a theory of what to look for, data may not reveal any pattern at all (Gelernter, 1995: 129).

7.5 OPPORTUNITIES FOR FURTHER INVESTIGATIONS

- The philosophical premise of the study may be a possible seed for further critical investigation. The relevance of a rationalist structure for a thesis, which is in essence an existential inquiry, may be analysed in studies on similar contexts or topics.
- The relevance of the research methodology to an African context may be analysed. There are aspects of African studies that are common and some that are unique. These need to be identified by architectural researchers.
- The role of social conscience, religion and ethics on place making.
- The relationship between burial systems and social systems and the impact on the built environment thereof. Illustrations of burial pits of various eras in the study region as depicted in Adams' seminal work, "Nubia, Corridor to Africa" (1977) can be an excellent source for future analysis and interpretation.
- Further study on the relationships between clothes forms and space use.
- The relationships between culture and space use and comparisons between different cultural groupings using the same place.
- Comparison between forms of social expression evident in village and town morphologies throughout the different eras in the region.
- The qualities of streets and open spaces in the region.
- The location of the Shaykh's tomb and territorial claims on land.
- Social interaction patterns and how they influence the structuring space. Though this has been tackled, it can be elaborated through the use of case studies.
- Kinship patterns and how they influence on space use are still to be investigated.
- Slavery and racial perceptions and their influence on space appropriation at the micro and macro scales: Status determined space use. Though the concept of race and space has been touched upon, it needs further research.
- The morphological documentation of urban centres and to what extent their layouts were influenced by passing traders. Emergent towns and their characteristics need to be studied.

- The categorized documentation of buildings, building types, building components, building materials, structural and organisational principles, modular principles and decorative elements in the region of the northern riverain Sudan. The Glossary at the end of this document is brief and is only intended to offer the reader, with no background on the Sudan, a feeling for the context, its colours and textures. It could be expanded in a future study into a comprehensive, systematic document of great value to students, teachers and researchers of architecture.
- More elaborate analysis of climate change through the ages and its influence on social structures and material culture.
- Order and line of authority in Sufism: Extensions of Sufi orders in social structure and space appropriation. The influence of the hierarchical structure evident in the order of authority of the *madeeh*, religious poetry, on spatial hierarchy.
- The spatial influence of the concept of the *halaqa*.
- More elaborate research into the relationship between language and the meanings associated with space and place.
- Different cultural groupings within the northern riverain regions can be more thoroughly investigated: the differences and similarities between them and how these are expressed through place-making patterns. The Nubians at a time in history, prior to Christianity, worshiped fire. Some of the rituals today relate to that era. This has not been tackled in this study; neither has its spatial implications.
- The relationships and similarities between Egyptian Nubia and Sudanese Nubia.
- Railways lines, initially constructed by the British to transport troops and weapons in their fight against the Mahdi's followers, became an important aspect that influenced the location of towns, trades within those towns and town layouts. The collapse of rail travel led to the deterioration of these towns. This could be an aspect of study as important as that of the older trade routes. Comparisons between them would be interesting in terms of different locations and morphological layouts of towns.

- The interpretations in this thesis comprise various speculations and ideas. Actual research findings are portrayed in line with tentative results. No links with research findings of other relevant research findings have been possible, as interpretative approaches to the architecture of the region have not yet been attempted. This study provides such an opportunity for other architects to react critically to an individual interpretation.