



Ain Shams University
Egypt



University of Stuttgart
Germany

Understanding the Historic Urban Landscape of Siwa oasis:

The relationship between human activity and the built environment in the formation of urban landscapes

**A Thesis submitted in the Partial Fulfillment for the Requirement of the Degree
of Master of Science in Integrated Urbanism and Sustainable Design**

by

Aly s. Elsayed

Supervised by

Prof. Dr. Mohamed Salheen
Prof. of Integrated Planning and Design
University of Ain Shams

Prof. Antje Stokman
Professor of Landscape Planning and Ecology
University of Stuttgart

2016

Understanding the Historic Urban Landscape of Siwa Oasis:

The relationship between human activity and the built environment in the formation of the urban landscape

A Thesis submitted in the Partial Fulfillment for the Requirement of the Degree of Master of Science in Integrated Urbanism and Sustainable Design

by Aly S. Elsayed

Supervised by

Prof. Dr. Mohamed Salheen
Professor of Integrated Planning and Design
Ain Shams University

Prof. Antje Stokman
Professor of Landscape Planning and Ecology
University of Stuttgart

Examiners Committee
Title, Name & Affiliation

Signature

Prof. (external examiner)
Professor of (...)
University of (...)

Prof. (Title/Name)
Professor of (...)
University of (...)

Prof. (Title/Name)
Professor of (...)
University of (...)

Prof. (Title/Name)
Professor of (...)
University of (...)



Ain Shams University
Egypt

02/25/2016



University of Stuttgart
Germany

Disclaimer

This dissertation is submitted to Ain Shams University, Faculty of Engineering and University of Stuttgart, Faculty of Architecture and Urban Planning for the degree of Integrated Urbanism and Sustainable Design.

**The work included in this thesis was carried out by the author in the Year 2016
The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.**

07/25/2016

Aly S. Elsayed

Signature

Acknowledgment

To the soul of my **father**...

In memory of my **baby girl** Ziena...

In memory of my **childhood companion** Bonita...

To my beloved **wife**...

To my kind **sister**...

To my loving **mother**...

Finally, I would like to acknowledge my supervisors for their patience and knowledge and to my friends for their constant support...

Abstract

In the recent years, historical cities have been subject to rapid transformation under pressure between demographic increase and continuous need for development. Globalized patterns of development tend to ignore local culture and identity while responding to immediate challenges and needs imposed by modern societies. In consequence, historic urban areas are significantly affected by urban transformations taking place worldwide in the form of planned urban renewal projects or spontaneous rapid urbanization. They became in danger of deterioration and in need for constant preservation and protection. Siwa oasis is an example of a historic city under rapid transformation to which it has been subjected throughout the past decade. It is part of desert vernacular settlements in the Egyptian western desert and the Saharan desert of Africa. The oasis has significantly expanded in the past years while its historic urban areas lost their functional values. With no protection or conservation effort, the historic city is quickly vanishing. In order to explore the problem of historic cities, Historic Urban Landscape HUL is reviewed as an important contemporary approach in the field of conservation. It is an instrumental approach developed by UNESCO in response to the damage to which historic cities are subjected to worldwide. Guided by the concepts and principles of HUL, the research explores the urban landscape of the oasis with the objective of understanding the relationship between the built environment and its users as two main elements of the landscape. The research decodes the formation of the oasis's urban fabric since its emergence. By the end, the research aims to explore how understanding the HUL of the case-study can help in its conservation and revitalization.

Keywords: Historic cities, Historic Urban Landscape, landscape, urban heritage, the built environment, public activity.

Table of Content

1 Introduction.....	17
1.1 Research objectives and questions	19
1.2 Methodology.....	21
1.3 Chapters overview.....	24
2 The historic city: A literature review	27
Part one	
2.1 Historic Urban Landscape concept HUL.....	28
2.1.1 From monumental to urban and from preservation to revitalization: origins in conservation theory and practice.....	29
2.2.2 From image to complex organism: origins in landscape and cultural landscape.....	32
2.3 Principles derived from HUL.....	37
2.3.1 Comprehensiveness	37
2.3.2 Over-layering.....	39
2.3.3 Regeneration of urban heritage.....	40
2.4 Integrity of HUL.....	40
2.5 Building the conceptual model (part.I)	42
Part two	
2.6 Place -making as a union between the tangible and intangible.....	42
2.6.1 Activity as componnt of place-making.....	43
2.6.2 Physical structure as component of place-making.....	46
2.7 Conclusion of chapter: a conceptual framework.....	47
3 Case-study: Siwa oasis analysis	51
3.1 Background of Siwa oasis.....	51
3.2 Formation of the landscape.....	54
3.3 Spatial evolution of urban settlements.....	55
3.3.1 Urban settlements of Antiquity.....	56
3.3.2 Urban settlements of Medieval: Berber Ksar	58
3.3.3 Expansions outside the walls of the ksar.....	62
3.3.4 Modern expansion of the oasis.....	66
3.4 Findings.....	68

3.5.1 Determining the focus study area.....	69
4. Exploring the relationship between the built environment and its users	74
Part one	
4.1 Urban structure typologies.....	75
4.1.1 Vernacular structures.....	75
4.1.2 New-vernacular structures.....	79
4.1.3 Mixed structures.....	81
4.1.4 Modern structures.....	82
4.2 Transformation patterns: a spectrum.....	84
4.3 mapping of physical typologies and transformation patterns....	86
4.4 findings.....	88
Part two	
4.5 Aspects of Siwan daily life.....	90
4.5.1 Arriving to the oasis.....	90
4.5.2 A daily routine and public activity.....	92
4.5.3 Mobility: how they move?.....	93
4.5.4 Gender: where did all the women go?.....	95
4.5.5 Shopping: where do they shop?.....	97
4.6 Basic necessary activities.....	99
4.7 Social meeting as main Form of social activity.....	99
4.7.1 'Khoss': A traditional form of social meeting.....	102
4.7.2 New formation of urban space.....	109
4.7.2.1 Raised platforms as UDF.....	110
4.7.2.2 Private loggias as UDF.....	112
4.7.2.3 General public garden as UDF.....	114
4.7.2.4 Main roads as UDF.....	116
4.7.3 Mosques and maqams: lingering rituals.....	117
4.8 Mapping synergies of urban design features and social activities	120
4.8.1 findings.....	120
4.9 Conclusions on chapter.....	122
5 Conclusion and Recommendation	127
5.1 Summary of findings.....	127
5.2 General conclusion & recommendation.....	132
6 Appendix.....	136

List of Figures

Figure 01: Research procedural framework, source: author, 2016.....	21
Figure 02: The conceptual evolution of landscapes, source: author, 2016.....	33
Figure 03: HUL model for conceptual framework created upon principles derived from HUL, source: author, 2016, inspired from of structure and system model used in research by (Salheen 2001: 25).....	41
Figure 04: Elements of Place, source: author, 2016.....	42
Figure 05: activity spectrum→, source: author, 2016.....	45
Figure 06: synergies of UDFs & activity conceptual diagram, source: author, 2016.	46
Figure 07: Conceptual framework, source: author, 2016.....	49
Figure 08: Map showing the route and settlements network located in the Sahara desert, North Africa , source: author, 2016 based on map by Petruccioli and Montalbano, 2011.....	52
Figure 09: Map showing the five oases of the western Egyptian desert on route network connecting them with Nile valley East, Mediterranean coast North, and the Sahara desert West , source: author, 2016 based on map by Petruccioli and Montalbano, 2011.	53
Figure 10: Map showing the different elements forming the landscape of the oasis, source: author, 2016 based on Google Earth footage 2015.....	55
Figure 11: Analysis of the landscape elements of a panoramic view on the oasis taken from the top of Al dakroun mountains northeast of present Siwa town, source: author, 2016.....	55
Figure 12: Urban growth diagram during Antiquities, source: author, 2016.....	57
Figure 13: Historical reconstruction of Aghourmi acropolis and surroundings, source: painting by Jean Claude Golvin.....	58
Figure 14: Berber ksar model, source: author, 2016.	61
Figure 15: Urban growth diagram during medieval era, source: author, 2016...	62
Figure 16: Depiction of the internal walkways of Shali based on Belgrave's accounts (1923) and drawn over photo of Shali ruins by Al-Shafei (1999), source: author, 2016.....	62
Figure 17: The settlement of Siwa in 1820 by Von Minutoli, Atlas, Pl. 5, source: Fakhry, 1990: 21.....	62
Figure 18: Expansion beyond the ksar model, source: author, 2016.....	64
Figure 19: Urban growth diagram during expansion beyond the ksar, source:	

author, 2016.....	64
Figure 20: Montage showing the urban expansions beyond the ksar, over historical photo by Major T.I. Dun (1933), source: author, 2016.....	64
Figure 21: Montage showing the urban expansions beyond the ksar, over historical photo by Hassanein Bey (1925), source: author, 2016.....	65
Figure 22: Montage showing the urban expansions beyond the ksar, over historical photo by (1933), source: author, 2016.....	66
Figure 23: Comparison of different photos taken at different times for the entrance to the road separating the eastern and western quarters. From top to bottom; Historic shot of the entrance, source: Belgrave, 1923: 113. Shot of the same entrance taken in mid Twentieth century, source: Fakhry, 1990: 23. Shot of the same entrance taken in 2015, source: author, 2015.	66
Figure 24: Modern expansion model, source: author, 2016.....	68
Figure 25: Urban growth diagram during modern expansion, source: author, 2016	71
Figure 26: Spatial evolution findings diagram, source: author, 2016	72
Figure 27: Focus study area with different zones (1-4), source: author, 2016, based on map by Petruccioli and Montalbano, 2011.....	79
Figure 28: Location of the focus study area (the historic city center) within Siwa town, source: author, 2016, based on map by Petruccioli and Montalbano, 2011.	
Figure 29: Vernacular house, source: author,2016.....	79
Figure 30: Deteriorated vernacular house, source: author,2016.....	80
Figure 31: New-vernacular house with a khoss turned into a private loggia in the ground floor, source: author, 2016.....	80
Figure 32: One of the renovated houses owned by local inhabitants which is left un-inhabited, source: author,2016.....	82
Figure 33: Photo shows a renovated new-vernacular structure on the left and a mixed local structure on the right, source: author, 2016.....	82
Figure 34: A mixed structure house rebuilt using stone bricks, source: author, 2016.....	83
Figure 35: A group of four modern structures using concrete roofs, source: author, 2016.	83
Figure 36: A modern structure with bright facade colors, source: author, 2016.....	83
Figure 37: A group of concrete modern structures, source: author, 2016.....	83
Figure 38: Spectrum of transformation pattern, source: author,2016.....	84-5

Figure 39: Mapped structural typologies within the focus study area, source: author, 2016.....	86
Figure 40: Mapped transformation patterns in focus study area, source: author, 2016.....	87
Figure 41: Physical structures divided according to two user groups, source: author, 2016.....	88
Figure 42: Distribution of developed local-physical structures in study area, source: author, 2016.....	89
Figure 43: Road going to the city center passing through the palm groves, source: author, 2015.....	91
Figure 44: Road going to the city center passing through urban settlements, source: author, 2015.	91
Figure 45: Road inside the historic city quarter separating Easterner and Westerner quarters, source: author, 2015.....	92
Figure 46: Road inside the historic city quarter separating Easterner and Westerner quarters, source: author, 2015.....	92
Figure 47: View of the Westerners ‚Garbeyeen‘ settlement on Adrar Mountain from above the ruins of Shali, source: author, 2015.....	92
Figure 48: View of the market square at three different times in the day, from top to bottom: 14:30, 17:00, 18:30, source: author, 2015.....	94
Figure 49: View from inside the marketplace in two different times, left (12:00) and right (17:30), source: author, 2015.....	94
Figure 50: depiction from memory of interviewee (D) regarding his donkey cart, source: author,2015.....	95
Figure 51: Zouq Zouq tradition,depiction from memory of interviewee (D), source: author, 2015.....	96
Figure 52: Top to bottom: standard situation of women riding in the family’s transport with male members riding. school girls in a public school football championship parade, source: author, 2015.....	97
Figure 53: Depiction of old shop in Siwa according to descriptions by Belgrave (1923), source: author, 2015.....	98
Figure 54: New model for shops in the oasis, source: author 2015.....	99
Figure 55: Diagram explaining forms of activities on the activity spectrum, source: author,2015.....	102
Figure 56: depiction of playing by the khoss from memory of interviewee (D), source: author, 2015.....	105
Figure 57: Three examples of large ‚khoss’s, source: author, 2015.....	106

Figure58: The central khoss as shown in historic material, left: historic photo from Hassanein Bey (1925), right: painting from Belgrave (1923), source: author's montage on historic material.....	107
Figure 59: Map showing ,Khoss's (UDF) distribution, source: author, 2016...	109
Figure 60: Variations of raised platforms (UDF), source: author, 2015.....	111
Figure 61: Map showing Raised platforms (UDF) distribution, source: author, 2016.....	111
Figure 62: Variations of private loggias (UDF), source: 2015.....	112
Figure 63: Map showing Private loggias (UDF) distribution, source: author, 2016.....	113
Figure 64: Photos showing Public garden (UDF), source: author, 2015.....	114
Figure 65: Map showing location of public garden (UDF), source: author, 2016..	116
Figure 66: Photos of public parades in market square, source: author, 2015...	117
Figure67: Map showing main roads as Paths (UDF) distribution, source: author, 2016.....	117
Figure 68: Photos of two main mosques in the focus study area, top: westerners mosque, bottom: ancient mosque of Shali, source: author, 2015.....	118
Figure 69: Historic depiction of Zikr sessions taking place in Sidi Soliman tomb, source: Belgrave (1923).....	118
Figure 70: Map showing distribution of mosques and ,maqam' as UDFs, source: author, 2016.....	119
Figure 71: Diagram showing mapped synergies between UDFs (with physical principles) and activities, source: author, 2016.....	120
Figure 72: Map showing active synergies of UDFs and activities, source: author, 2016.....	122
Figure 73: Map showing the layering of the mapping of locally- developed physical structures on the mapping of active synergies. source: author, 2016.....	125
Figure 74: Conclusion diagram 1, source: author, 2016.....	130
Figure 75: Conclusion diagram 2, source: author, 2016.....	130
Figure 76: Conclusion diagram 3, source: author, 2016.....	132



Chapter 1: Introduction

1 Introduction

In recent decades, historical cities, precisely historic urban areas within, have been subject to rapid transformation under pressure between demographic increase and continuous need for development. With the rise of industrialization, globalized patterns of development change the face of historic cities. Patterns that tend to ignore local culture and identity and respond to immediate challenges and needs imposed by modern societies to which traditional cities seem to be inadequate. In consequence, historic urban areas are affected by urban transformations taking place worldwide in the form of planned urban renewal projects or spontaneous rapid urbanization, which eats through its ancient fabric leaving small isolated patches of artifacts and historical sites. It disturbs the fusion between local culture and subsequent urban structures that evolved through centuries left the remaining structures socially and urbanely inactive. Subsequently, they became in danger of deterioration and in need for constant preservation and protection. The threat to the integrity and authenticity of historic cities and the inherited urban landscapes they present is therefore increasingly alarming. According to figures presented to the World Heritage Committee in its 31st session in Christchurch, New Zealand (2007), 39 percent of the 84 State of Conservation reports of cultural properties worldwide focused on the threatening impacts

of urban development and regeneration on World Heritage sites. The 84 sites examined by the committee are part of the total of 830 World Heritage sites inscribed at the time (Ron van Oers, 2010). One can claim that historic cities are in the crossfire between the persistent economic need for development and the cultural necessity of preservation and protection of heritage, or what remains from it.

Siwa oasis is an example of a historic city under rapid transformation to which it has been recently subjected throughout the past decade. Nevertheless it is important to present Siwa as a part of the desert vernacular settlement in the Egyptian western desert and the Saharan desert of Africa. It is positioned within a network of ancient trade routes cutting the Saharan desert across the continent to the Nile delta and is also a part of a five-oases network within the Egyptian western desert. Since few decades, Siwa has been under transformation which has increased rapidly during the recent one. Modern urban development is resembled in the abandoning of vernacular urban models in favor of modern ones, rapid urbanization and expansion of the oasis, and the establishment of new tourism developments among others. Such rise in uncontrolled economic and urban development is changing the urban scene and the landscape of the oasis. With the exception of few initiatives, the remaining historic center along with its historic monuments is left to deteriorate and gradually vanish. The problem can be considered part of an international urban conservation crisis facing historic cities but also as a crisis of a world vernacular architecture which is disappearing. As claimed in the biennial report (2009-2010) by the global heritage fund, the loss of vernacular heritage does not only imply external factors like urban sprawl and natural disasters but also an inner change in perception of inhabitants as they refuse to follow in or develop inherited vernacular models (Dabaieh, 2011: 17). She further describes how young inhabitants of these desert communities share an overwhelming desire to adopt modern life-styles and facilities not offered by their inherited models of building. One could observe this change first-handed between the inhabitants of the Siwa oasis and could see its strong impact on the urban scene and the landscape of the oasis in a matter of years. People of the oasis have moved from their original family houses where a family lived together under the same roof to new houses where family members lived individually. While some vernacular houses are abandoned and left unattended to, others are demolished and substituted by modern concrete skeleton buildings. It is a case similar to that described by Dabaieh (2011) in her study of 'Balat', a desert town

in the 'Dakhlah' oasis, as a case-study of the desert vernacular architecture in the western Egyptian desert. In her study, Dabaieh tackles the problem of historic cities from an architectural point of view as case of a vanishing vernacular architecture. She attempts to re-think the vanishing vernacular architecture through the users who inherited this heritage. On the other side, in this research, one attempts to tackle the problem of the historic city from an urban view where the problem of the disappearing vernacular is a factor. It is within this research that one attempts to utilize a holistic approach in looking to the problem where the user or the inhabitant plays a major role as part of a landscape including the vernacular as urban structures.

1.1 Research objectives and questions

This thesis is mainly concerned with the urban conservation of historic urban environments in general and of the historic urban environment of Siwa oasis in specific. The aim of this thesis is to explore and apply the knowledge and know-how necessary for the revitalization and conservation, of the selected historic urban area, which respects and fulfills modern and state of the art principles and notions of the field. Therefore, the research attempts to look into the problem of historic cities from a holistic point of view as part of an evolving system where the physical urban structures are one element within. It attempts to understand the historic urban fabric not only as physical structures but to connect them as vassals of human urban life that shapes them throughout history. Therefore, it views the historic city as a historic urban landscape consisting of different elements related together in different structures that are historically layered over each other and is considered as a part of a whole cultural landscape. This makes the objective of the research to be the reading and understanding of the historic urban landscape of the oasis including its physical and social components with respect to its historic strata, in order to achieve successful revitalization of HUL. This objective is achieved through:

- Understanding the theories explaining historic cities as Historic Urban Landscapes through defining them as urban heritage and as landscapes. Then, understanding the theories and framework developed for the understanding of the relationship between the landscape's two elements: the built environment and human activity.

- Conceptualizing the HUL approach and theories relationship between the built environment and human activity in order to create a framework for the research.
- Examining and exploring the case study in light of the created conceptual framework in order to help in the understanding of its HUL.

In addition to the primary aim of the thesis, the research has a number of secondary objectives:

- Apply a methodology which could be applicable on other cases of historic cities present within the same regional boundaries and in the same time be an inspiration for other similar cases of urban conservation of historic cities in general.
- Offer a documentation of the urban environment and its components of the case-study that are beneficial for potential urban conservation projects in the area.

The literature review creates the framework through which the investigation of the case-study proceeds and answers the following questions: What is HUL? What is the theoretical development regarding the position of the historic city in different fields related to HUL? What are the major principles derived from HUL? How can one identify the relationship between the built environment and human activity?

Through the case-study of the historic urban center of Siwa oasis, the research answers the following questions through three lines of investigation:

- 1st line of investigation: What is the morphology of the urban settlement in relation to the social, cultural and political factors justifying its creation as a landscape through layers of time?
- 2nd line of investigation: What are the forms of the physical structures of the built environment in relation to its users? What are the models of its development?
- 3rd line of investigation: What are the forms of relationships between the built environment and activities and its users?
- How can the previous lines of investigation help in the revitalization of HUL?

1.2 Methodology

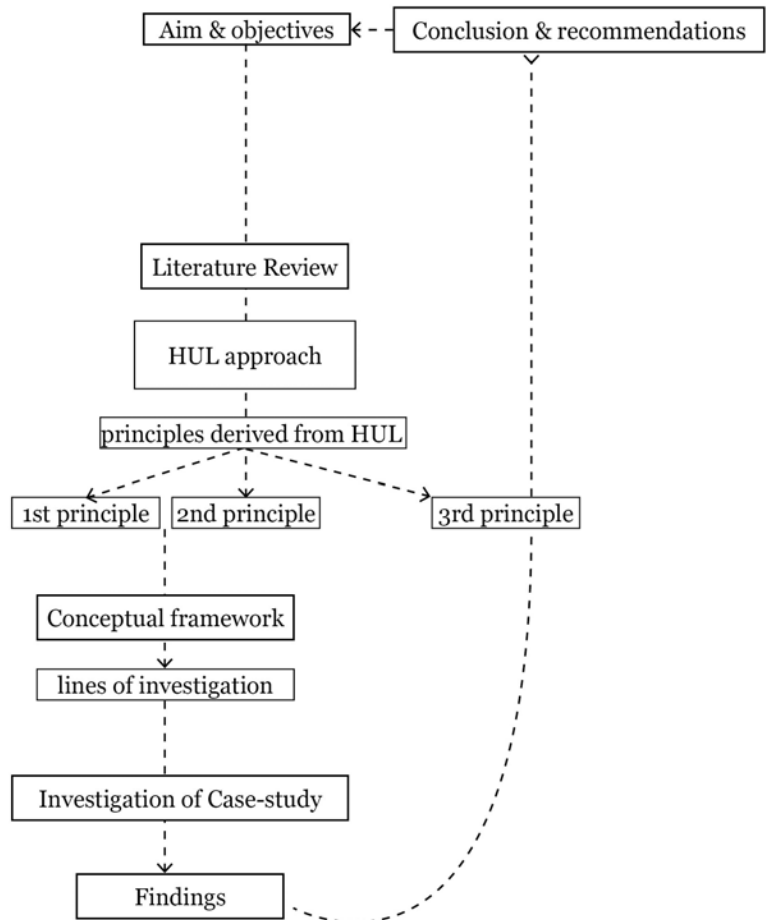


Fig.01: Research procedural framework, source: author, 2016.

To investigate the Historic urban landscape of the case-study, the thesis undertakes an extensive literature review on the topic of HUL and the theories contributing to its evolution. Through this literature review, a conceptual framework is created to guide the investigation of the case-study and defining specific areas for exploration. Based on the problem statement guiding the research's general aim, the literature review begins with the issue of the historic city. Through the discussion of the position of the historic city within the fields of conservation and landscapes, one explains the evolution of HUL as state of the art approach in dealing with the issue of the historic city. Then the main principles defining HUL as an approach are deduced in order to be used in the investigation. Three principles are identified: 'comprehensiveness', 'over-layering', and 'regeneration of

urban heritage’, and reinterpreted together as a system model expressing HUL. The investigation then uses the first two principles to form lines of investigation through which the case-study is examined; where the relation between the physical and non-physical elements of the landscape (representing the 1st principle) is explored in respect to its historical strata (representing the 2nd principle), while the third principle ‘the regeneration of urban heritage’ resembles the aim of the research; which is to revitalize HUL through the creation of new quality heritage. Therefore, the first and the second principle are used to further guide the investigation while the third principle is reflected upon in the conclusion using the findings from the investigation thus returning back from the in-depth frame of the case-study to a general conceptual frame of discussion.

The research is made through qualitative methods; literature review of related theoretical works and publications, analyzing secondary data collected from related studies, reports and historical material, and analyzing primary data collected on site by the author.

Theoretical input:

- Publication materials on Historic Urban Landscape approach published by international heritage conservation entities such as UNESCO, supported with published books, articles and studies made by related academics and professionals on the topic of HUL, landscapes, and activity in public spaces.
- Historic and Academic input on case-study including published studies reports, thesis and books.

Graphic and historic input:

- Historical material on the case-study including descriptive accounts, maps, images and depictions. The case-study offers a rich inventory of historical accounts and depictions made by previous travellers and temporary dwellers throughout different eras of history. historic photos and paintings proved to be useful in the verification of data collected on the historic evolution of the built structure. Written descriptions of daily processes, public activities and events proved to be useful as they provide insight on the changes taking place in the case-study.
- Maps collected from previous studies reports and Satellite imagery. Base-maps done by previous studies offered a basis for the different mapping taking place in the investigation.

On-site investigation:

- Guided walkthroughs through study areas. These walkthroughs took place mainly to explore the historic city fabric (physical structures) and to understand its mode of habitation and dynamics of transformation. This required a guide for two reasons: first, he would know stories of present and past inhabitants of the structures, reasons for leaving/ or staying in their structures and details about their transformation that cannot be deduced by direct observation and looking onto buildings without knowing what takes place inside. second, he would know the way into the ruins of completely un-inhabited areas on the focus study area and stories about those who were living within its walls thus providing a vibrant living vision of completely abandoned structures.

- Direct observation of public activities and events. There are two types of direct observation used in this research: the first is non-participant direct observations carried through walkthrough in study areas in order to map daily forms of public activities and its relation with the physical environment. Input is collected by the author in form of dairies while no participation takes place by the author in the mapped activities. The repetition on these walkthroughs by the author provided a solid view on the patterns in the collected information which was then analyzed and documented by the author either by sketches or photos. (Appendix 1) provides sketches drawn by the author throughout his walkthroughs where forms of activities are collected unstructurally and then analyzed and structured in an another phase. This method has its disadvantages as it provides no quantitative data but only qualitative input and impressions collected by the author which require indepth analysis and re-interpretation in light of the conceptual framework on the research. The second type of direct observation used in the research is the participant observation where the author is immersed in the event or experience which he is observing. This took place only in cultural and non-daily events including religious sessions 'Zikr'.

- Unstructured in-depth interviews are conducted by a little number of local inhabitants representing different age groups (appendix 2). These indepth interviews took place throughout long meetings with the interviews throughout different days. The author had the chance to know them better and personally thus increased his ability to reflect that on their views on different topics, also long conversations revealed important data for the research such as

interviewees' memories and stories regarding the historic city and their childhood thus providing a source of living history helping in decoding the history of the present structures. Also the frequency of meeting sessions provided insight on how social meetings take place as a regular form of social activities as a daily participant in them. This method in interview had its disadvantages as it does not allow for large numbers of interviews with different interviews to take place, thus allowing only for qualitative input.

1.3 Chapters overview

The investigation carried out by this research follows a framework created in Chapter 2, while the investigation takes place in chapters 3 and 4, and finally Chapter 5 explains the key findings and reflects on the findings in regards to the overall aim of the research.

Chapter 1: Introduction provides the background of the topic, research problem, methodology, and scope of research.

Chapter 2: The historic city: A literature review provides an extensive literature review of the main concepts guiding the research, in order to create a conceptual framework guiding the research through a set of lines of investigation which are applied on the case-study.

Chapter 3: case-study: Siwa oasis analysis provides basic background on Siwa oasis as the research case-study. After that, the chapter adopts the first line of investigation aiming to the understanding of the morphology of the urban settlement in relation to the social, cultural and political factors justifying its creation through layers of time. This is discussed through analysing the spatial evolution of the urban settlements of the oasis since the beginning of known history till the present era. In the end of the chapter, the choice of the focus study area takes place accordingly where the historic urban landscape is found to be clearly represented.

Chapter 4: Exploring the relationship between the built environment and its users examines the relationship between the built environment of the historic urban center of Siwa oasis and its users with special attention to the historic background of the different elements and their interconnected relationships. In this

chapter, the second and third investigation lines are investigated, dividing the chapter into two parts; each for one line of investigation. The first part explores the relation between the physical structures composing the present urban settlements (**the tangible**) and **the mode of habitation of their users (the intangible)** resulting in the transformation of the physical structures. The second part focuses on the relation between special features of the built environment (Urban Design Features UDF) and **the users' activities in the focus area of study**. This is achieved through the mapping of urban design features of the built environment represented in physical structures and spaces which carries associated social activities.

Chapter 5: Conclusion and recommendation reveals the findings of the investigations undertaken in the previous chapters. It begins with revealing the key findings regarding the exploring the relationship between the built environment and its users within the historic urban center examines the relationship between **the built environment of the historic urban center of Siwa oasis as a case-study**. Finally, a general conclusion regarding the understanding of HUL of the case-study is provided along with recommendations on achieving the general aim of the research.



Chapter 2:
The historic city:
A literature review

2 The historic city: A literature review

Based on the research problem and questions, the research focuses on the role of the historic city and its position within the modern city. Therefore, it is essential to review the development of the understanding of the historic city and its position in relation to that of the urban development of its modern counterpart. The literature review explore relevant theories and concepts on which the conceptual framework, for the research's investigation of the case study, is built. The review is divided into two parts; part one explores the gradual theoretical and conceptual development of the understanding and recognition of the historic city in relation to the modern city within different related fields marked with paradigm shifts in both the fields of heritage conservation, and landscapes. This theoretical development leads to a holistic approach, Historic Urban Landscape HUL, in the understanding of historic cities as urban landscapes present within overall cultural landscapes which includes all consistent man-made and natural elements. Deriving from HUL, guiding principles needed for tackling the research problem represented in the case-study are developed along exploring variables for the description and identification of HUL. While in part two, the connection between the built environment and its users as a part of the process of place-making is explored, which represents the incorporation of the social aspect with the phys-

ical according to the principles derived from HUL. It also provides an overview of how different theorists and practitioners analyze and understand this relationship between the people and the physical structure; examining how people act in urban spaces and sharing views on the function of historic cities regarding such aspect. From this overview, important typologies and tools are explored which are used in the investigation of the case-study.

Part one

2.1 Historic Urban Landscape concept HUL

'Urban heritage is of vital importance for our cities – now and in the future. Tangible and intangible heritage are sources of social cohesion, factors of diversity and drivers of creativity, innovation and urban regeneration – we must do more to harness this power.' Irina Bokova, Director-General of UNESCO at the World Urban Forum, Naples (2012)

The conservation and management of Historic Urban Landscapes adopt a holistic notion that incorporates both the goals of conservation along with those of social and economic development of the city. It sees urban heritage as an asset for the city and recognizes it as dynamic organism that is shaped by economic, social and cultural forces through the course of time. It aims for the sustainability of planning and design intervention in the city through considering its exiting built environment, intangible heritage and socio-economic factors. HUL approach is considered to be a new standard-setting instrument for the safeguarding of the historic city worldwide. It aims to promote the need for the protection of historic cities through the inclusion of their inherited values and cultural significance into conservation and urban development strategies. The approach was launched under the World Heritage Cities Programme UNESCO in the international conference, World Heritage and Contemporary Architecture – Managing the Historic Urban Landscape, held in Vienna (Austria) in May 2005. The World Heritage Cities Programme is one of six thematic programmes by the World Heritage Committee, most important are Earthen Architecture and Sustainable tourism, and aim to provide a framework for States parties and international donors that follow the general strategies of the World Heritage Committee. HUL aims for the protection of historic cities through the inclusion of their value and significance into strategies of conservation and urban development. In order to understand

the approach and the concept behind it, one must first understand how the approach has originated. This can be understood through the exploration of the historic city and its evolving position in relation to the two fields of conservation and landscape, thus unfolding how the historic city is understood as an urban heritage and landscape.

2.1.1 From monumental to urban and from preservation to revitalization: origins in conservation theory and practice

In this section, the position of the historic city within the field of conservation is investigated in order to understand its evolution and influential theories developed to understand it. The interest in conserving urban landscapes is dependent on the recognition of the historic city, which is referred to as 'urban', to be a part of the heritage system. This required a change in the focus of conservation theory and practice from the scale of historic monuments to that of urban areas and cities. Such recognition also required an alteration of conservation thought from the mere preservation of artifacts to that of restoration and revival which required a proper understanding of the dynamics of its formation and operation and the values which it embodies. From the beginning of the nineteenth century, contributions by conservators, art historians, architects, and urban planners have not only shaped the principles of modern conservation, but had an impact on the urban planning of modern cities. This is through the reinterpretation of the historic city and understanding how the city works and what are the lessons which could be learned.

One must first return to the emergence of the notion of 'heritage' in the aftermath of the French revolution in the beginning of the nineteenth century and its transformation to the notion of 'urban heritage'. In their book 'The Historic Urban Landscape: managing heritage in an urban century', Bandarin and Van Oers (2012) provide a short history on the development of the city as heritage and its origin. They write that Hobsbawm (1983) mentions that during the nineteenth and twentieth centuries historic monuments became a tool for the celebration of national epics and tradition in the forging of national identities of modern nations. Consequently, early movements and institutions were established and supported by intellectuals in Europe with the historic monument in the center of their focus. Institutions including the 'Commission des Monuments Historiques' established in France in 1837, Society for the Protection of Ancient Buildings created by William Morris in Great Britain in 1877, and the extensive invento-

ries of monuments created by writer and conservator Prosper Mérimée in France in the mid- nineteenth century among others. Meanwhile the historic city, the urban setting of historic monuments, was excluded from the scope of conservation effort and perceived as a place of moral and physical decay. Nevertheless it did not motivate changes that would elevate it from its deteriorated condition; it rather provoked a variety of utopian visions of new urban centers that are separated from it and grand urban renewal projects that resulted in its systematic replacement with newly planned urban fabric. The leading example is Baron Haussmann's renovations of Paris in the mid nineteenth century (between 1850 and 1870) where a large portion of the city's medieval urban structure was cut and destroyed to give way to the city's now famous Boulevards and squares in an attempt to remodel the whole medieval city. This 'Haussmannian model' was applied extensively throughout the nineteenth century in European cities and other capitals worldwide including Cairo. The Khedival urban development of the Egyptian capital carried out by Ismail pasha and planned by Cairo's planner of the time Ali Pasha Mubarak followed the model applied in Paris turning its back to the historic Fatimid Cairo. The urban scheme included the cutting of wide roads through the historic urban fabric, addition of new urban expansions towards the Nile banks, and the establishment of new filled canals and lakes for the creation of thoroughfares and residential quarters (UNESCO and URHC, 2012).

Despite the exclusion of the historic city from new urban development, early attempts to recognize the value of the historic city as a basis for the continuity of the city's architectural and urban development took place. This came from a contradiction of thought within the field of conservation of the time. Conservators such as John Ruskin and William Morris saw necessity of preserving the historic elements the way they are and considered the idea of restoring it to its ideal state to be impossible, while Eugène-Emmanuel Viollet -Le-Duc saw in the restoration and reconstruction of the historic elements a method for the establishment of a basis for future development through the identification of its architectural development (Bandarin and Van Oers, 2012). Regardless to the scope of Viollet-Le-Duc 's work, whether it is the historic monument or its urban setting, the concept of continuity of inherited values and founding principles to shape future developments inspired the re-interpretation of the historic city as basis for modern urban planning. This concept guided the work of Camillo Sitte that links the historic city with urban planning for the first time. In his book 'City Planning according to Artistic Principles' (1889), Sitte devises an operational guide that

decodes the aesthetic value present within the historic city through studying its morphological and typological development in order to devise rules and models for the development of the modern city. Sitte's work recognizes the historic city for its aesthetic and historic value which acts as an inspiration for the urban planning of the modern city and consequently perceives it as part of heritage in need for conservation measures. While Sitte builds his theory on the aesthetic dimension of the historic city, Patrick Geddes takes the notion a step further. Geddes offers, in his book 'Cities in Evolution' (1915), the first comprehensive view of the historic city as a complex evolving organism of interaction between its physical and social components. He offers a model for the management of the historic city built on its functioning and design principles. He establishes the term 'conservative surgery' aimed for the habilitation of historical buildings and their adaption to modern needs, a strategy later applied in several places worldwide. Among the urban planners of the day it is Gustave Giovannoni who offered an approach for the management of the historic city which revolutionizes its role in modern society. As one could not negotiate the unsuitability of the dense urban fabric of the historic city for the persistent needs of modern industrial societies as centers of production and technology, but Giovannoni saves an important role for the old city away from that of production and communication. He sees the historic city as part of the existing network of urban functions in the city, where its high aesthetic quality and urban features provide functions of living and social exchange. He adopted an integrative planning system that respects its urban morphologies and architectural typologies through a variety of strategies including the integration of the missing parts of the fabric and the de-densification of parts that would prevent its adequate functions. By adopting this position, Giovannoni recomposes the old city's romantic memorial function emphasized by Ruskin and Morris with its function as operational guide for planning offered by Sitte. This is by incorporating a range of societal needs into one comprehensive view (Bandarin and Van Oers, 2012). It would be in the aftermath of the WWII that critiques of the modernist rational in architecture and urban planning would acknowledge the historic city for its functional qualities for provision of social exchange and disembark in developing methods on the analysis and benefiting from urban public spaces. Among these architects and urban planners are Jane Jacobs, William Whyte, Donald Appleyard and others whose approaches are briefly investigated in Part two of this chapter. The modernist architects and urban planners of the time, represented by 'Congrès internationaux d'architecture moderne' CIAM, completely ignored the historic city and considered it to be a negative model for the

development of the modern city. They promoted for new rational schemes for the modern city adequate with modern society needs and technology. In the Athens Charter, CIAM's most important manifesto published by Le Corbusier in 1943, it is mentioned that the historic city should be demolished and replaced with new urban development except for monuments of historic or sentimental value that should be kept and restored. The reaction to Modernism inspired many other architects and urban planners to develop analytical and operational tools for the understanding of cities that influenced modern urban conservation. Focusing on the physical structure of the city as the result of a historical stratification process, urban geographer Conzen develops the process of 'Urban Morphology'. It investigates the city's formation and gradual transformation through the understanding of complex morphological processes including building fabric, building types, plot patterns, blocks and street patterns. Others like Cullen and Lynch focused on perception as an analytical tool for the interpretation and design of the city. Another reaction to modernism and the urge to safeguard what the damage caused in the aftermath of the Second-World-War was the creation of a strong international conservation movement which established its own institutions, strategies and practices; each contributes to the continuation and development of urban conservation theories and tools. The most important of these institutions is UNESCO which was founded in 1945, and under its initiative main conservation organizations were established including ICOMOS, ICOM, ICCROM. UNESCO and other organizations had a large role in the development and the evolution of the Historic Urban Landscape HUL approach.

In conclusion, the evolution of the understanding of the historic city begins with the preservation of single monuments for its symbolic and historic values as a basis for architectural development in disregard to the urban fabric. Then it develops to include the historic urban fabric and the idea of its restoration and revitalization as basis for urban development. This understanding further evolves to the exploration of its qualities architecturally and urban-wise and the investigation of its potential role of the historic urban fabric within the modern city.

2.2.2 From image to complex organism: origins in landscape and cultural landscape

In this section, the concept of 'landscapes' is explored and its evolution in order to understand the position of the historic city within it to be both 'urban'

and 'historic'. The term 'landscape' refers to the way one views the surrounding environment and also to this surrounding environment itself as an object external to individual perception (Müller & Gibbs, 2011). The affiliation of the term 'Cultural' to that of 'landscape' represents an evolution in the understanding of the concept as it evolves from a work of art into a field of scientific research in schools of geography and related fields by the beginning of the Twentieth century. Therefore, one can associate landscape with two fundamental semantic values; the subjective and the objective (Martini, 2013). In the effort of connecting landscapes with the field of urban planning, Gabrielli (2010) restricts his search into three concepts. The first concept recognizes the landscape as object of art, a subject of aesthetic experience and, therefore, judgment, which represents its subjective semantic value. While the second concept is a cultural one which relates landscapes with the research field of civilization, a 'mirror to civilization', and taken from Carl Sauer's synthesis on cultural landscapes. The third, the one the author found most relevant to urban planning, understands landscapes as a morphological entity of relationships between its consistent parts that are only comprehensible in a whole and in its position within its wider context (Gabrielli, 2010: 20). The last two concepts represent the objective dimension of landscapes. In order to explore the metamorphosis of the notion of landscape from an aesthetic definition into an objective scientific one, one progresses through the three concepts arriving to the development of Historic Urban Landscapes as a concept.

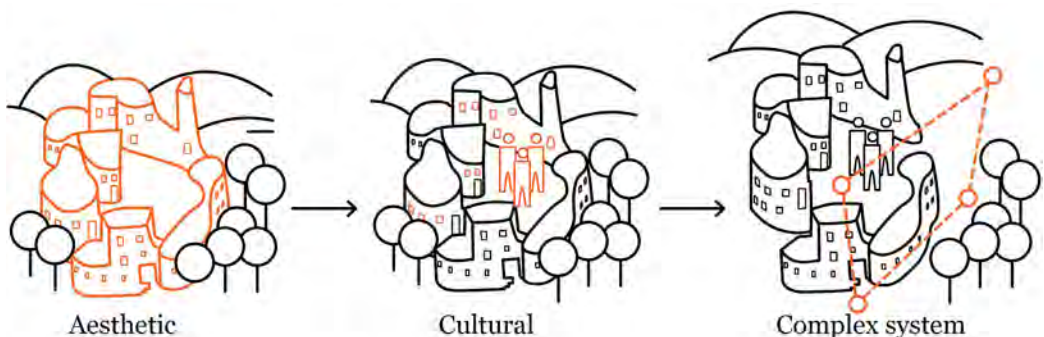


Fig.02: The conceptual evolution of landscapes, source:author, 2016

One begins with the first concept and the birth of landscape as an aesthetic dimension. Landscape originates in both China and Europe where the perception of landscapes influenced art of painting. The painting of landscapes was widely developed in China in the eleventh century which focused on the painting of wa-

ters and mountains giving it its name ‘Shan (mountains) Shui (waters)’ (UNESCO WHC, 2009). In Medieval Europe, landscapes were painted during the late middle ages in the second half of the fifteenth century as the art of painting of rural fields and towns and describing their unique features (UNESCO WHC, 2009). Historical sources of the period offers plenty of personal and descriptive encounters of natural places, towns and cities in the form of travel reports, works of descriptive literature and paintings that gives landscapes a subjective nature. Garbielli (2010) mentions that in the past European cities were confined and represented a well-defined or ‘filled space’ in contrast with its surrounding countryside or ‘void’. He claims that such a synthesis of urban form resulted in the hypothesis of the city as a work of art. Such a dichotomy of filled space versus void has almost disappeared in our modern-day as claimed by Martini (2013) that with the shift of sources of production from agriculture fields into the industrialized city itself had caused a change in urban form and the dissolution of the clear boundary between fields ‘void’ and the dense city. Therefore, landscape remained within the realm of art till the beginning of the twentieth century. Pagano (2011) says that the aesthetic interpretation of the landscape represented through the work of painters depicts these two elements, city and countryside, while it neglects the realistic depiction of the communities forging them and the daily life scenes of their members. Therefore, the depiction of towns and landscapes of cultural significance focused mainly on aesthetic composition of the two elements with keen selection of viewpoints to best illustrate their beauty, even when people are illustrated they are included as part of this composition that only serves its aesthetic semantic value. This artistic definition continues to the renaissance and eighteenth century depiction of landscape and affects the approach of landscape design of the age. It is criticized by John Brinckerhoff Jackson (1984) in his book ‘Discovering the vernacular landscape’ as he accuses the period’s classical painters and gardeners, who were considered to be the landscape designers of the age, of ignoring the inner realistic conditions of the village inhabitants in favor of the commonly agreeable natural features of a beautiful green landscape in order to form a highly stylized and superficial image (Pagano, 2011). Similarly, Denis Cosgrove (1985) describes the renaissance and eighteenth century definition of landscapes as a “Reality [...] frozen at a specific moment, removed from the flux of time and change, and rendered the property of the observer” (Cosgrove 1985: 22 quoted in Pagano, 2011). In his description, he points out to landscapes of that fashion as work of art especially tailored to the pleasantness of the elite so it excludes all what is unpleasant to present a seem-

ingly perfect image. Thus, Cosgrove distinguishes between the external observer who is in total control of the view and to whom sometimes the view is entirely created, and the internal participant who is classically marginalized and his view ignored. Landscape is described here as an interpretation of the physical reality through the frame of art which is specifically made for an observer and lacks a true understanding of the social (intangible) dimension of this physical reality represented in the dwelling communities. Similarly, Massimo Quaini and Italo Calvino point out to a whole side of the landscape which is marginalized and left in the 'opaque', as Calvino calls it, while picturesque sights and images of the landscape are used to represent it. Both the authors shared the same interest in reflecting their thoughts on the area of Liguria located in the Italian peninsula. Between 1943 and 1945, Calvino explored Liguria to discover the hidden landscape of its peasants and villages beyond the over-exploited glamorous images of its seashore to shift his position, using Cosgrove's terms, from the external observer to the inside participant. Building on Calvino's ideas, Massimo Quaini, in his 'L'ombra del passaggio', calls for the reinvention of the concept of landscapes as "a scenography of landscape with actors, and not merely with spectators" (Quaini, 1994 quoted in Pagano, 2011). This shift in position from observer to participant represents the vernacular landscape which Jackson (1984) describes to function and evolve to serve the community not according to laws of nature. Jackson writes: "a landscape is not a natural feature of the environment, but a synthetic space, a man-made system of spaces superimposed on the face of the land, functioning and evolving not according to natural laws but to serve a community" (Jackson, 1984: 9 quoted in Pagano, 2011). This attention to the community and people as an integral part of the landscape puts culture in the center of the discussion and leads it into the second concept mentioned previously by Garbielli (2010). Rosario Assunto (1973) emphasizes the importance of landscapes to modern communities exceeding aesthetic value and linking it to cultural identity as he argues that landscapes are reservoirs of the individual and collective memories of its constituting communities. He further emphasizes the position of communities in understanding landscapes through the criticism of modern thought for its inability to differentiate between 'landscape' and 'space'. He sees that modern architects and urban planners simplifies the 'landscape' from its intangible components to a mere geometrical 'space'; a 'space' that can be modified and altered according to its spatial attributes without any concern to the cultures that produced it and the intangible values and memories which it be-

holds. This evolution in the complexity of the understanding of landscapes as a representation to the communities' daily lives and cultural identity forged through time is essential its affiliation as being 'cultural'. The concept of 'cultural landscapes' was developed by Geographers in the early twentieth century, among them is Carl O. Sauer in book 'Morphology of landscape' (1925). Sauer clearly recognizes intangible values and cultural expressions in formation of the landscape which he defines as an area of natural features altered by a cultural group; where culture is the agent and nature is the medium. He states that "a cultural landscape is fashioned out of a natural area by a cultural group. Culture is the agent, acting upon the natural area as the medium; the 'cultural landscape' is the result." Therefore, the key values of a given landscape could be objectively assessed and documented through research and accumulation of the evidence of associative connections (Müller & Gibbs, 2011). The transition from the completely aesthetic to objective and the recognition of landscapes as a product of human agency is presented in Jokilehto's (2010) trace of the evolution of landscape's notion in different charters and recommendations by international organizations and councils. First, he points to the definition of protected landscapes and sites in the UNESCO 1962 'Recommendation concerning the safeguarding of the beauty and character of Landscapes and sites' which recommends that protected areas are not limited to natural landscapes but extends to "landscapes and sites whose formation is due wholly or in part to the work of man" (UNESCO, 1962 art.5). He claims that although of the recognition of man-associated landscapes, the document's proposed policies still reflected an enduring static and picturesque understanding of landscapes as it was expected to be restored like a monument. While in the 1995 Council of Europe 'Recommendation on the Integrated Conservation of Cultural Landscape Areas as Part of Landscape Policies', Jokilehto says that the definition evolves from viewing landscape as a restorable static object to a 'dynamic system comprising natural and cultural elements interacting at a given time and place' (preamble in Council of Europe, 1995). It is defined as a 'formal expression of the numerous relationships existing in a given period between the individual or a society and a topographically defined territory, the appearance of which is the result of action, over time, of natural and human factors and of a combination of both' (art. 1). He even mentions the introduction of the notion of Cultural landscape by the World Heritage Committee in its 1994 'Operational Guidelines' where they are seen as 'illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their

natural environment and of successive social, economic and cultural forces, both external and internal' (version 1995: art. 47). This shift in the understanding landscapes one finds to represent progress towards the third concept, a system of relationships, previously mentioned by Garbielli (2010). It expresses not only the transcendence of landscape away from being understood as a picture, captured entirely through artistic interpretation, into a product of human agency represented in the community and its cultural identity, it also communicates a complex system of functional relationships between the human society and the natural environment through sets of social, economic and cultural factors resulting in a built (man-affected) environment shaping specific landscapes and giving them identity. Looking specifically to historic cities which are the main focus of this study, Smith (2010) explains the term 'urban' landscape. He reads cities as artifacts whose creation and sustaining is justified by the ritualized behavior of its inhabitants. He creates a dichotomy between the artifact and the ritual which is in a state of equilibrium, and where the physical artifact is the place of function for ritualized religious, social and cultural activities of its dwellers. Thus, he claims that urban landscapes are the cultural landscapes of the urban dwellers and as these urban landscapes sustain this state of equilibrium for long periods of time, they are then described as 'historic'; thus, Historic Urban Landscapes. In conclusion, looking into historic cities within the frame historic urban landscapes imply the application of different principles regarding its properties as landscapes; principles which guide the research in tackling the problem of historic cities presented in the case study.

2.3 Principles derived from HUL

In this section, the principles derived from the historic urban landscape concept are presented and connected together in one model that illustrates historic urban landscapes which serves as a main part of the conceptual framework of the research.

2.3.1 Comprehensiveness

The first principle is that of comprehensiveness; Historical Urban Landscape approach attempts to perceive historic cities comprehensively to include all its constituting elements and driving forces. Accordingly, the focus of a historic environment is altered in terms of scale and nature. In terms of scale, it is mentioned

previously how the focus on conservation extend from the micro-scale of single monuments to include the surrounding urban area and geographical context. This is well communicated in to “the recommendation on historic urban landscapes” adopted by UNESCO in 2011, where the historic landscape is defined as “the urban area [...] extending beyond the notion of “historic center” or “ensemble” to include the broader urban context and its geographical setting” (art.8). In terms of nature, the same document describes, in its ninth article, this broader context to comprehend all its consisting elements from the tangible to the intangible layered together to construct the landscape as we perceive it. It is a matter which is discussed previously in the evolution of the concept of landscapes and Historic Urban Landscapes as part of cultural landscapes. The Tangible elements are the physical aspects of the landscape such as typography, vegetation, natural systems, land use and spatial organization of urban structures, while the intangible are the aspects that resemble the interaction between people and place such as rituals and traditional practices. It is specifically mentioned later within the same document:

“This wider context includes notably the site’s topography, geomorphology, hydrology and natural features, its built environment, both historic and contemporary, its infrastructures above and below ground, its open spaces and gardens, its land use patterns and spatial organization, perceptions and visual relationships, as well as all other elements of the urban structure. It also includes social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity.” (art.9)

This union between the tangible and intangible in the shaping of landscapes is similarly referred to within theories on the identification of cultural landscapes. It is mentioned by Müller & Gibbs in their ‘Reading and representing the cultural landscape – a toolkit’ (2011) that all landscapes consist of three main components; two of which are the permanent and physical settings, and the intangible landscape of temporary human activities and behaviors. It is similarly referred to by Smith (2010) in a dichotomy of rituals, referring to social and cultural processes, and artifacts, referring to physical buildings and urban structures. Following this principle, the study adopts this dichotomy of the social (intangible) and the physical (tangible).

2.3.2 Over-layering

Another central aspect of Historic Urban Landscapes is time; as mentioned previously historic urban landscapes are conceived as a result of a long-standing stratification, or layering, of processes that carry cultural significance and values through time. This is also referred to in ‘the recommendation on historic urban landscapes’ (2011), where it is mentioned that “The historic landscape is the urban area understood as the result of a historic layering of cultural and natural values and attributes [...]” (art.8). Furthermore, it is referred to by Müller & Gibbs (2011) quoting O’Hare (1997) in his description of cultural landscapes, where he says;

“the cultural landscape consists of a dialogue between the natural physical setting [tangible], the human modifications [intangible] to that setting, and the meanings of the resulting landscape to insiders and outsiders [...] The concept of ‘cultural landscape’ therefore embodies a dynamic understanding of history, in which the past, present and future are seamlessly connected” (O’Hare, 1997)

Understanding landscapes in relation to time has a key role in the reading of the landscape itself. The objective in reading a cultural landscape is in the distilling of each its historic layers and the perception of its meaning and significance (Geotcheus, 2006). Bianca (2010) sees the present historic city as the tangible incarnation of the cultural processes which have produced it. He claims that the urban structures or artifacts, by Smith’s (2010) terms, are imbued by ‘meaning’ predicating the values and social conceptions of the societies building them. Thus making historic cities a vassal for the collective memory of its makers in which the stratification of layers of successive urban typologies produced through time reflects evolution and phases of transformation. These ‘multiple layers of meaning’ gives identity and specific sense of place and thus through analyzing them in relation to social, political and cultural factors affecting inhabiting societies in different ages, one understands the logic behind the formation of the urban landscape and the historic city in its present state. Also, it opens a way in dealing with the historic city sustainably. As one does not look only to its physical structures but one rather looks at the invisible social networks working behind the scenes which produced such structures and through the revitalizing or at least the consideration of such processes that one can deal with problem of historic cities.

2.3.3 Regeneration of urban heritage

In reference to the production of the urban landscape by means of historical stratification and over-layering of successive urban structures through time, this predicates the current processing of new urban landscapes. Regardless to its connection with its predecessor urban landscapes, communities constantly altering and modifying the previous landscape according their new social, cultural and economic status. In connecting urban landscapes with urban planning, Gabrielli (2010) states that the aim in dealing with historic cities should not only include its conservation as historic urban landscapes but the affirmation of creating new quality urban landscapes that preserves and develops local identity. He further says that this is only achieved through proper urban planning which “invites each intervention within the city to reflect the identity of the heritage”. One can think of it as a continuation of the past heritage and, what Bianca (2010) calls, the ‘soft transformation’ where gradual urban modification and re-adaptation that have traditionally took place as a normal evolutionary scheme in pre-industrial times. It is a process where heritage “ must continue to be actively produced, maintained, re-created and safeguarded by the communities, groups or individuals concerned, or it simply ceases to be heritage” (Proschan, 2008). It is a flow which he claims to be interrupted by post-industrial urban planning, where urban structures do not evolve in close relation to local culture thus creates a new urban landscape which is completely detached from its previous ones and this is when historic cities became in need for conservation and protection. The principle of regeneration of new heritage is related to the general aim of the study.

2.4 Integrity of HUL

According to Jokilehto (2010), integrity of the urban landscape is a key characteristic in the identification of HUL. Integrity of the urban landscape is the extent to which the founding elements forming the cultural landscape and the historical interactions between human and setting remain currently existent and observable (O’donnell, 2008). Integrity can be partially identified through both the state of conservation and visual condition of the studied area, along with the identification of the elements and characteristics forming the landscape (Jokilehto, 2010). Thus, he discusses the issue of integrity in reference to three typologies; social-functional integrity, Structural-historical integrity, and visual integrity. Social- functional integrity is that related to functional and symbolic re-

relationships that have influenced the formation of the landscape resulted from the economic, social and cultural development of the place. Structural-historical integrity is ‘ the state of conservation of the individual elements of the place, which can be referred to the historical-typological-morphological condition of the fabric and its setting’ (Jokilehto, 2010: 47). While the visual integrity is the degree to which the over-time transformation of the buildings and other elements of the place alters its historical image.

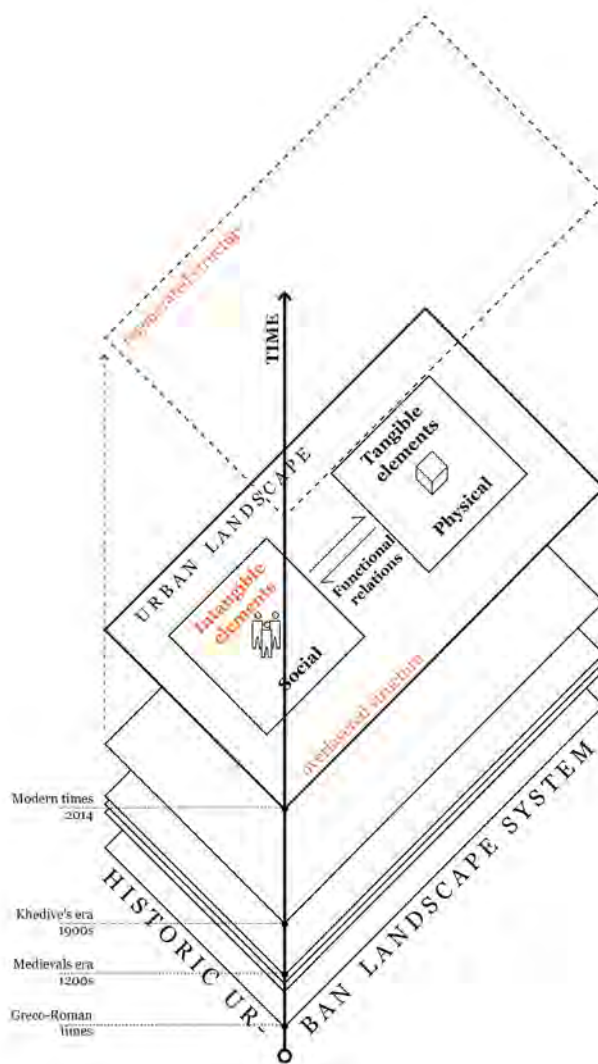


Fig.03: HUL model for conceptual framework created upon principles derived from HUL, source: author, 2016, inspired from of structure and system model used in research by (Salheen 2001: 25).

2.5 Building the conceptual model (part.I)

Based on reviewed concepts and principles in each of the two parts, a conceptual framework for the research investigation is proposed. Building on the principles deduced from historic urban landscape concept in part one, the landscape is understood as a system of over-layered structures along the axis of time as each represents a certain era (referring to ‘over-layering’ principle in section 2.3.2). Each structure/ layer is composed of two types of elements; the physical tangible and the social intangible elements (referring to ‘Comprehensiveness’ principle in section 2.3.1). The physical tangible elements represent the built environment in its physical urban structures and design features while the social intangible elements represent the inhabitants’ mode of habitation, their activities, and related social, cultural and political factors. The third principle ‘regeneration of urban heritage’ (section 2.3.3) represents the future layered structure along the axis of time where the research eventually concludes. This system of successive complex layers is the general structure of the conceptual framework model following the principles of HUL (figure 04). It can be understood through different scales; the smallest in that of the single layer representing one specific era in history providing detailed view on the two types of elements inside one layer. The second scale is that goes on comparing the successive layers along the axis of time providing a holistic understanding of the morphology of the landscape throughout the layers. The third scale is that of the system which looks beyond the present top-most layer exploring the future of the HUL which depends on the proper understanding of the previous layers.

Part two

2.6 Place -making as a union between the tangible and intangible

This section focuses the connection between the two types of elements forming the environment in a given structure (specific era): the built environment and its users in the place-making process and provides a quick overview of how different theorists and practitioners analyze and understand this relationship; they examine how people act in urban spaces and how they perceive them which contribute in the shaping and



Fig.04: Elements of Place, source: author, 2016

evolution of the city. In order to safeguard the city's urban heritage manifested in its urban spaces and structures, it is essential to understand its conceiving forces embodied in the way people use its spaces according to their cultural and socio-economic backgrounds.

Theorists within the field of urban design and geography have attempted to identify the meaning of place and its composing elements from Relph (1976), Canter (1977), Punter (1991), and Montgomery (1998) who provides a reinterpretation for them all (Rasouli, 2013: 22). In his book 'Place and placelessness' (1976), geographer Edward Relph examines the concept of place in depth. He believes that in order to properly identify place, one must understand both the people's identification of place and people's association with place. As for the people's identification of place, Relph sees it as the "persistent sameness and unity which allows that [the place] to be differentiated from others" (Relph, 1976:45). He mentions three components of place which include; its physical setting, people's activities, and people's individual and group meanings based on their experiences and intentions Building on Relph's work, David Canter (1977) adopts a triadic similar to Relph, physical attributes, activities and conceptions, where place is a function of the combination of all three of them. Consequently Canter says that regardless to which components one would begin from, one have to associate certain modes of activity to spaces with physical attributes that people would bear a certain meaning for (Canter, 1977: 159, quoted in Rasouli, 2013). He proposes a set of tools needed in this procedure of place identification which are sketching for capturing the physical attributes of spaces, description for understanding people conceptions and mapping activities to indicate what people do and where (Canter, 1977: 160-161, quoted in Rasouli, 2013). Afterwards Punter (1991) attempts to link these components to urban design different principles, on which Montgomery (1998) builds his model. In his model, Montgomery assigns a variety of principles to the components composing the place-making process. Most important of these are diversity and vitality for the component of activities.

2.6.1 Activity as componnt of place-making

As explained in the previous section, the identification process of place-making, is all about understanding the relationships between its components. The relationship between two of the three components, the physical attributes of the urban structure and the activities taking place within, is extensively covered by ur-

ban planners and architects in their studying of public life. This section provides an overview on the discourse in the study of public life which took place during the second half of the twentieth century. Critics of that time, architects and urban planners, opposed the rational modernist model in urban planning for its negative impact on the quality of public life of its urban spaces. Gehl and Sevarre (2013) argue that the city's urban spaces are the result of the interaction between architectural space and public life and that architects tend to ignore the latter for its complexity, unpredictability and changing nature while the first proves to be simpler to deal with. This resulted in the poor quality of urban spaces in the modern city which turns the attention to the model of pre-industrial public spaces in order to study the relation between its public spaces and life that makes it socially successful. In her book 'The Death and Life of Great American Cities' (1960), Jane Jacobs refers to the new cities built following the modernist rationale as "dead cities" that lack active social life. Despite the deteriorated condition of the urban spaces provided by the historic city, she argues that they still manage to attract people; Jacob (1960) states "*There is no logic that can be superimposed on the city; people make it, and it is to them, not buildings, that we must fit our plans [...] by simple old-fashioned observation we can see what they [congested spaces of downtown] are. We can see what people like*" (Jacobs, 1958, quoted by Gehl and Sevarre, 2013: 51). Thus Jacob argues that bringing people into public spaces is the reason for their success and that the question lies in the ability to do so which cannot be answered unless the already active public spaces are studied. Similarly Donald Appleyard, in his book 'Livable Streets' (1980), adopts the concept of livability as an indication of the success of public spaces. With a focus on traffic, his work features comparative studies of different streets within which social life can unfold provided the proper conditions. Whyte (1980) focuses on the use of urban spaces created during his time in New York city. His book 'The Social Life of Small Urban Spaces' showcases a variety of tools which he devised to observe people's activity in these public urban spaces where he argues that the way people use public spaces is the reason whether they succeed or not. Gehl's (2011) framework offered in his book 'Life between buildings' is found to be quite useful in studying the link between the tangible attributes of the physical environment and the intangible human activity taking place and shaping this environment. Gehl explores the activities that take place in public spaces and how they are affected by the quality of the outdoor physical environment. He categories public activities into three types; necessary, optional and social 'resultant' activities. The three types are interwoven together and related with the

physical urban environment. Necessary activities are the functional activities in which participants are required to perform in order to achieve their required tasks. They take place regardless to the conditions of the outdoor physical environment, although better conditions can affect the duration in which they are performed. These activities can involve mostly walking to a certain destination such as work or staying in the outdoor space as part of your daily task such as selling or shopping. On the contrary, optional activities are those performed willingly by the participants to enjoy qualities of the outdoor environment and considered



Fig.05: activity spectrum, source: author, 2016

to mainly include recreational activities. This implies that they rely strongly on the conditions of the outdoor environment in the degree of which they support and accommodate such activities. Social or resultant activities are the activities that involve interaction between any numbers of participants present together in the same space and supported when necessary and optional activities are enhanced by better outdoor physical conditions. They can include activities with a wide spectrum of interaction level; from passive communication in watching other people and hearing them to meetings, conversations and other performances of high level of interaction and communication. Thus, one concludes that certain types of public human activity supported by better conditions of the physical urban environment are needed in order to create successful and livable urban areas which can be the solution to vitalize the historic city and by so safeguard and enhance the historic urban landscape. In conclusion, social activities are the resultant activities of necessary and optional activities stimulated by formulations of the physical environment. Nevertheless, one finds it impossible to categorize social activities only as one of the two possibilities. One finds that a lot of social activities are positioned between the two extremes as they can involve activities that are usually performed optionally by a group of people and at the same time be related to or spatially restricted by a necessary activity. Therefore, one creates the 'social activity spectrum' through which one positions the variant social activities accordingly.

2.6.2 Physical structure as component of place-making

The physical element of place, and the landscape, consists of physical structures and urban spaces where a variety of public activities take place by users. Referring to the triadic of place-making, the perceptual dimension is linked to the physical while the element of activities is discussed separately. Lynch and Rodwin (1958) believe that activities are directly affected by the physical form of urban spaces, while the users determine the meaning and value of these urban spaces according to the way they (the spaces) are perceived by them (Rasouli, 2013). In other words, users use the urban spaces as part of the physical components of the place, and the landscape, according to the meaning they understand them through, and they use them in the form of activities. Therefore one attempts to grasp this relationship through the mapping of Urban Design Features, which are features of the physical environment including its structures and spaces that carries the users’ activities creating multiple synergies between urban design features and activity forms. Meanwhile, these urban design features are sorted using the physical principles defined by Lynch (1960), which he refers to as elements. Sorting urban design features according to a principal typology facilitates their comparison with UDF carrying the same principal typology from previous structures in time. Lynch (1960) defines a number of principles to categorize the physical environment or the city affecting people’s perception of the city. They are paths, nodes, edges, landmarks, and districts. **Paths** represent ways penetrating the city’s physical structures and considered by Lynch as the principle element in people’s perception of the city’s image. While **nodes** are defined by Lynch as either important intersection of paths or concentrations of significant uses and functions or significant physical elements. **Edges** are defined as linear elements

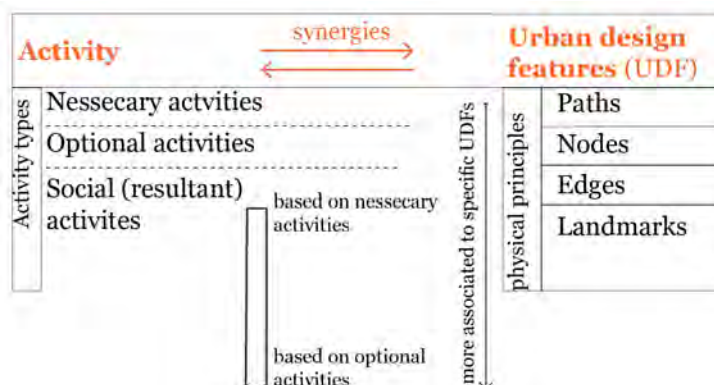


Fig.06:synergies of UDFs & activity conceptual diagram, source: author, 2016

which are more or less penetrable by users and connecting different elements of space together. (Rasouli, 2013) Christopher Alexander (1977) emphasizes the role of edges of the space in affecting the way buildings enhance and invites public life as he compares the edges of modernist buildings which he claims to be 'machine-like' with no opportunities to foster public activity and that of other models that provide more interactive buildings with more staying possibilities.

Upon connecting the physical structure represented by its Urban Design Features UDFs (identified through principles guiding their meaning) and the activities taking place within in, as the elements forming place and the two elements (tangible /intangible) of the urban landscape, one establishes synergies between the two parts (figure 07). These synergies are the basis for studying the relationship between the built environment and its users, thus understanding the urban landscape.

2.7 Conclusion of chapter: a conceptual framework

Basing on to the HUL model previously created (see section 2.5), the conceptual framework guiding the research investigation is built. The general conceptual model carries three different parts of the investigation going through different scales.

The first investigation: runs on the scale of the successive layers where the morphology of the urban settlement is studied in relation to the social, cultural and political factors justifying its creation through layers of time. This represents a functional relationship evolving between the landscape's tangible and intangible elements through time and through which the functional integrity of the urban settlements can be described, thus their structural and visual integrity accordingly. The second part of the investigation runs on the scale of the single layer where the relation between the physical structures composing the present urban settlements (the tangible) and the mode of habitation of their users (the intangible) is explored.

The second line of investigation: runs on the scale of the present structure. It aims to explore the relation between the physical structures composing the present urban settlements (the tangible) and the mode of habitation of their users (the intangible) resulting in the transformation of the physical structures. Thus

understanding the development of the physical structures and the forces deriving its transformation.

The third line of investigation: runs on the scale of the present structure with special references to the scale of over-layered structures. It focuses on the relation between special features of the built environment (Urban Design Features UDF) and the users activities in the focus area of study. This is achieved through the mapping of urban design features of the built environment represented in physical structures and spaces which carries associated social activities. The formed synergies of activities and urban design features represent a functional relationship between the tangible and intangible (artifact and ritual).

General conclusion: returns to the overall scale of the system as the aim of the research is the conservation and revitalization of HUL and as previously mentioned, the third principle of HUL ‘regeneration of urban heritage’ is related to this point.

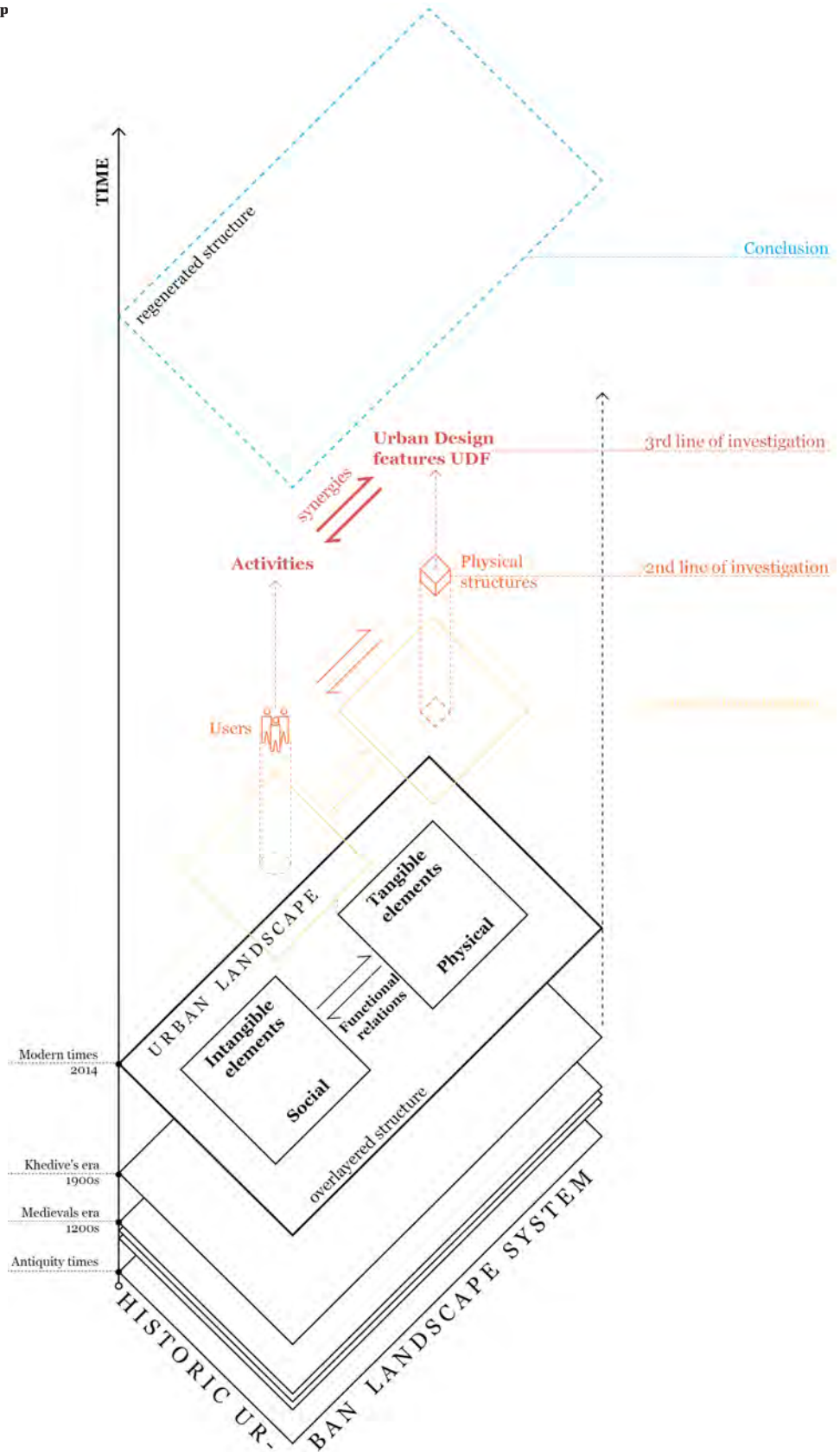


Fig.07:Conceptual framework, source: author, 2016



Chapter 3:
Case-study:
Siwa oasis analysis

3 Case-study: Siwa oasis analysis

This chapter provide basic background on Siwa oasis as the research case-study. It gives an overview on its emergence in relation to of the geographical position and historical factors affecting its creation. After that, the chapter adopts the first line of investigation aiming to the understanding of the morphology of the urban settlement in relation to the social, cultural and political factors justifying its creation through layers of time. This represents a functional relationship evolving between the landscape's tangible and intangible elements and through which the functional integrity of the urban settlements can be described. This is discussed through analysing the spatial evolution of the urban settlements of the oasis since the beginning of known history till the present era. In the end of the chapter, the choice of the focus study area takes place accordingly where the historic urban landscape is found to be clearly represented.

3.1 Background of Siwa oasis

Siwa is one of the largest desert settlements in the western desert of Egypt. The oasis's position on both the region and local scale that justifies and explains its emergence as a desert urban settlement. On the regional scale, Siwa is situated on the eastern side of the Saharan desert near the borders separating Libya and Egypt. The Sahara desert, also referred to as the North African belt, is considered



Fig.08: Map showing the route and settlements network located in the Sahara desert, North Africa , source: author, 2016 based on map by Petruccioli and Montalbano, 2011

to be the largest desert in the world covering a distance of 5000 km east –west and a depth of around 2000 km. It stretches along the northern coast of the continent of Africa from the coast of the Atlantic ocean East to the Nile River West. Throughout history, the Mediterranean sea maintained the connection needed between all of its overlooking nations and settlements, while the vast Saharan desert separated them from sub-Saharan, central and Southern Africa. Therefore, a weave of trade routes has been established crossing the Sahara in both East-West and North-South directions. The long distances and hostility of the arid desert constituted the main factor in the emergence of a chain of fortified human settlements situated strategically along the trade routes offering needed protection and stopovers for crossing caravans. Another factor is the presence of underground water allowing for such an emergence amid a hostile environment. Salt is present in abundance throughout the Sahara, which strongly limits the possibility for cultivation. It is worth of mentioning that the Nile valley is the only significant cultivated area within its premises. The Greek historian Herodotus provides an early description of these early settlements, he says:

“In this belt [the North African belt] at intervals of about ten days’ journey there are fragments of salt in great lumps forming hills, and at the top of each hill there shoots up from the middle of the salt a spring of water cold and sweet; and about the spring dwell men, at the furthest limit towards the desert, and above the wild-beast region [sub-Saharan Africa].” (Macauley, G. C, The History of Herodotus vol. 1, 2001, quoted in Petruccioli and Montalbano, 2011: 28-29)

On the local scale, Siwa oasis is one of the largest oases in the Western desert of Egypt where it is located near its western borders with Libya. It is part of a great depression that spreads throughout the desert beginning from Upper Egypt in the South and extends northwards towards the Mediterranean coast. In the Egyptian western desert, Siwa is one of five major oases; Bahariya, Farafra, Dakhlah and Khargah respectively from the nearest to the far most from the oasis. As previously mentioned, Siwa is a part of an elaborate network of ancient trade-routes and desert urban settlements that vary in size and significance on both the regional and local scale. The oasis's significance comes from its location on the cross-roads of important regional and local trans-desert routes. Most important of these is the ancient Augila- Thebes route connecting 'Thebes' in the Nile valley with 'Augila' in Cyrenaica, the Libyan desert, and then westwards across the Sa-



Fig.09:Map showing the five oases of the western Egyptian desert on route network connecting them with Nile valley East, Mediterranean coast North, and the Sahara desert West, source: author, 2016 based on map by Petruccioli and Montalbano, 2011

hara. This route passes through a set of major oases including Khargah, Dakhlah, Farafra, Siwa in Egypt and Augila and Jaghbub in Libya. The second route is the Oases route connecting Solum on the Mediterranean coast North to Sudan South and dates back to the Seventh century (Petruccioli and Montalbano, 2011: 31). This route passes through all the previously mentioned major oases in the Western desert of Egypt in addition to Jaghbub in Libya. On the route from Jaghbub lie few small oases on the west of Siwa including Girba, Shiyata and Umm'Asha where the salination of the ground water turned their wells un-usable (32). The third Alexandria- Siwa route dates back to the Fourth century when it was used by Alexander the Great in his famous visit to the Ammon oracle (31) passing by Marsa Matruh on the Mediterranean and the minor oasis of Qara North-East of Siwa. The fourth and last route is that of Siwa- Memphis, modern-day Giza which passes through the major oasis of Bahariya and minor oases of Al-Arag, Nuwamisah and others whose wells have dried up. Nowadays, many of these minor oases are deserted due to the sensitivity of their existence in the first place (32).

3.2 Formation of the landscape

The Siwa oasis is composed of an elongated depression with the length of about 75-80 km (east to west) and a width of about 5-10 km (north to south) and floor level of 18 meters below sea level. Petruccioli and Montalbano (2011) conceptualize the Siwa depression as a polycentric system of distinct settlements; a system which is composed of several urban settlements with central nuclei positioned in relation to hydro-geographical elements and transitional routes (33). The Hydrological elements of the oasis are represented in its abundant ground water and Salty lakes called 'Sabkahs'; the oasis contains a large number of springs and three main lakes: Siwa, Maraki and Al-Zaytun lakes, along with two secondary and almost dried up lakes: Khamisah and Aghurmi. Close to the urban agglomerations a clear separation between the urban structure, crowned by the two most dominant urban centers: Shali and Aghurmi, and the cultivated plains is exhibited. Other un-urbanized hilltops and lonely mountains such as Gabal Al-mawta, Gabal Al-Dakrou, Gabal Adrar and Gaafar Mountain among other spreading along the northern borders of the depression, are part of the geographical and topographical features of the basin. In reference to definitions and notions discussed in the literature review on the concept of 'Landscapes', the landscape is a result of a system of natural features that is being continuously modified and altered by communities bearing evolving cultural features. The management of

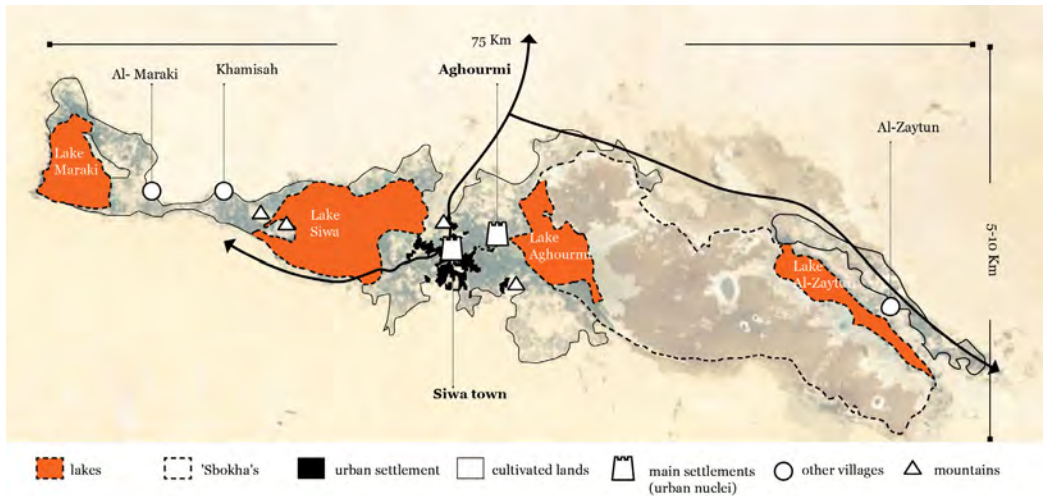


Fig.10:Map showing the different elements forming the landscape of the oasis, source: author, 2016 based on Google Earth footage 2015.

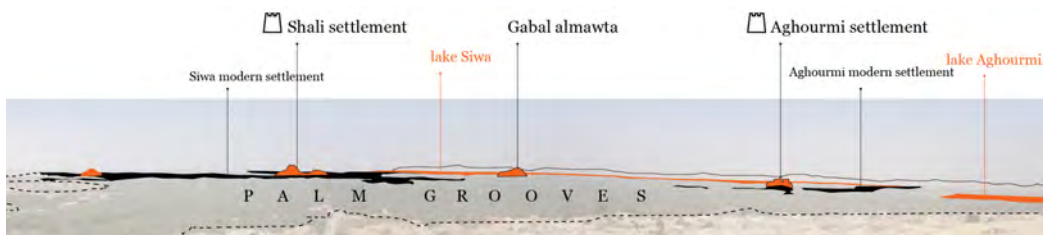


Fig.11: Analysis of the landscape elements of a panoramic view on the oasis taken from the top of Al dakroun mountains northeast of present Siwa town, source: author, 2016.

these natural resources throughout the history of the oasis forms its landscape (see Chp. 2.2.2). The over-extraction of ground-water without adequate drainage formulates the changing lakes and the cultivation of special plants, date palms and olive trees, create the seemingly endless palm grooves. The urbanization of the hilltops of Aghurmi and Shali creates dominant features of the landscape along with the northern group of lonely mountains and ridges versus the flat plain of the southern desert.

3.3 Spatial evolution of urban settlements

The prehistory of the Egyptian western desert oases has not been thoroughly studied. Nevertheless, surface findings dating back to Paleolithic and Neolithic eras prove that Siwa among other oases of the western desert were inhabited by a culture different to that of the Nile Valley (Fakhry, 1990: 72). Reference to such

culture west of the Nile Valley, called the ‘Tehenu’, dates back to the first Egyptian Dynasty and mentions their failed attempt to settle on the western border of the Valley. Despite of the propositions made of their settlement in Al-Fayyum and Wadi Al-Natrun areas, Fakhry (1990) suggests that these people inhabited the oases of Siwa, Bahariya and Farafra (74). Later during the sixth dynasty, references show the people of Tehenu being pushed away from the territory by the ‘Temehu’ who unlike the latter look different from the people Nile Valley. It is even supposed that the four oases of the western desert, except Siwa, were already under Egyptian rule while the status of Siwa remains uncertain. The only known fact is that Egyptian religion and culture spread into the Siwa region. The oases local governors held total control over the oases with the recognition of the Egyptian kings as their rulers; this was through the payment of regular tribute. This made the oases easily independent after the Assyrian conquest of Nile valley in the seventh century B.C. Instability and rebellion followed the Assyrian invasion resulting in the shifting of the trade routes coming from Sudan and sub-Saharan Africa through the oases in order to reach the Mediterranean shore and continue to Europe and elsewhere. This positioned the oases in the centre of the trading system of the time leading to its prosperity while giving rise to new Greek trading colonies on the Northern Libyan shore which were strongly connected to Siwa (77, 79).

3.3.1 Urban settlements of Antiquity

According to the local history of Siwa, provided by the Siwan Manuscript, the first settlement to emerge in the Siwa region was that of Aghurmi situated 2.5 km East of the Siwa settlement known later as ‘Shali’ and located in the middle of the oasis basin. The Aghurmi settlement is described to consist mainly of a fortified complex built over an elevated rock hill containing a number of religious and civic buildings including the Temple of the Oracle of Ammun. Not far from the complex laid the temple of Umm Ubaydah and the Ghulah spring which irrigated the surrounding palm grooves (figure 13). The Temple of the Oracle of Ammun was built during the 26th dynasty under the

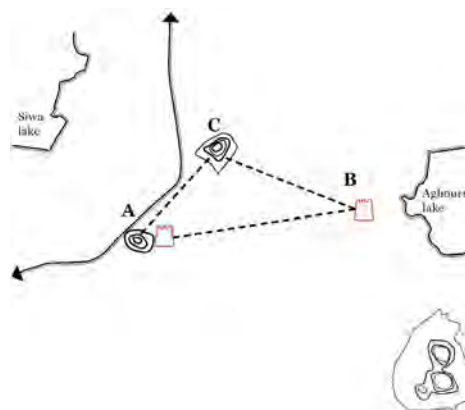


Fig.12: Urban growth diagram during Antiquities, source: author, 2016

Temple of the Oracle of Ammun. Not far from the complex laid the temple of Umm Ubaydah and the Ghulah spring which irrigated the surrounding palm grooves (figure 13). The Temple of the Oracle of Ammun was built during the 26th dynasty under the

rule of king Amasis and was already famous all over the Mediterranean basin. The Acropolis witnessed the famous visit of Alexander the Great to the Oracle of Ammun in 331 B.C. Descriptions of the acropolis are provided by several Greek writers from the accounts of Alexander's visit:

“The inhabitants of the Oasis of Amun live in villages; in the middle of the oasis stands the Akropolis which is fortified with three enclosures. The first

enclosure contains the palace of the ancient rulers, in the second one are the harem houses of the women, children and other relatives as well as the guards, and lastly the chapel of the god and the sacred spring in which the offerings of the god are purified. The third one is the soldiers' barracks and the houses of the private guards of the ruler. A short distance from the Akropolis, a second temple of Amun stands in the shade of many large trees. Nearby, is a spring called “Spring of the Sun” because of its nature”. (Clitrac, 300 B.C, reported by Diodoro siculoXII, quoted by Petruccioli and Montalbano, 2011: 33)

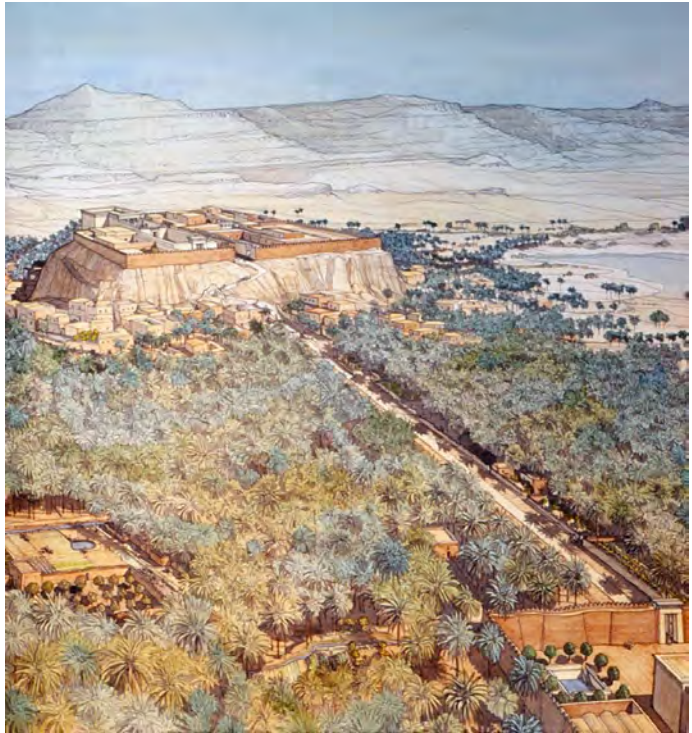


Fig.13: Historical reconstruction of Aghourmi acropolis and surroundings, source: painting by Jean Claude Golvin.

These accounts mainly describe the presence of several settlements on the cultivated plains with the Aghurmi acropolis in the middle. Petruccioli and Montalbano (2011) mention the absence of any evidence to illuminate the possibility that the nearby hill of Shali was inhabited in the time with one of these settlements; especially that ‘gabal Al-Mawta’, the main necropolis, is located in close proximity to it. Therefore, they hypothesize the presence of an urban settlement over Shali in the time of Antiquity and propose a Three-pole system of the Siwan settlement on Shali (A), the necropolis of ‘gabal Al-mawta’ (C) and the Aghurmi acropolis (B) as a religious and political center along the temple of Umm Ubaydah

and the Ghulah spring (49). After the decline of the fame of the Oracle of Ammun, the acropolis was converted into an urban settlement between the Twelfth and the Thirteenth centuries. The new settlement was built by the local population on the typology of a Berber Saharan Ksar; a fortified city with high opaque walls and only one entrance. Its structure was built using limestone extracted from the former temples and palaces of the acropolis. It remained inhabited till about the early Twentieth century during which several accounts and descriptions of the settlement were provided. Von Minutoli in 1820 visited Siwa and the northern coast and presented illustrations of the settlements of Shali and Aghurmi (fig *).

3.3.2 Urban settlements of Medieval: Berber Ksar

In 1203 A.D, part of the inhabitants of the settlement of Aghurmi moved to the location of present-day Siwa town situated to its eastern direction and built their new town ‘Shali’ (Fakhry, 1990); the word ‘Shali’ means ‘The Town’ in Siwan language. The medieval city of ‘Shali’ is situated on tableland of the elevated rock of jabal Siwa which is 200 meters above sea level and is located about 2.5 kilometers west of Aghurmi village, the former acropolis of the Oracle of Ammun. Nevertheless, it was the political conditions that dictated their defensive stance; both Shali and Aghurmi remained as the main urban settlements in the region for centuries to come as the surrounding flat plains and palm groves provided no defense against the frequent attacks by nomadic Bedouins. Shali is built on the typology of a Berber Saharan Ksar . This form of building was not entirely new to the medieval settlers as their previous village, Aghourmi, was reconstructed in the same fashion above the ruins of the former acropolis. Berber ksour are forms of highly

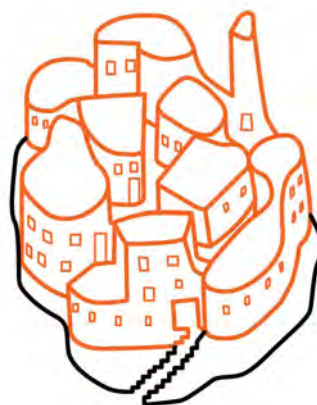


Fig.14: Berber ksar model, source: author, 2016

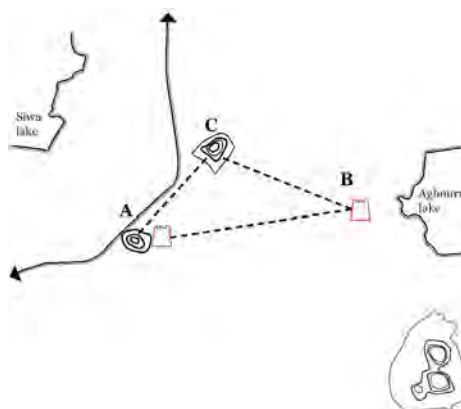


Fig.15: Urban growth diagram during Medieval era, source: author, 2016

dense and heavily fortified desert settlements which are built by the Berber tribes inhabiting the Saharan desert. They are usually constructed on high ground for defense and for the optimal use of the rare plain lands fertile for cultivation. They are constructed along the ancient trans-Saharan trade routes as stopovers for caravans. A ksar has a set of unique typological features; most dominant of all is its high opaque enclosures with little openings which follows the external borders of the topographic feature on which it rests. The city enclosure has usually one entrance passing beneath its main mosque, which is the case in Aghurmi, and has one main road network that connects to a secondary network of smaller alleys and shaded walkways. The tribal composition of the society is represented in the structure and grouping of its houses with the single family as its basic unit (Petruccioli and Montalbano, 2011: 56).

In the case of Shali, more entrances were developed other than the original main entrance situated on its northern side, called 'Al-Bab Inshal'. 'Al-bab Atrat' was the second door opened on the southern side of the ksar in order to provide easier exit towards the gardens located in that direction and to avoid the passing in front of 'Al-ajwad' who held their daily meeting by the main gates. By time, a third entrance, 'Bab Qaddumah' was opened for women who were granted the right to go to the gardens (Fakhry, 1990: 18). The city consisted of one main north-south axis beginning from the main entrance in the north to the olive mill in the south. This axis was intended as a separation between two main districts of the city; the Easterners including three families and the Westerners including four families (Al-Shafei, 1999: 62). Al-Tawil (1981) analyzes the urban spaces of Shali into public places and private alleys and walkways. The public spaces consist of one primary public space and a set of secondary social spaces called 'khoss'. The primary space was a central public square located near the main entrance where the city's mosque, 'Al-masjed Al-Atiq', is located. He proposes that it was used as a daily meeting place for the council of 'Al-ajwad' and as a gathering place for the inhabitants who would listen to the decisions of 'Al-ajwad' announced by the 'bahweety', the city's official announcer whose house overlooks the public space. Furthermore, it is the center from which all the secondary alleys going deep into the city's houses deviate. As for the city's secondary network of alleys, they exhibit a high level of compactness and spontaneousness where necessary shade and privacy are provided.

In order to understand Shali's urban structure, one must consider the social, economic and political factors that shaped the city and its urban fabric. This is

the functional relation connecting the physical structure which represents the tangible element of the oasis's HUL and its intangible forces once in action justifying the creation and maintenance of what is physical and observable in the moment. The first factor is the social structure of local community which exhibited a clear division between two parties; Easterners and Westerners. This division played key role in the management and arrangement of the city structure; as the heads of the seven families formed a ruling committee called 'Al-ajwad'. The joint committee made important decisions, issued permissions and organized the relations between the families where tension often aroused between the two main groups. A decisive factor in the city formation is the security state which is political in nature; as the unprotected plains surrounding jabal Siwa limited settling beyond the city walls for centuries. This limitation imposed certain spatial and typographic conditions that resulted in a dense and overlapping arrangement of buildings. Such vertical expansion of the city was incited by other economic, demographical and cultural factors. As the Siwan population grew with the addition of new cultivated lands, building of new houses and extensions took place as the salty surface layer of the land is removed and transformed into 'Kerchief' for construction. This links the agricultural development on the surrounding plains with the city's urban expansion. This vertical expansion can also be linked to some cultural influence; as it was custom that a father's married sons should stay within the same house which made each family add one floor on top of the other for more rooms for their married sons. Al-Shafei (1999) suggests that the compacted urban fabric of Shali owes to an aspiration for security and the need for cooperation and mutual understanding incited by political and societal conditions. Such conditions required the communal cooperation in the management of local resources and economic activities and a strong collaboration to guarantee the right of all the parties. Such functional relations exhibiting different dimensions; social, cultural and political justifies the specific composition of the city as a physical structure and maintains its existence in order to represent a special life-style which is necessary under the circumstances and conditions of the age. Returning to the literature review where the social-functional integrity plays an important role in identifying the historic urban landscape, one claims that the integrity of these functional relations and the degree to which they remain present, or not at all, is an indication to the evolution of the landscape itself and to the status of related urban structures and visual image.

Unfortunately not much is left from the dense urban fabric of the medieval for-

dress to illustrate the exact urban features of the interior of the city. The only recognizable features are parts of the external high walls of the city and its ancient mosque which remains active till this moment. Nevertheless rich historical descriptions and depictions made by previous visitors of the fortress provide an image of its interior. The first pictorial description of Shali comes from the German consul Von Minutoli who visited the oasis in 1824 (figure 17). In 1923 Belgrave provides a description of the dense city which was still inhabited during his two-years stay in the oasis from (1920-21), where mud houses are built over each other to form one great line of battlements with small windows and said to reach a height of 200 feet. He offers a cinematic narration of his experience while exploring the city, he writes:

“... a vast warren of houses connected by steep, twisting tunnels [...] where one needs to carry a light even in day time, and two persons can scarcely walk abreast. This labyrinthine maze of dark, narrow passages, with little low doors of split palm logs [...] forms the old town of Siwa”... “This human warren is surprisingly clean and free from the smells that one would expect in a place where there is such an absence of light and ventilation [...] one notices is the subdued hum of human voices, from invisible people, and the perpetual sound of stone grinding mills, above, below and all around. When one meets people, groping along these tortuous passages, they loom into sight, silently, white robed, like ghosts, and pass with a murmured greeting to their gloomy homes.” (Belgrave, 1923: 134, 135).

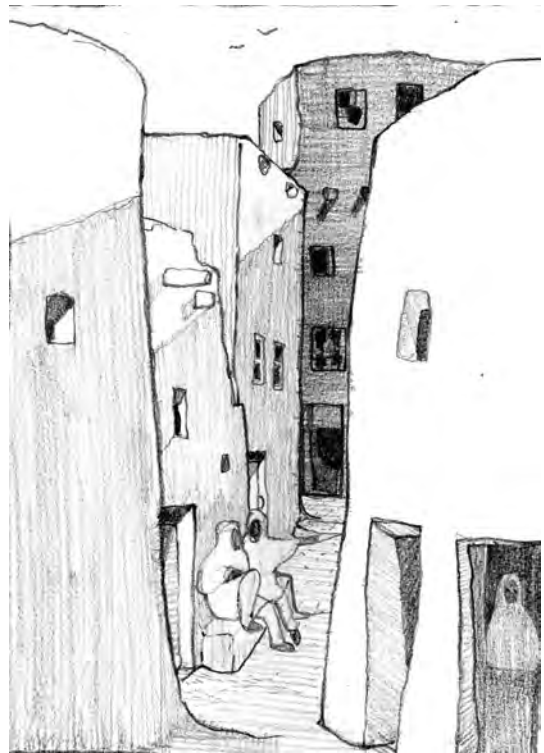


Fig.16: Depiction of the internal walkways of Shali based on Belgrave's accounts (1923) and drawn over photo of Shali ruins by Al-Shafei (1999), source: author, 2016.



Fig.17: The settlement of Siwa in 1820 by Von Minutoli, Atlas, Pl. 5, source: Fakhry, 1990: 21

3.3.3 Expansions outside the walls of the ksar

During the 18th century a great political change took place; a change that would affect the Siwan perception of themselves and their position in the region and would motivate them to change their way of living thus their urban structure. As mentioned by Al-Shafei (1999), disputes between both the Easterners and Westerners grew beyond the control of ‘Al-Ajwad’ and turned into a war between the two sides the end of the 17th century. In 1816 the head of the Westerners called for the aid of the central Egyptian government in Cairo against the winning Easterners, Egyptian forces came and took control of the oasis in 1820. Sequentially the Siwan state of isolation came to an end with the recognition of a larger body that controls the region. These new political conditions were followed by a new logic concerning the urban expansion of the town. With the ultimate control of the Egyptian governorate over the region, the

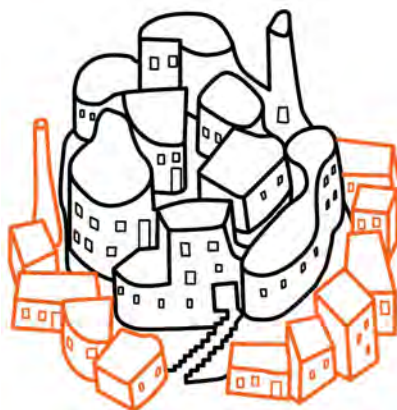


Fig.18:Expansion beyond the ksar model, source: author, 2016

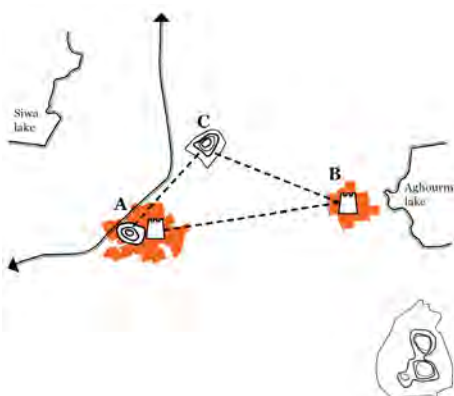


Fig.19: Urban growth diagram during expansion beyond the ksar, source: author, 2016

danger from nomadic Bedouins became limited. This gave the opportunity for the town to expansion beyond the walls of Shali, not to mention the increase in population and the need for urban expansion. The result is a two layered urban structure with the Shali ksar in the middle as a nucleus for urban growth and external layers of houses surrounding the high walls of the ksar and extending both westwards up the neighboring 'Adrar' mountain and southwards on the flat plains. During this era, one could find clear accounts and depictions describing the oasis while the structures from the previous era (the medieval Berber ksar) were still in use and intact. Belgrave is a German officer who inhabited the oasis for two years (1921-22) and provides detailed descriptions and pictures, both photographic and painted, of oasis's structures and inhabitants in his book 'Siwa: the oasis of Jupiter Ammon' published in 1923. Around the same time, Ahmed Mohamed Hassanein Bey, served initially as a diplomat for the Egyptian King Faud, offers an account of Siwa oasis as a stop-over on his 1923 journey across the Libyan desert in his book 'The lost oasis' published in 1925. Although he does not offer a detailed description of the oasis as Belgrave (1923), he offers a picture of Shali ksar and the surrounding expansions that one found to best illustrate the era's urban structure (figures 20,21). Later, accounts of the military exploration of the Libyan desert by a reconnaissance squadron from the British Royal Army describing their way from Cairo, the Egyptian capital, to Siwa oasis is published in the 'from Cairo to Siwa: across the Libyan desert with armoured cars' by Major T.I. Dun in 1933. The book contained a catalogue of different aerial pictures, among others, of the oasis clearly showing its urban composition and the structural typology of the houses (figure 22).

The new urban expansion followed the same social division which had existed inside the fortified city; with the Easterners expanding on the flat plains east of Shali, while Westerners occupying the western slopes in the direction of the Adrar mountain. This division created two different urban fabrics, with the 'Easterners' adoption of a new typology while the Westerners followed Shali's urban arrangement and fabric. Belgrave (1923) describes the settlement during his two-years stay in Siwa (1920-21); the fortified city of Shali was still inhabited while below its high battlements stood more houses surrounded by a second wall. He describes his way passing through the street separating both quarters which still exists (figure 23):

“The path to the town passed over a disused cemetery [...], under an archway and into the street that divides the Eastern and Western quarters. The street itself was hard rock and very steep in parts, but owing to the Siwa height of the tall houses on each side it was generally cool and shady and a favorite resting-place of the inhabitants, many of whom lay stretched full length across the street taking their siesta.” (Belgrave, 1923: 63).



Fig.20: Montage showing the urban expansions beyond the ksar, over historical photo by Major T.I. Dun (1933), source: author, 2016.

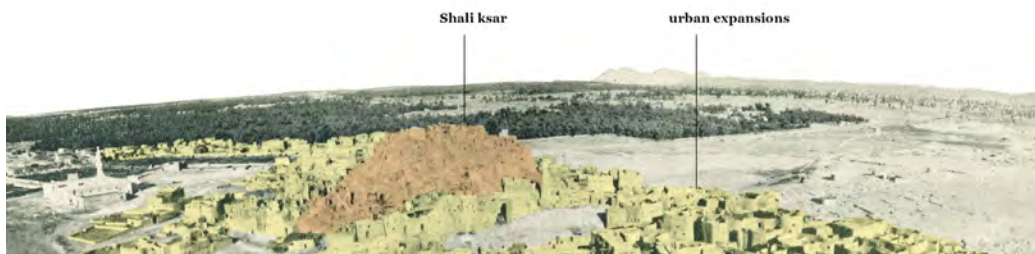


Fig.21: Montage showing the urban expansions beyond the ksar, over historical photo by Major T.I. Dun (1933), source: author, 2016.



Fig.22: Montage showing the urban expansions beyond the ksar, over historical photo by (1933), source: author, 2016.

The new housing typology followed by the ‘Easterners’ was not restricted or limited by significant typographic or spatial factors, unlike their counterparts on

the opposite direction. One can find that a simple rectangular grid with a relatively wide street network was adapted where houses would stand individually or a group of two to four houses would be connected together. Houses were built with maximum height of two floors. The privacy and climatic advantages previously provided by Shali's compacted and inter-locked urban fabric were compensated by larger plot areas and inner courtyards with high outer walls for privacy in the new houses. The new urban arrangement allowed for much less interaction within the public domain as streets and open spaces lacked the needed shading and compactness. Belgrave (1923) that most of the sheikhs and rich merchant left Shali and went for more spacious and luxurious houses down on the plains next the lush green landscape of the palm groves. On the other hand, the 'Westerners' embraced similar compactness as they limited topographically by the hilly land under the foot of the 'Adrar' mountain which also posed as western boundary limiting the available space for expansion. Accounts of one of the streets that divided between the western and eastern quarters; probably it was situated more on the western side of Shali separated the western quarter on one side and the houses that was directly built under the foot of Shali on the other. Belgrave describes his way through this passage which gives the impression that the Western fabric allowed for similar types of social interaction of the public domain where shade and cool places for meetings were provided.



Fig.23: Comparison of different photos taken at different times for the entrance to the road separating the eastern and western quarters. From top to bottom; Historic shot of the entrance, source: Belgrave, 1923: 113. Shot of the same entrance taken in mid Twentieth century, source: Fakhry, 1990: 23. Shot of the same entrance taken in 2015, source: author, 2015.

It was not until the 1930s when more changes occurred to oasis and boosted more expansion and further transformation. It is mentioned by Fakhry (1973) that the oasis was subjected to heavy rain that lasted for three days in 1926. Along with an earthquake that happened later, Shali was evacuated in the thirties by the Egyptian authorities and their inhabitants had to dwell on the flat surrounding plains. This increased the expansion rate of the oasis and put an end to the life within the fortified city. This era is also marked by attention from the Egyptian central governorate for investment and development of the oasis. In 1929, the Egyptian king visited the oasis and began the construction of a new mosque and police station. There were other agricultural projects which were not completed. The most important one was the construction of a road connecting the oasis with the coastal city of Marsa Matruh; where major future expansion would extend along this main axis within the oasis.

One can state that this was a transitional era represented by a transitional state of urbanism where the Siwan society was gradually changing its way of living in reaction to new challenges and opportunities. A mixture between imitation of the old and aspirations towards the new have emerged to mark a transformation from a defensive and security-based urban logic to that of rapid expansion and exploitation.

3.3.4 Modern expansion of the oasis

Beginning from the sixties and further on, Siwa oasis was heavily transformed under the influence of political, economical and demographic changes. This had greatly its influence on the urban structure of the oasis and shaped a parallel emerging city. Politically, two main factors influenced the oasis. First, the attention of central government to the oasis through provision of several services and infrastructure followed by interest from international development agencies for local empowerment and promotion of self-building strategies. The offi-

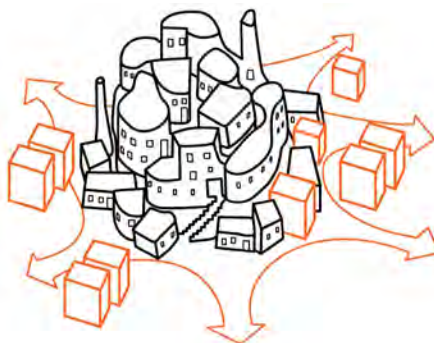


Fig.24:Modern expansion model, source: author, 2016

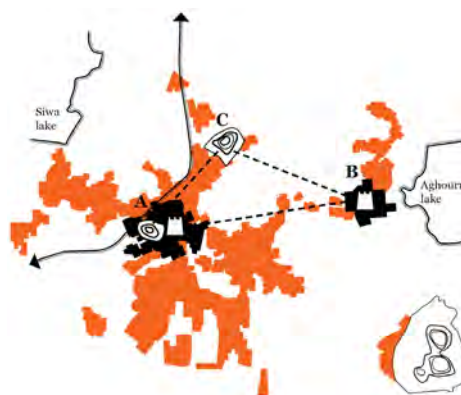


Fig.25: Urban growth diagram during modern expansion, source: author, 2016

cial development adapted a standard way in urban planning where housing projects were constructed using the prototype design for public housing developed by the Ministry of Housing and Development. Not to mention provision of basic infrastructure and services, including schools, mosques and health care facilities to new satellite villages emerging next to the plantations and farms where its inhabitants work. The Second factor is the changing in the labor market within the oasis, resulting in the arrival of foreign cheap labor from Upper Egypt to work in the oasis's fields and plantations. As the discovery of oil in the Libyan desert new opportunities for work for Siwan youth were available, which made them leave their work in the oasis and travel to Libya. Also, Siwan youth were called for military service in the Egyptian armed forces. These demographic, economic and political conditions brought new urban patterns into the oasis; resembled in the favoring of the painted concrete and fire bricks houses to the humble two stories Kerchief houses.

Returning to the urban structure, housing topologies varies between those provided by the government in the sixties and seventies and patterns of self-built houses that emerged in later periods of time, during the eighties, with the official support of infrastructure and basic services. Such urbanization pattern of self-built houses was similar to those emerging in other major cities and villages; concrete and red-brick houses painted in strong colors and continuously subject to vertical expansion and densification. Although this pattern is alien to the Siwan built environment, one can find that Siwans have added some of the elements from their old houses such as 'Al-Marboaa'; which is a semi public guest room usually accessible from the outside of the houses and sometimes detached from the structure of the main house. This pattern dominated the Siwan scene on two scales: the scale of new expansions and satellite villages that developed its own administration and 'Al-Ajwad' outside the city center in a grid formation and the scale of the city center where old buildings are being replaced by new concrete ones adapting the existing urban fabric but changing its physical characteristics and appearance. It is essential to mention that the buildings of the 'Westerners' compacted urban fabric remained the same, as it was mostly abandoned in favor for the new expansions of modern buildings. As for Shali, its urban structure has suffered great deterioration and stagnation throughout this era until this very moment, where it is quietly vanishing with the exception of the Old mosque which was renovated in 2010.

3.4 Findings

Siwa exists as a form of desert settlements whose special existence is justified in frame of its geographical and historical context. On the regional scale, Siwa is part of a network of desert settlements originally built and situated strategically along an elaborate trade route network crossing the Saharan desert in North Africa. On the local scale, Siwa is one of the largest oases in the Western desert of Egypt among a group of five oases. Siwa oasis can be understood as inter-related system of different urban settlements, hydrological elements and transitional routes forming its general landscape. Through time its urban landscape has evolved in relation to the social, cultural and political factors affecting its communities, in turn changing and forging the urban landscape itself. From the historical analysis of the spatial evolution of the oasis as an urban settlement, one understands that the formation its urban structure follows a certain model for growth. It begins with highly condensed urban settlements, Berber ksars, scattered on elevated topographic features in Shali and Aghourmi. Such model owes to an aspiration for security and the need for cooperation and mutual understanding incited by political and societal conditions. This is followed by a phase of growth beyond the walls of the ksars, where the ksars acted as nuclei for urban expansion in the successive layers of the landscape. The newly developed urban expansions bore similarities to the architectural and urban characteristics

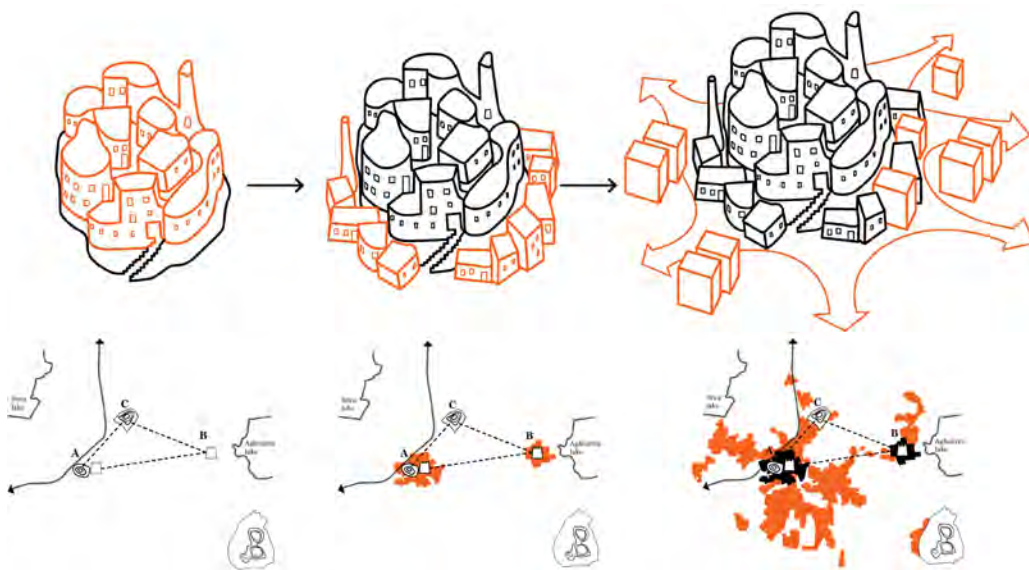


Fig.26: Spatial evolution findings diagram, source: author, 2016

of the ksars, forming vernacular urban settlements around their high walls. In this case urban expansion was only limited by the oasis limited needs, population and affected by its long-going state of isolation. This was changed later with the investment of the Egyptian government in the development of the oasis's services and infrastructure provision cutting a long phase of isolation and beginning a phase of unprecedented urban growth for the oasis. During the phases prior to the modernization of the oasis, strong functional relationships were created between the intangible social, cultural and political factors of the oasis's inhabitants and the produced tangible physical structure. These functional relationships shaped and were shaped by the society's strong cultural identity thus forging the features of the Siwan historic urban landscape. Nevertheless, with the modernization of the oasis, the functional integrity of oasis's HUL was destroyed and new functional relationships rose forming an entire new urban landscape that does not reflect or represent a continuation of the oasis's cultural identity and marking its historic urban structures as historic and inactive.

3.4.1 Determining the focus study area

The understanding the morphology of the oasis's urban landscape defines the boundaries of its historic urban landscape and the urban structures representing it. From the analysis, one can clearly define the borders of urban structures dating from different layers of the landscape, thus determining the borders of the historic city. In the case of Siwa, the historic urban structure is resembled by two main urban nuclei (A: Shali & B: Aghourmi) and their expansion in the times prior to the layer of modernization. This is for a clear reason; the post-modernization urban expansion does not relate to the oasis historic and cultural identity thus lacking the vernacular factor. Since the research main concern is the historic city, it is logical that these historic urban nuclei would form the center of its focus. Nevertheless, the research concentrates on urban nuclei (A) and its urban expansions beyond its medieval ksar. This is due to its superiority as a representation of the development of the urban landscape of the oasis thus its HUL. It is a fact that after the decline of the oracle of Ammun situated in the once Aghourmi acropolis, the center was shifted to Shali as the main urban settlement of the oasis. The historic focus study area is then divided to include the zones (1-2-3). This division follow only its historical morphology but also its current state of conservation and habitation. Zone (1) includes the ruins of the Shali ksar dating back to the medieval layer of the landscape. It is considered to be a his-

torical destination under the protection of the Egyptian state for antiquities but with a poor state of conservation; highly unrecognizable urban fabric except for parts of the fort's external walls. Therefore, it is not inhabitable or used by local inhabitants except for the ancient mosque situated by the ksar's main entrance. Zones (2 & 3) represent the urban expansions beyond the Berber ksar in the successive layer of the landscape. The two zones represent the two different quarters **formed following the society's division into Westerners and Easterners. Zone (2)** represents the Westerners expansion onto the neighbouring 'Adrar mountain' which kept Shali's compact urban fabric, while zone (3) represents the Easterners expansions on the flat plain under the ksar. This division also reflect a different state of present habitation; zone (2) is completely abandoned with no activity or urban development taking place within its premises while zone (3) is partially inhabited where urban development is taking place representing the active part of the historic urban centre. Nevertheless from the initial impression of the zone, one understands that it is not heavily inhabited and active in comparison to the surrounding areas outside the historic centre. It is the night view from the top of Shali that provides a clear image; the very dim and scattered lights coming from **some of the houses and almost dark streets which make it much less welcoming to walkthrough during at night.** There is another impression one gets from a night view looking eastwards towards the marketplace; which is situated on the eastern side of zone (3) and stretches along part of its northern edge. While the historic area is sunk in silence and darkness, the marketplace is booming with life, strong and colourful lights and noisy movement of all sorts of transportation available **in the oasis.** It does not take much time living in the oasis to recognise that the neighbouring marketplace is the centre of public life and activity of the oasis with high concentration of shops offering various products and services. Therefore, it is found that incorporation the marketplace area as zone (4) within the focus area of the study is vital due to its strong connection and close proximity to the historic centre as a place of great human activity and as a part of strong functional and visual impacts on the urban landscape of oasis's centre. Not to forget that part of the research approach is to look to the historic urban landscape within its context as part of the overall urban landscape. As for the other neighbourhoods from the northern and southern directions surrounding the study focus area, one found them to be not interesting for inclusion in its focus. They are found to be quite monotonous without any variety in activities while their modern houses lack any significant historic value.

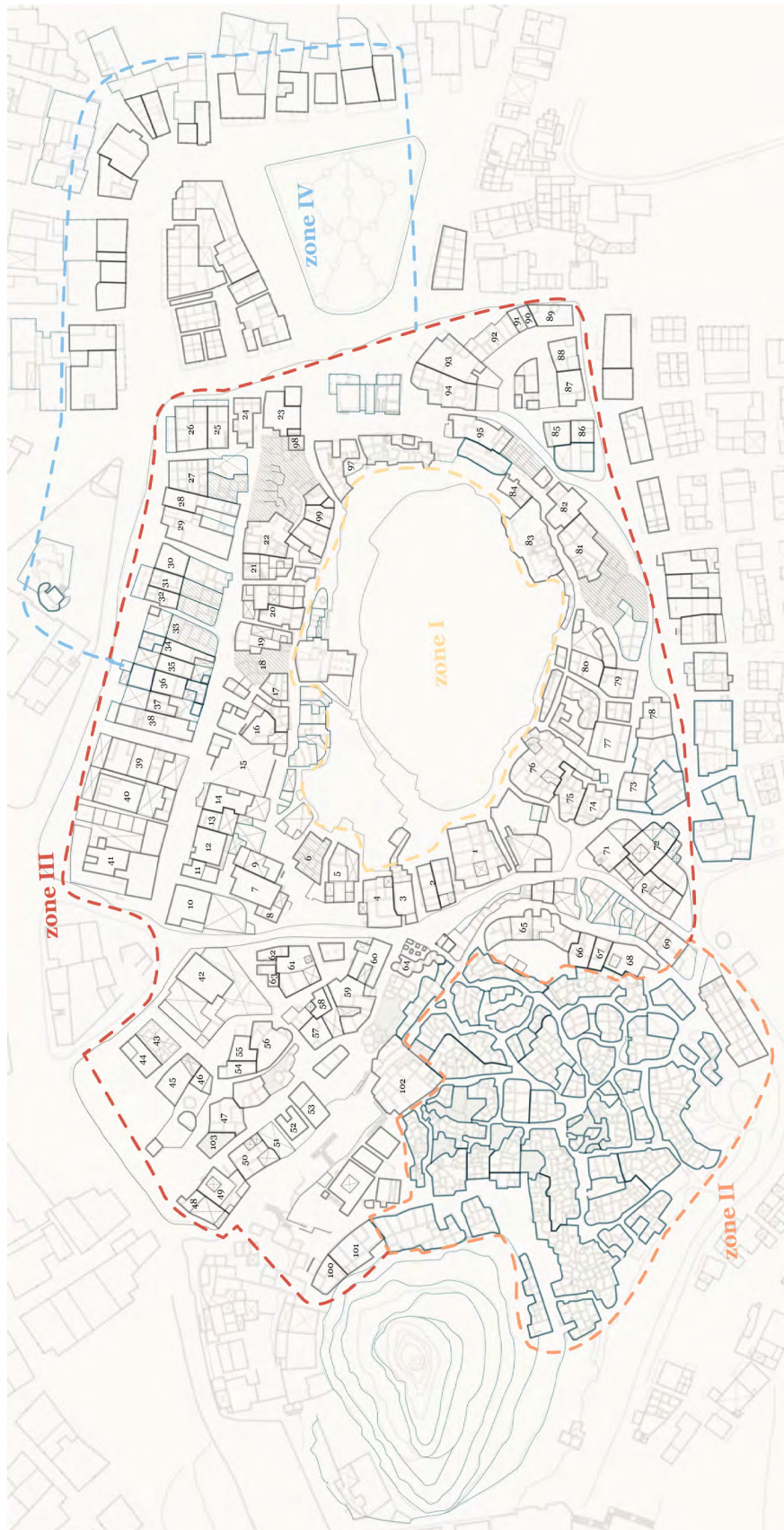


Fig.27: Map showing Focus study area with different zones (1-4), source: author, 2016, based on map by Petruccioli and Montalbano, 2011.



Fig.28: Location of the focus study area (the historic city center) within Siwa town, source: author, 2016, based on map by Petruccioli and Montalbano, 2011.



Chapter 4:

Exploring the relationship
between the built
environment and its users

4. Exploring the relationship between the built environment and its users

This chapter examines the relationship between the built environment of the historic urban center of Siwa oasis and its users; representing the two elements within the urban landscape. This takes place with a special attention to the historic background of the different elements and their interconnected relationships. In this chapter, the second and third investigation lines are investigated, dividing the chapter into two parts; each for one line of investigation. The first part, which is the second line of investigation, aims to explore the relation between the physical structures composing the present urban settlements (the tangible) and the mode of habitation of their users (the intangible) resulting in the transformation of the physical structures. Thus understanding the development of the physical structures and the forces deriving its transformation. The second part begins with brief aspects of Siwan daily public life as observed by the author then the exploration of past and relative present synergies of social activities in the focus area of study is undertaken and mapped. This part, which resembles the third line of investigation, focuses on the relation between special features of the built environment (Urban Design Features UDF) and the users activities in the focus area of study. This is achieved through the mapping of urban design features of the built environment represented in physical structures and spaces which

carries associated social activities. The formed synergies of activities and urban design features represent a functional relationship between the tangible and intangible (artifact and ritual). The investigation line does not only map present active synergies of activity and UFD, it compares them to past synergies in previous layers thus it goes on the scale of the single layer and that of successive layers too.

part one

4.1 Urban structure typologies

The first investigation lines focuses on the physical structures in relation to its users. The first step is to decode the physical structures and categorize them into different typologies that share common features, characteristics and user groups. This facilitates the comprehension of the different forms of the physical structures and the way they relate to the quality of HUL.

4.1.1 Vernacular structures

The term ‘vernacular’ is commonly used to describe what a certain group of people, identified within the frame of their local culture, would shape objects of their livelihood in respond to the particular environmental, cultural, social and religious (among other) resources. Thus vernacular structures would necessarily represent ‘vernacular architecture’. It is the way people build their homes in respect to their limitations in terms of local climate, availability of materials and in fulfillment to their aspirations and needs. It is local knowledge built up through time and passed on through generations thus can be also described as ‘Architecture without architect’, ‘hand-made’ and ‘low-tech’ (Dabaieh, 2011). In this research, the typology ‘vernacular structures’ is used to refer to structures built in the ‘medieval Berber Ksar’ period (see section 4.4.2) and the ‘expansions beyond the walls of the ksar’ (see section 4.4.3), as they both represent the Siwan vernacular methods in building and construction although they vary in urban composition. As previously discussed in the spatial evolution of the oasis’s urban structure, the urban fabric and the way buildings are arranged together are different in both eras. On one hand buildings inside the ksar were built over each other and packed in a seemingly one dense formation forming the formidable opaque of the fortress. On the other hand, the expansion outside the ksar gave access to larger space and flat terrain and with the elimination of these spatial and typological

graphic limitations, houses were built following a more geometric pattern with no need for vertical expansion (two stories high). As previously mentioned, this takes place in exception to the Westerners urban expansion on the neighboring 'Adrar' mountain. Nevertheless, the climatic and building materials limitations remains unchanged between both era; medieval Berber ksar and later expansions beyond the ksar. Therefore, structures from both eras share same inherited buildings techniques and related visual image, which remained unchanged until the introduction of modern building materials and techniques during the second half of the 20th century. One thus claims that between the different structure typologies discussed, vernacular structures with all its physical features in terms building height and used materials are the most representative of the historic urban landscape of the oasis and its image. Within the study area vernacular structures are divided into three main components: houses, mosques and shaded meeting places or 'Khoss's. Both mosques and 'khoss's are discussed later in relation to forms of human activities as urban design features, while this section while focus mainly on residential buildings and mixed residential buildings.

Vernacular structures are structures built using traditional building materials and local construction techniques which gives them certain architectural and spatial features. The main construction material is 'Kerchief'. It is a form of solidified mud extracted from the salt crust surrounding the salty lake and once sectioned it becomes hard enough to build the load-bearing walls of the structures. Dry palm tree wood is used as floor beams and architraves while palm tree dry leaves are spread as a second layer over the palm tree wood logs and beams to form the roof. Mud with its different variations is used for rendering walls and for covering floor and roofs as a finishing layer. This type of architecture imposes certain restrictions on buildings. The restricted spans of inner spaces are between 3 to 3,5 meters in length, this is due palm tree wood have weak flexion resistance thus easily deformed (. Also, the load-bearing technique and the use of palm tree wood as architraves impose restrictions on the size of wall openings making interior spaces darker. Nevertheless, the system offers flexibility in the shaping of the walls to create organic and interlocking structures and the thickness (reaching 1 meter) offers great protection against external heat thus keeps internal spaces cool during the day (Petruccioli and Montalbano, 2011). Belgrave (1923) describes his experience regarding Siwan traditional houses where he marks a difference between the houses built down on the flat plains around the ksar and those built inside the ksar. First, he generally mentions the 'exceed-

ing lowness' of the doors and that locals told him that they build such small doors to keep the warmth inside. He further describes the houses on the flat plain to follow the usual Arab pattern with the services on the ground floor and the living quarters above. They are two or three stories high with a usable flat roof where rooms are positioned sometimes. On the other hand he mentions how compact the older houses up in the ksar are where rooms are packed over one-another with the light only reaching the outer rooms via small square windows with four wooden slits. Therefore, only the top-most ksar houses have flat usable rooftops where family members would usually sleep in during the summer. He also mentions that their walls are massive compared to their counterparts outside the ksar which provides more thermal comfort inside the compact rooms (Belgrave, 1923: 142-143). Nowadays, kerchief is seen by locals to be unsuitable and outdated as a construction material for their houses. One can also associate it with their strong desire for modernizing their life-style looking up to modern methods of construction and models from out of Siwa. According to interviewee (A), who is in his mid-thirties and is building his own new house, he provides several reasons why he or any of his people would not prefer using Kerchief. One of the major reasons is its high sensitivity to water proposes a challenge when using modern wet facilities inside the house. The introduction of modern plumbing offers unprecedented high accessibility for water in houses along with the lack of maintenance that keeps water running in wet facilities, not to mention the rise of underground water-table and humidity reaching ground-level walls in low structures. In contrary to the old houses, Interviewee (A) claims that the use of water was limited as it required manual transportation and storage inside the house as many houses were either up in the ksar or hard to reach while carrying a supposing large water container. He says:

“Only women and girls bathed inside the house, or to be more precise, used little water to clean their bodies. Men used the springs in their garden to bath. A woman would seldom accompany her husband in the morning to the fields with a sack of clothes needed to be washed. She would wash them in the washing spring in the garden and would take a good bath, and then she would hang the washed clothes on a palm branch and take them back with her on their way home. Each house used to have a small barrel or a sack made out of goat skin to store the water in house for daily use. Water would be used carefully and reused whenever possible. As for toilets, they used ashes from making fire to clean the toilet holes which eliminate the need for flushing water and avoid any

unpleasant odor [...] a good wife is known from the cleanness of her house's toilet." (Interviewee C, May 2015)

One of the most reasons one heard from the Siwan inhabitants is that traditional building requires specific high labour cost and long duration of construction which claimed to be not the situation back when the system was popular. As inhabitants would build together their houses and gradually expand it upon need while currently real estate investment makes owner want to build the whole building in a short time. Another reason is the desire to escape from the strong restrictions on internal spaces imposed by massive kerchief walls and short spans of palm tree wood. This is not to mention some of the young people's desire to imitate modern interior spaces which they are exposed to via media and with the introduction western concepts via touristic facilities in the oasis. Such spaces require the use of open continuous spaces with large glass openings among others. One would rather ensure that despite of the inhabitants desire to modernize, their conservative cultural background imposes high distinctions between public and private spaces in the household. One was invited to eat in the houses of two of the interviewees (A & B), where the guest-rooms ('marbouaa's) were entirely separated from the houses living quarters with their separate wet-facilities and entrances which is quite similar to Siwan traditional houses.

One finds that the transformation of vernacular houses in the oasis goes in two different directions according to two inhabiting user groups; local inhabitants, and tourists and expats. The first is the direction representing the local inhabitants who would transform their houses towards modern models of building to form either mixed structures or modern structures. The second direction represents foreign expats and tourists where vernacular structures are transformed towards a new-vernacular model. Thus the transformation of the physical structures is affected by the user group inhabiting the structures.



Fig.29: Vernacular house, source: author,2016.



Fig.30: Deteriorated vernacular house, source: author,2016.

4.1.2 New-vernacular structures

New vernacular structures are buildings that are renovated or built imitating traditional buildings techniques and using traditional construction materials. The extent to which they are built according to traditional methods varies from one building to another depending on the extent of traditional materials and techniques applied in the design and construction of these houses. One can claim that this seemingly nostalgic style was introduced via touristic facilities built in the oasis which aimed to offer their visitors a vernacular experience of the oasis. Later foreigners bought old houses and renovated them as vacation houses which raised the price of old houses and offered itself as an opportunity to sell one's old abandoned house in the historic quarter. Therefore, these structures are mostly not inhabited by locals who would not spend a lot on renovation using expensive local materials and labour, they are rather inhabited on a seasonal basis by their non-local owners or rented to tourists who seek an extended stay in the oasis. This is true except for one exception; when a number of vernacular houses owned by local inhabitants were renovated as part of an urban revitalization project. Interviewee (A)'s extended family owns an old house which has been renovated by this program. He says that there were certain conditions for applying for this renovation program of which the most important condition was that the house should be inhabited. From the renovated the 5 houses found in the study area, only one is inhabited. According to him, some have already been sold to foreigners while others are closed and offered for sale including his extended family's

renovated house. Another man whose uncle used to live in one of these houses, says that his uncle lived in a similar house from time to time until he passed away and now it is abandoned again.

One can argue that new-vernacular structures are not typically similar to the vernacular structures in style and structure. Their forms are geometrically sharp in appearance with symmetrical elevations which seems to be much less spontaneous. Their openings sizes are much larger than the traditional ones and different in proportions, as old houses had typical square small windows with for wooden shutters. New elements are added to the buildings that were not common in tra-

ditional houses. This includes hand-rails built from lemon-tree branches and roofs pergolas made of wood and reed, this is not to mention extensive decorative plastering on elevations. In terms of structure, attempts to overcome spatial and structural restrictions imposed by the use of local materials and techniques are undertaken. Modern insulation techniques along with the use of concrete for floors and inner layer of fired brick are used to overcome the water-sensitivity issue related to wet-facilities. Some houses would use cement plastering for inner walls instead of mud to avoid dust accumulation falling off the mud walls. A layer of wire mesh is added to windows to prevent mosquitos from entering the house among other small details. Therefore, it is hard to cluster them all together if are to discuss their authenticity and integrity in following the vernacular model, but they are clustered together as a mode of transformation representing a new group of users attracted to the oasis.



Fig.31: new-vernacular house with a khoss turned into a private loggia in the ground floor, source: author, 2016.



Fig.32:One of the renovated houses owned by local inhabitants which is left un-inhabited, source: author,2016.

It is a typology that evolved according to a different mode of habitation which follows the motivations of the new users carrying values different from their local counterparts. In comparison to the vernacular typology of structures, one can say that new-vernacular structures offer an image that blends along with the historic urban landscape visually but it is a different when it comes to its functional and structural dimensions. Another conclusion is that this type of transformation has altered the local perspective on vernacular structures. First, old houses are looked to as an investment opportunity as it attracts tourists and expats with a lot of income generation possibilities and the rise in their price is a proof of that. Second, one finds that this creates further disconnection between the local inhabitants and the vernacular structure as a representation of Siwan heritage. As the functional bond between them is broken and new bonds are connected with new group of users according to which the structures are transforming. In other words, the local inhabitants taste has changed away from their inherited vernacular models into new and modern counterparts leaving the old ones for non-local visitors and expats. One can refer to Smith's (2010) synthesis on the disconnection between ritual and artifact (see section 2.2.2); in this case vernacular structures as artifacts, representing the Siwan vernacular model, are being customized to the rituals of the new group of users, different to the original ones who created them in the first place and through which their (the new user's) cultural, economic and social needs are channeled.

4.1.3 Mixed structures

Mixed structures represent one form of transformation of vernacular buildings by local inhabitants where local attempts to adapt the old structures to modern needs take place. These adaptations include the addition of new extension rooms built using modern materials usually white stone bricks with either wooden or concrete roofs depending the user's budget. Adaptations also could be in the introduction of modern plumbing systems and water supply. This takes place usually out of economic reasons as the inhabitants are not able to completely rebuild their house entirely using skeleton concrete systems. Although mixed structures are discussed as a separate typology, they can be considered as an intermediate stage in the transformation of the vernacular structure typology to the modern counterpart as the extended spaces would still spontaneously keep the building's vernacular shape and form. They express the change of the physical structure as an artifact to adapt to the changing rituals of its same old group of users forging

a new functional relation which, unfortunately, streams away from inherited cultural identity.



Fig.33:Photo shows a renovated new-vernacular structure on the left and a mixed local structure on the right, source: author, 2016.



Fig.34: a mixed structure house rebuilt using stone bricks, source: author, 2016.

4.1.4 Modern structures

Modern structures represent the local inhabitants desire to pursue modern lifestyles. The typology of structures follows that developed in all over Egyptian villages and informal settlements. It consists of a multi-story concrete structure with the maximum of four stories high which is according to the maximum height allowed in the oasis where balconies are typically repeated along the main elevation. Some of these buildings overlooking main-streets have shops on the ground floor with a raised platform extending few meters in front of the building, while the flexibility of its internal division offers the ability to create separate apartments which makes it a good model for real estate investment. As for wet facilities, it offers the use of modern plumbing systems and water supply quite flexibly along with possibilities for mechanical ventilations. Especially that the building materials used and techniques do not protect the building against the oasis's arid climate therefore most of the time mechanical ventilation is required. This typology represents new functional relations between the local inhabitants' needs which, as they see, cannot be answered using their traditional vernacular ways anymore. Not to mention, the perceptual dimensions of their needs that is influenced by exposure to modernity and global media to which their ancient ways cannot be related. In terms of its effect on the integrity of the oasis's HUL,

it is clear that such model does not relate or resemble in any ways its historic counterpart neither structurally or visually.



Fig.35:a group of four modern structures using concrete roofs, source: author, 2016.



Fig.36:A modern structure with bright facade colors, source: author, 2016.



Fig.37: A group of concrete modern structures, source: author, 2016.

4.2 Transformation patterns: a spectrum

In studying the physical structures in the focus study area, structures are clustered into different typologies. These typologies reflect the motivations of their past and present user groups that guided the process of their creation resulting

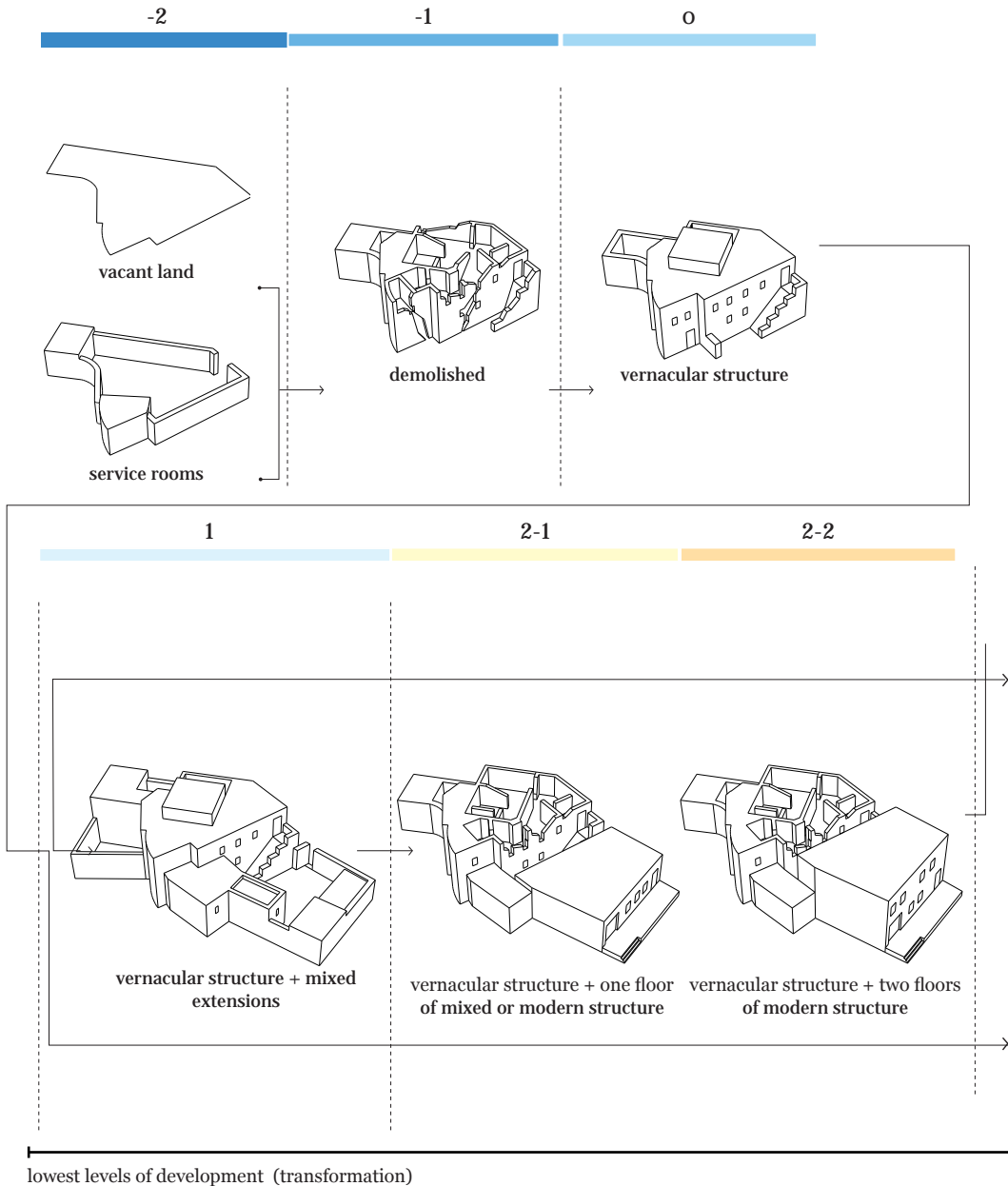
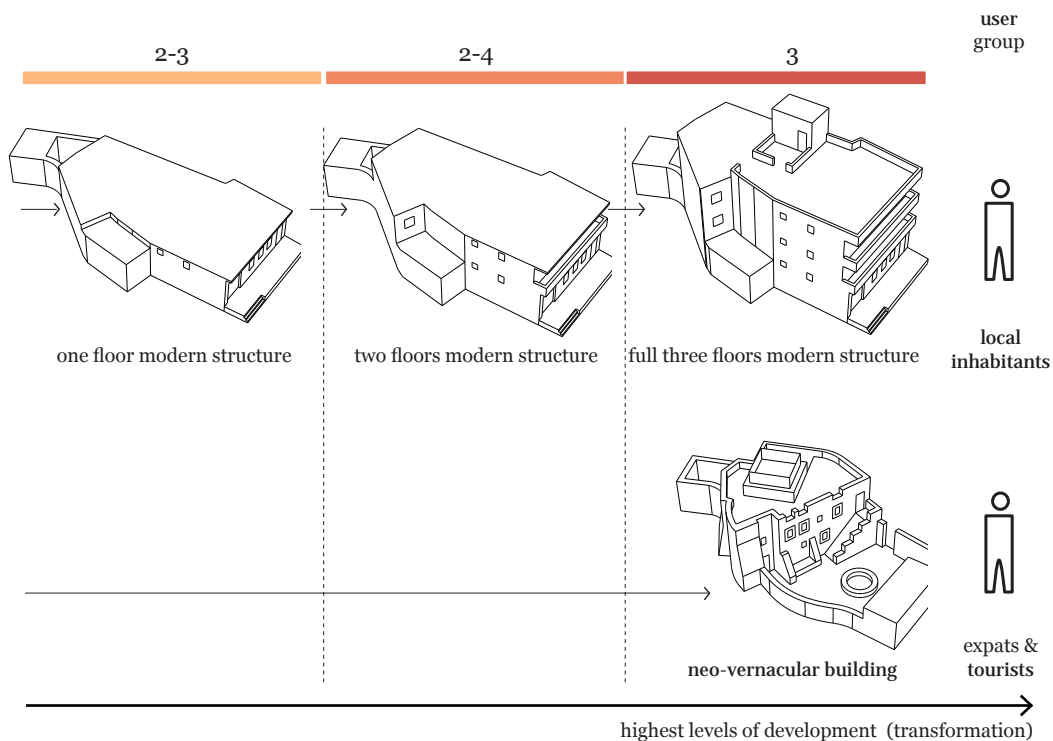


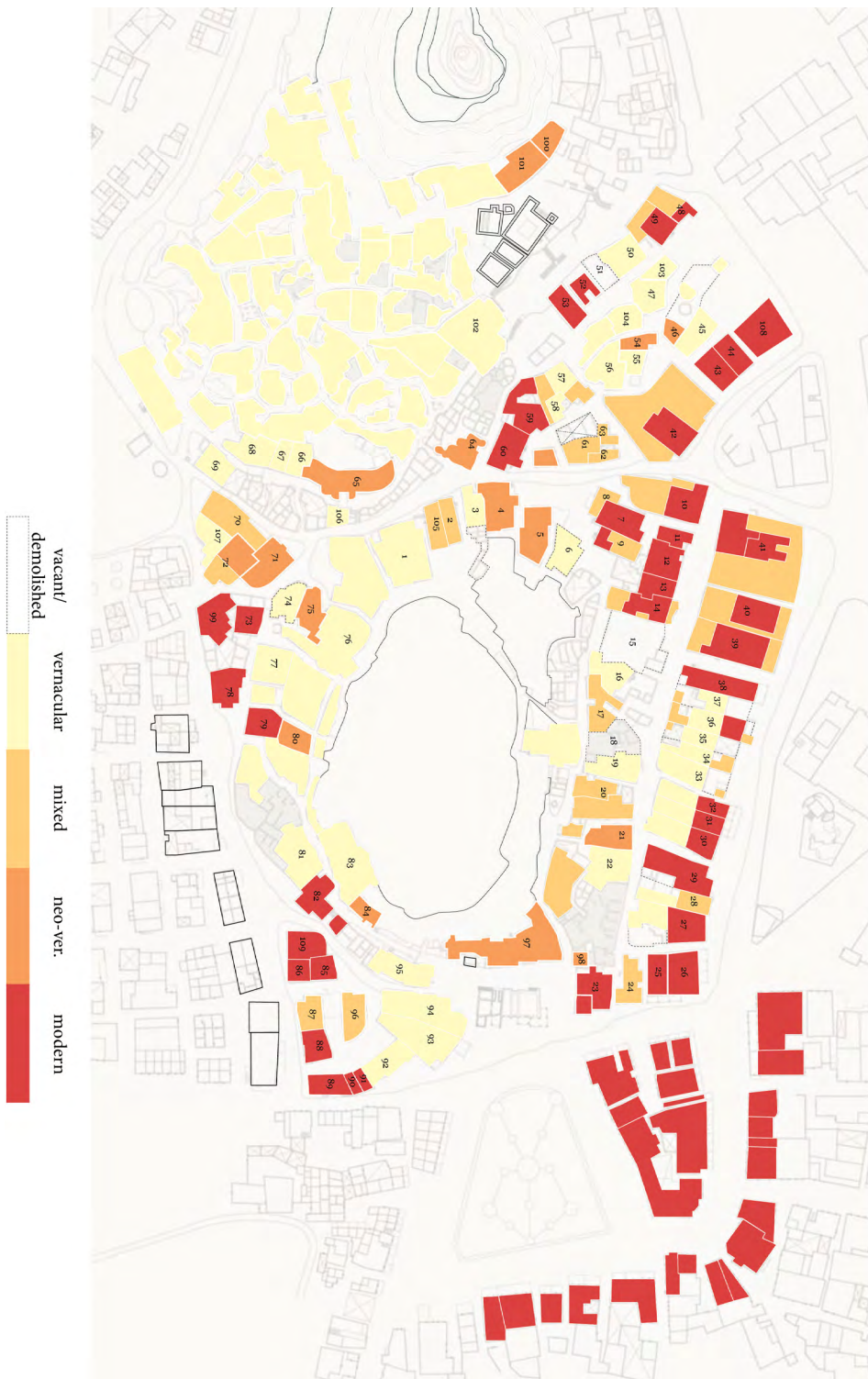
Fig.38:Spectrum of transformation pattern, source: author,2016

in their different features and characteristics. Not the mention, the position of these structures in terms of their structural and visual integrities are important in order to understand the potential impact of their presence on the Historic Urban Landscape overall. Nevertheless, these typologies are part of transformation in process; they represent beginning, intermediate and end-result states of physical structures. Physical structures are transforming along these typologies representing a mixture at a given time or representing one of the typologies as an end result. For example, vernacular structures that are turned into modern ones can pass through phases of transformation where the vernacular structure might partially remain while a mixed structure is developed next to it. A modern structure might get developed on different portions of a land plot next to other types of structure, or develop gradually through vertical expansion, or the combination of both. Therefore, a spectrum of transformation is created to capture the specific state of present structures in their positions between the specific physical typologies as a part of a transformation process, so that one can identify areas most developed and areas least.



4.3 mapping of physical typologies and transformation patterns

Fig.39: Mapped structural typologies within the focus study area, source: author, 2016.



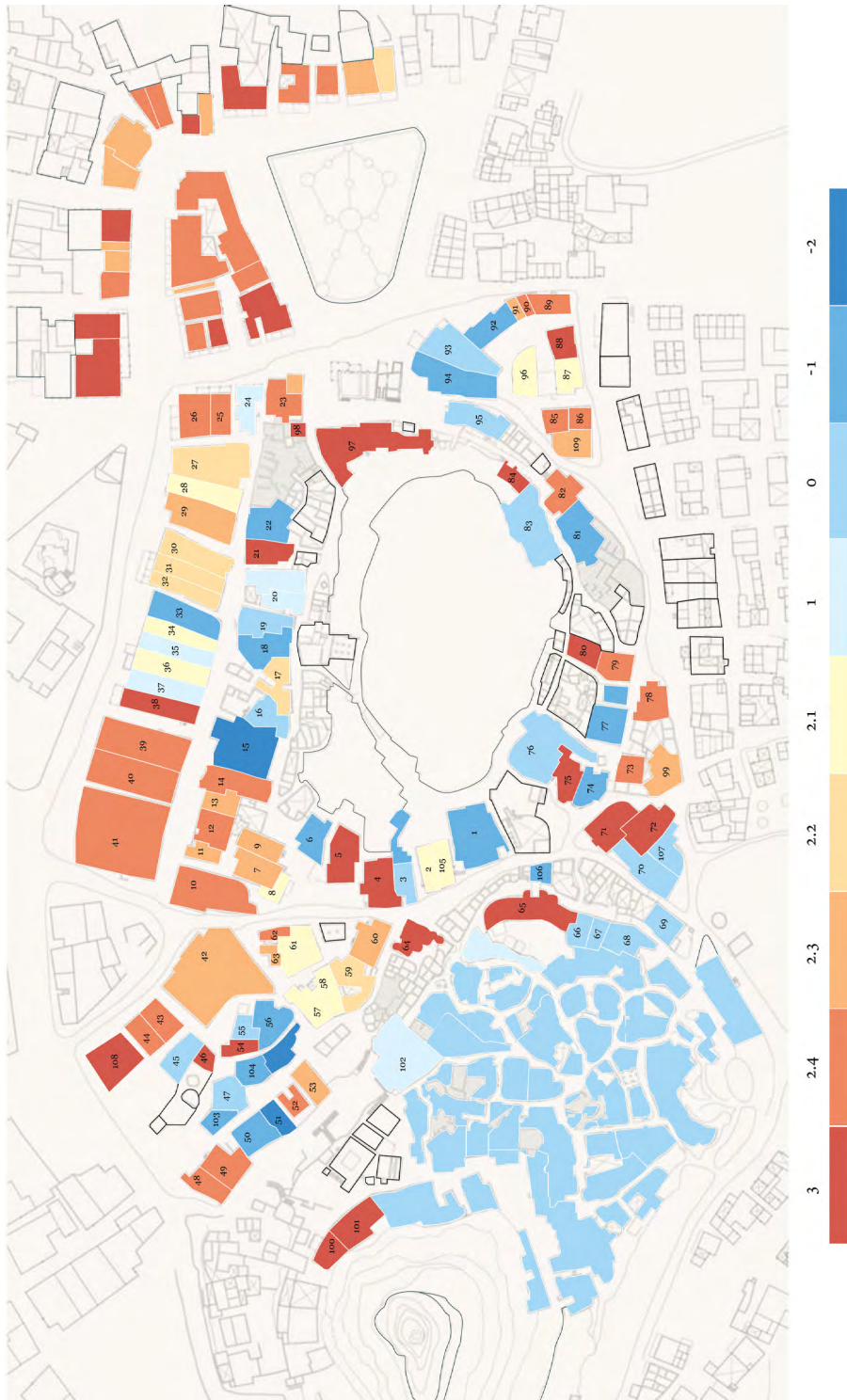


Fig.40: Mapped transformation patterns in focus study area, source: author, 2016.

4.4 findings

1 A process of transformation is understood as physical structures transform between the different states representing the typologies of physical structures; typologies bearing different features and impacts on the integrity of HUL. Meanwhile they represent two main user groups in the focus study area each with their own direction of transformation for physical structures which best resemble their values and motivations. The two groups are local inhabitants, and foreigner expats and tourists. The vernacular typology of structures represents a starting point from which each of the user group transform the physical structure in order to reach one of the other typologies. This means that:

- There are two distinctive directions of structure transformation representing the two different groups of users. In case of expats and tourists, physical structures are transformed to reach the new-vernacular model which is discussed previously in the chapter. While in case of local inhabitants, structures are transformed in the direction of the modern typology with the mixed structure typology as an intermediate.

2 From the mapping of the physical structure typologies and transformation patterns of the physical structures present within the focus study area, one concludes that:

- The presence of two distinctive boundaries between the structures transformed and inhabited by the two different groups, which means that they are weakly inter-connected (only in small parts of intersection). This is reflected in their location and concentration.



Fig.41: Physical structures divided according to two user groups, source: author, 2016.

- The presence of the group of locally transformed structures (modern and mixed typologies) in parts of one (3) and zone (4). While no locally transformed structures are present in the other two zones of the focus study area (zones 1&2). The structure's group presence in zone (3), representing its overall presence in the historic center, is highly concentrated on the zone's edges with zone (4) and decreasing along the direction towards the center. Noting that the most developed of these structures, representing multi-story concrete structures with shops on the ground floor, are present within these edges and in zone (4) and inside it.

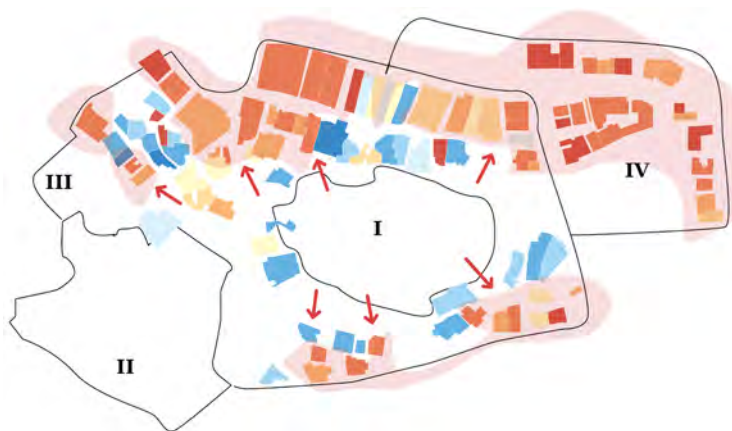


Fig.42: Distribution of developed local-physical structures in study area, source: author, 2016.

- The presence of the group of structures transformed by expats and for tourists inside zone (3) deeper inside the quite historic center away from zone (4) and the external edges of zone (3).

The position of the two main groups of structures representing different user groups in relation to the boundaries of the historic center (zones 1-3) is different. Group including locally developed structures tend to position itself outwards from the historic center, stimulating heavily on its edges and out of it in the marketplace zone (4). On the opposite, the other group of structures representing tourism and expats tend to shelter deep within the boundaries of the historic center. This is in addition to the fact that zone (2) as a large concentration of vernacular structures remain with un-inhabited with no transformation processes taking place by either parties. One can say that locally motivated development of the physical structures tends to push itself away from the center of the historic area looking outwards to the fringes with the marketplace (zone 4).

Part two

The second part begins with brief aspects of Siwan daily public life as observed by the author then the exploration of past and relative present synergies of social activities in the focus area of study is undertaken and mapped. This part resembles the third line of investigation and explores the relation between special features of the built environment (Urban Design Features UDF) and the users activities in the focus area of study.

4.5 Aspects of Siwan daily life

This section provides some initial observations and first impressions made by the author and connected with information from different interviews in order to provide an overview on how the public life in the Siwan streets looks like in relation to what was it like in previous times.

4.5.1 Arriving to the oasis

The journey from the outmost desert peripheries into the city center exhibits a rapid transition of the surrounding environment as many if it changes drastically in very little time. The surrounding environment experienced on the way changes according to one's direction of departure. Nevertheless, one experiences a blend of different sceneries from dense palm grooves, narrow twirling streets and fully loaded donkey carts to areas of wider streets of very little traffic with monotonous flat buildings on both sides that do not exceed two floors. Regardless to the direction from which one is coming, the roaring engines of motorcycles, 'tuktuks'; three-wheeled motorcycles, and lorries mark one's arrival to the city center. The bright colors of the signs and product displays of the congested shops of the city center make it quite recognizable. One makes his way between the parked Lorries and pick-ups, the toktoks waiting for costumers, fast motorcycles and donkey carts rushing by, children running back from schools and countless workers sitting on side-platforms. Most of whom one passes by, Siwans or non-Siwans, are easily distinguishable from their outfit. Most Siwans, if not all, dress in a white 'Jalabiya' that looks different from that of an Upper Egyptian, a Delta resident or a Bedouin from the Northern coast. A 'Jalabiya' is a traditional tall garment that is widely cut with long sleeves, it varies according to the place of origin but shares some common features. Anyways not all these immigrants

wear Jalabiyas, they would sometimes wear shirts and trousers which make them hard to differentiate from residents of the big cities such as Cairo and Alexandria. From time to time, a foreigner of western looks passes by and from his dress, equipment which he carries and the level of confidence in his walking one could guess whether he is a tourist or an expat who knows his way through well. After reaching the Market-square; a central square with a large garden in the middle which offers pergolas and several small trees for shading, one recognizes the unique ruins of the medieval fortress of Shali that mark the entrance to the medieval city from the market square. Inside the city it is quite different; noises reduce to near silence and the variety of colors of the surrounding environment reduces to the minimum. No people are to be seen except for small number of people passing by in donkey carts or motorcycles without signs of any forms of social public interaction. The ruins of the medieval Ksar are highly deteriorated with barely any recognizable features but it offers a strategic panoramic view of the oasis and the surrounding historic settlement 'Gharbeyeen' located on the opposite Adrar Mountain.



Fig.43:Road going to the city center passing through the palm groves, source: author, 2015.



Fig.44:Road going to the city center passing through urban settlements, source: author, 2015.



Fig.45:Main road in the busy city center, source: author, 2015.



Fig.46:Road inside the historic city quarter separating Easterner and Westerner quarters, source: author, 2015.



Fig.47:View of the Westerners ,Garbeyeen' settlement on Adrar Mountain from above the ruins of Shali, source: author, 2015.

4.5.2 A daily routine and public activity

The daily life in the Siwan oasis is somehow uniform that from walking through the streets in different timings of the day, one can grasp a daily pattern. The working day of the Siwan residents can be divided into two parts; the first one be-

gins early in the morning depending on the type of work and ends around noon, 'Al-dohr' prayer, and strictly after. The second part begins in the late afternoon with 'Al-aser' prayer and lasts onwards till after sunset at 'Al-a'asha' prayer', businesses including shops and similar facilities closes at midnight with the exception of few grocery and food shops which are owned and operated by non-Siwans. In the period between the first and second working phases, people sleep to pass the warmest hours of the day which makes this pattern more recognizable in the burning summer. One can barely find any opened shops during this period with very little traffic and people present in the street. From random conversations with several residents, one understood that a lot of Siwan residents work in the water mining plants in Siwa, others in governmental jobs and some in agriculture. It is worth mentioning that in the harvest season labor, mostly Upper Egyptian, comes to the oasis for work. Such phenomena could be traced back to the first labor problems faced by Siwans in the mid Twentieth century. One can argue that such patterns are inherited as all interviewees mentioned that their fathers before them have followed the same daily pattern. Three shots of the central market square are taken in three different times in the day; 14:30, 17:00, 18:30 respectively showing the difference in the public life following the daily pattern described above (figure 48). They show a gradual activation of the daily public life in the square reaching the peak at night. In figures (figure 49) two photographs of the same spot in the market area in different times, first at noon while the other at night, show the strong difference in the presence of active public life.

4.5.3 Mobility: how they move?

Upon walking the streets of the oasis, one meets all types of mobility vehicles in the oasis; donkey carts, motorcycles, tuktuks (three-wheeled motorcycles), and cars. lot of Siwans own their private motorcycles or tuktuks; tuktuks are used for the transportation of goods or people. It is common to see men, even young children, riding a tuktuk with their entire families behind. They are also used for income generation as taxis where one find them waiting for tourists and other potential customers by important nodes and intersections. Nevertheless, a decade ago this was not the situation as one hears that the ways of mobility in the oasis has drastically changed in the past generation. Donkey carts were the main method of transportation before the introduction of the mechanized mobiles to the oasis. It is still used now by mainly farmers who would go at dusk to their fields



Fig.48:View of the market square at three different times in the day, from top to bottom: 14:30, 17:00, 18:30, source: author, 2015.



Fig.49:View from inside the marketplace in two different times, left (12:00) and right (17:30), source: author, 2015.

with their families. Donkey carts were common in every household, interviewee (D) says that his family owned two donkey and carts. He remembers that he, his brothers and friends would take the cart in the afternoon reaching nearly seven people on board taking a long time to reach their destination allowing for social interaction. Nowadays, he says, things are faster than before, as each person has his own motorcycle.



Fig.50: depiction from memory of interviewee (D) regarding his donkey cart, source: author,2015.

4.5.4 Gender: where did all the women go?

A noticeable aspect of the public life is the passive and rather limited presence of women in the streets of the Siwan city center. It is noticed that all sorts of activities taking place in public is usually performed by men including selling, buying and all sorts of service provision. Women are rarely seen riding with her families riding a donkey cart or sitting in the back of a tuktuk while the male family members, husbands or sons, would ride the transport. Adult Siwan women rarely leave the premises of their houses except for visiting relatives or going to private gardens with family members. It is different for young girls and teenagers who can be seen daily returning from their schools and in parades that take place regularly in weddings and similar occasions. Teenage girls would usually wear a normal hijab, Islamic headscarf, similar to that found throughout Egypt while young girls are not necessarily veiled and they can be found playing around their houses with other family children. According to the accounts of Fakhry (1990), Siwan women wore colorful clothes in vicinity of their houses. When they leave their houses, they would put on a special type of wide cloth striped in black and grey called milayah which was manufactured in Kirdasah village near Giza. A similar dress is found today in the form of a jalabeya, traditional dress, that cov-

ers the whole body including the face. Fakhry further mentions that women did not veil their faces; they would cover it with the edge of their milayahs when strangers approach. He ensures that women did not take much space in public life, nevertheless he says that women used to ride donkeys themselves few years before his arrival to the oasis. Such restriction in the participation of women in public life can be traced back to time of Shali; when the unmarried men called zagalas were not allowed to stay within Shali and lived in small rooms called Harimat built at the feet of the fortified enclosure. Before nightfall married men and boys under the age of puberty were only allowed into the premises of the fort with all their donkeys and cattle. Such strong segregation between the enclosed fort as a private zone and the public exterior is referred to by Al-Shafei (1999) as part of tradition in Islamic communities. Belgrave (1923) mentions that women residing inside Shali would go to a certain old well present within the city's enclosure only to avoid going out of the city where unnecessary encounters with men could take place on their way to the springs. He describes one of his encounters while roaming inside the old fort:

“Often when I passed out from the narrow entrance of a passage I would see a dozen women busy with their pitchers, veils cast aside, laughing and chattering-in a moment, like magic, everyone would have silently vanished, and only the eyes peering from the adjoining windows would show any signs of life.” (Belgrave, 1923: 136)

It seems that the Siwan society has always been that conservative concerning women; a trait which has evolved through time. Interviewee (D) mentions that women were not that segregated from public life as nowadays, at least during his time growing up in his neighborhood. He says that relation between opposite genders was never that sensitive as boys and girls would spend time playing together; boys teaching girls new games and having girls cheering for them while playing football. Furthermore, he speaks about a tradition called ‘Zuoq-Zouq’ which used to take place in feasts and special occasions. Young women would dress in their best



Fig.51: Zouq Zouq tradition, depiction from memory of interviewee (D), source: author, 2015.

outfits and move around holding a home-made dish for others to try as groups from the same neighborhoods moved around to visit the surrounding ones. He even says that his wife among many others have never seen Siwa from above the ruins of Shali and his only concern about taking her up would be the talking of people and their harsh opinions. Interviewee (A) shares his ideas regarding the matter during a visit to his house as his wife does not step outside to clean the house's front porch uncovered. This strict privacy justifies the different strategies through which the view into the



Fig.52:Top to bottom: standard situation of women riding in the family's transport with male members riding. school girls in a public school football championship parade, source: author, 2015.

front porch of modern buildings is blocked by high walls. Ultimately, the nature of the women's presence in public life affected by local culture influences and contributes to the unique the urban landscape of the oasis.

4.5.5 Shopping: where do they shop?

In the accounts of Belgrave (1923), he describes the experience of shopping in the old oasis. He mentions that all shops are general shops; shops that sell everything and they are spread informally within the oasis where their customers are those living the nearest. Shops look very simple and un-noticeable from the outside. Furthermore, he describes a shop composed of a room connected to another room used for storage. He writes about a room of a simple interior with a rough counter, shelves, and sacks of different products for sale along with handkerchiefs hanged on the wall. He concludes on this matter by writing that:

“There is nothing in Siwa that compares with the gorgeous bazaars of Cairo, or the gaily decked shops in the markets of provincial towns. These dark little shops have no colour, only a queer, rather pleasant smell, a potpourri of incense, spices, herbs, onions, olive oil and coffee.” (Belgrave, 1923: 141)

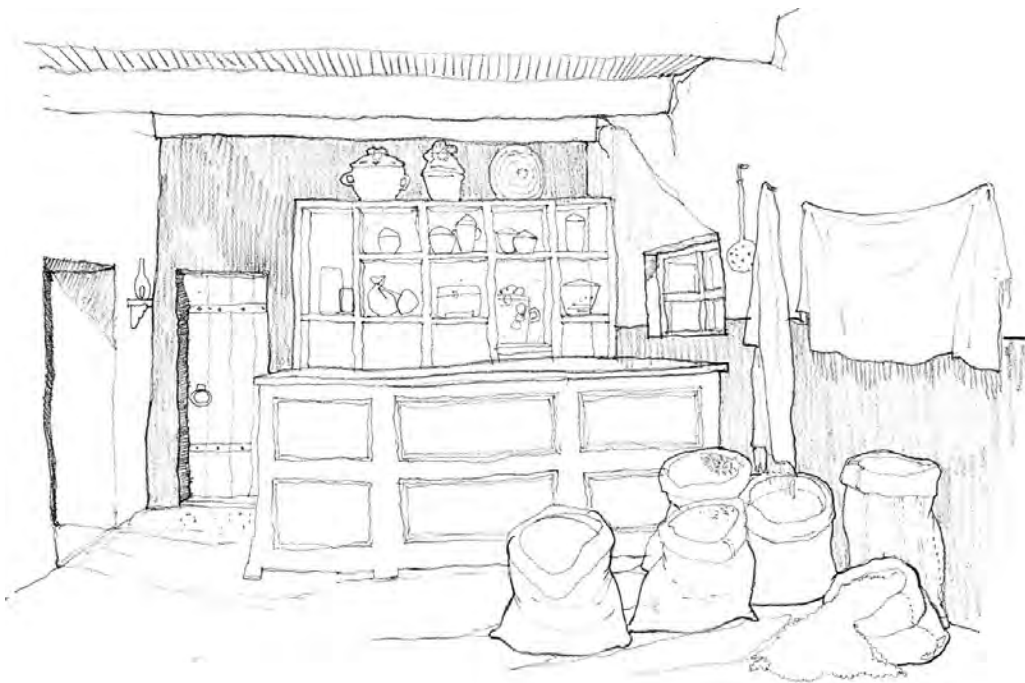


Fig.53:Depiction of old shop in Siwa according to descriptions by Belgrave (1923), source: author, 2015

The description provided by Belgrave reflects a seemingly simple and self-sufficient society which does not depend on shopping for the provision of most of their food products, as a high number of Siwans used and still own their gardens. Interviewee (C) mentions: “Before these times, most of Siwans used to go to their gardens where they would plant all sorts of crops and would send each other all sorts of fruits and vegetables... distribute to their neighbors, relatives and extended families...” (Interviewee C, May 2015). On the contrary, one local comments that nowadays “people would leave stuff on a bridge [throw away stuff] rather than giving them to their neighbors” (old male, May 2015). This change in mentality is reflected in the shopping experience one receives now in the oasis. Shops are found to exist in a great variety including general markets, groceries, stationaries, hardware stores and local food products. Shops that offer cheap local Egyptian food are to be found too, one can assume that they mainly targeted non-Siwan workers and immigrants arriving to the oasis. The shop exteriors are highly noticeable due to large and colorful signs and heavy light-up, with the products displayed in-front of the shop. They look very similar to the shops found all over Egypt as one could link this to the increase in the number of incoming non-Siwan investors coming to the oasis. These shops are present in high concentration in the central area of the oasis forming the marketplace and the hub of



Fig.54:New model for shops in the oasis, source: author 2015.

activity in the oasis on the intersection its main regional streets.

4.6 Basic necessary activities

This group includes the basics activities one experiences in all public spaces. They are activities that take place regardless to the special design of the urban environment in which people are obliged to participate as a part of their daily tasks. This category includes mainly the simple action of moving to a certain place through walking or riding a transport such as people walking to the mosque for prayer, children walking back from school or people going to work. Depending on the design quality and the arrangement of the physical urban environment, these simple necessary activities can result in more complex social activities enhancing the livability of the public space. While necessary activities do not require specific urban design features to take place, it is their resultant social activities that are enhanced and associated with urban design features present in the built environment. Therefore, it is of more interest to the research to explore these social activities, whether resulting from necessary or optional activities.

4.7 Social meeting as main Form of social activity

The activity of social meeting can be observed in the Siwan public realm; from quick encounters between a small numbers of participants meeting on the street for a short time to long meetings where large numbers of participants interact in a certain urban design features present in the public space. Nevertheless, its

various forms cannot be simply combined as one specific case, it is rather a spectrum of forms beginning with general and simple encounters in streets to more specific meetings associated with certain urban design features. One could say that the more these social meetings become less spontaneous and more pre-arranged they become more attached to their specific UDF. For example, random encounters can be the simplest forms of such meetings and less specific to certain UDF. They take place between people moving on the street or standing by a shop resulting in small conversations. In this case, social meeting is resulting from a necessary activity of people walking to reach a certain destination and meeting others who are performing a similar activity then they would stop and engage in a conversation. The necessary activity of walking to a destination does not be stimulated by a certain UDF, it is rather the street one is taking, representing a path, might be going through an important Node or a landmark that, as UDF themselves, would offer more opportunities for social meeting to take place as a form of social activity. Through observations of public activities in important nodes, such as the market square in zone 4, one captured a variety of such simple forms of interactions showing people walking or riding their transport then stopping at the sight of familiar faces. The result is different formulations of people standing together while some of them stand by their transport or remain sitting on it as they in a conversation (Appendix 1). Another case takes place as people would stay in their shops in what can be defined clearly as a necessary economic activity, yet they would sit in front of the shop watching other people engaging passively with them in what is an optional activity or even engage in short conversations with them which are also identified as a social activity encouraged and fostered by the external condition of the urban environment of being situated in the busy city center or node. This function also extends to other temporary forms of space. It appears in taxi tuktuk parking spots situated randomly in the middle of a main street where the tuktuk drivers parking their tuktuks next to each other would sit together in the back of one of them. While clustering their tuktuks together they form a space where they necessarily have to be present for economic reasons, yet this formulation of space can be identified as a temporary node that stimulates social meeting as a social activity. It is with the reference that a Node, as previously defined, can be a concentration of uses and functions attracting users, this definition applies on the case of these tuktuks parking. The described forms of social meetings are highly dynamic and short-lasting but they reflect a way of communication which is adapting to new and fast lifestyles completely different from the traditional lifestyles which provided more time and

regularity. Meanwhile they also create a sense of randomness and fill the street with livelihood and public life as more people choose to stay a little longer in the street. While the more complex forms of social activities become, the more they are longer, less spontaneous and specifically synergized with specific urban design features which accommodates and stimulates them in the first place.

Longer social meetings take place mainly as a form of recreation between individuals, mainly males, who share specific relationships, backgrounds or economic activities and thus utilize specific urban design features in the built environment for engaging in longer social meetings. These longer social meetings can take different forms depending on the type of the meeting which defines their position on the social activities spectrum between social activities based on necessary activities or based on optional activities. For example, daily social meetings can be planned between individuals who share special relationship or background as they choose to meet together after work which is an optional activity, but at the same time they could be meeting at a member's shop where he has to be present for necessary economic reasons. In this case, the choice to meet is considered a social activity based on an optional recreational intention while the choice of the member's shop as a place, which can be also situated next to the other members' shops, relates the activity to the necessary activity of work where one member or all of them have to be present nearby their shops for economic reasons. This duality puts such activity in a position between being the two extremes; being completely based on a necessary activity or being based on a completely optional one. In other situations, a group of individuals, maybe groups of friends or families, would meet publically for recreational reasons and would choose the place accordingly such as a garden or a café. In this case the social activity is based completely on an optional activity while it can be related to more than one UDF. On one hand, the short social meetings, discussed in the beginning, are short, more necessary based, more spontaneous, and thus much less associable with specific UDFs. On the other hand, the two cases of longer social meetings discussed later are longer, more optional based, less spontaneous, and more associable to a specific group of UDFs. Therefore, they are positioned more towards (the longer, more optional based, and UDF specific) end of the social activities spectrum (see section 2.6.1). Using the same logic, the far-most positioned close to the end of this spectrum are periodic cultural and religious events. They take place on longer periods, completely based on optional motivations, not spontaneous as they are planned ahead, and specific to certain UDFs that cannot take place except through them. In the coming parts, one discusses these clusters of

social meetings in their synergies with their associated UDFs and past synergies present in previous layers.

Furthermore, one can suggest that the small community size and the close proximity between its members make people’s specific places of meetings quite predictable. In other words, by knowing a person one knows who he usually meets and when and where the meetings probably take place. It is noticeable that such



Fig.55:Diagram explaining forms of activities on the activity spectrum, source: author,2015.

activity constitutes an integral part of the daily Siwan public life and by examining the history behind it one finds out that it had always been the case.

4.7.1 ‘Khoss’: A traditional form of social meeting

The function of social meeting has played an important role in the traditional Siwan life on different levels and various user groups, but as a social activity it is related to one specific urban design feature of the Siwan urban environment which is the ‘khoss’. The ‘khoss’ is a term used by Siwans to describe shaded public meeting places scattered throughout the traditional urban structure. In other accounts it is referred to as ‘Dalulas’ (Belgrave, 1923). These structures are unique features of the traditional Siwan built environment that physically sur-

vives to the present day.

A normal 'khoss' is usually composed of shaded seating areas that are especially equipped with benches and opened from both sides to allow air circulation as it offers a pleasant and cool place during the warm hours of the day. Nevertheless, one notices that the term includes a variety of other similar spatial formulations; **from shaded alleyways under a hanging room between two houses to small wooden shades exclusively positioned in front of houses.** According to Petruccioli and Montalbano, (2011), Khoss represents the 'mazalah'; means a shaded place in Arabic, which is typical to the traditional urban fabric of Islamic cities. They claim that the presence of these structures in the dense fabric of the old city compensates the lack of public urban spaces in its modern notion; the urban spaces that would have had the role of **accommodating the society's social, necessary, and optional activities.** This means that the 'Khoss' was the place for such activities. The 'khoss's are situated strategically throughout the urban fabric; in association with different neighborhoods or individual families who own a group of neighboring houses. One could easily differentiate between a 'Khoss' which is used on the neighborhood scale and another used by certain families or group of connected houses. Therefore, the level of privacy of the 'Khoss' cannot be considered to be uniform. According to Al-Shafei (1999), a 'Khoss' is a semi-public space. This is due to several reasons; first, it is strategically allocated to serve a special group of **inhabitants either on the scale of a neighborhood or several houses** and second, it is only used by men as Siwan women are not allowed to share public space with men (Al-Shafei, 1999). Therefore, 'Khoss's could be divided into three main types according to spatial characteristics and location in the urban fabric. The first type is the common form which serves an entire neighborhood and is located away from the doors of nearby homes. It is usually spacious enough to accommodate the men of the neighborhood and equipped with raised benches on both sides and sometimes storage rooms, furthermore it is usually either equipped **with devices for storing fresh water or located near a well.** The second one is that which serves users on the scale of families or specific households which makes them more private. These exist in the form of benches and seating areas attached to individual or groups of houses. They also exist as a part of a shaded alleyway or a portico of a house which offers a comfortable spot for family members, mainly men, and for children to play near their house. The third type is a central space that is used commonly by the whole oasis. Historically there was one example of the central 'khoss' serving as the oasis's main market. That does not imply the

absence of separate shops scattered across the oasis.

A 'khoss' was urban design feature carrying multiple activities and functions. The first function was to serve as official meeting places for the elders of the neighborhood or oasis associated to the 'Khoss', where they managed the common good of the community and resolve problems and disputes between the inhabitants. **In a tribal society like Siwa where elders are the active decision-makers of their oases and families, this represented a decisive political role as these meetings are social activities but based on a very necessary need for administration and management** This is regardless to the scale whether on the that of the whole oasis, or that of Easterners and Westerners families, or the scale of single families. One important example is the meetings of 'Alajwad', natural leaders of the medieval city of 'Shali', which was situated on the main entrance of the old fortress by the ancient mosque (fakhry, 1990). Belgrave refers to the function of the 'khoss' as a meeting place for the elders:

“ Here [in 'Khoss's] the grey-beards [referring to old men] of the town assemble in the evenings, strangers sit and gossip when they visit the town, and the Camel Corps men wander through to hear the latest news. It is a sort of public club, and one hears even more gossip than at a club at home.” (Belgrave, 1923: 101)

The second purpose was to serve as a place for cultural events such as funerals and weddings. Furthermore, it was also a hub for the variety of daily activities. They accommodated recreational and social activities between neighbors from similar areas and from different age groups. In her research, Al-Shafei (1999) interviews show some local views on the value of the 'Khoss' as a meeting space, referred to as pergola, and how it was changing:

“In the pergola men from the same area can sit together in the hot afternoons to talk and argue about different aspects of life, while the youth and younger boys sit and listen to take useful lessons out of the real life experiences of the elders.” (male, March 1998, Al-Shafei, 1999: 160)

“That was a way to have a reciprocal feeling between people instead of the isolation and loneliness in front of a TV nowadays for example. Also there was a chance in that meeting place to know about narratives from the past and stories about the present. It was a way to let people participate in the current events, for example to help someone to build his house or visit an ill person or even in special events like burying a dead person and helping his family.” (old male, in-

interviewed in June 1997, by Al-Shafei, 1999: 160)

Similarly, the author captures memories from some of his interviewees on some of the 'Khoss's associated with their present or past neighborhoods. The interviewee (C), an elder of more than 70 years of age, lived in the same neighborhood his entire life. He shares memories about this 'Khoss' and another small one situated next to it:

"I remember the young men gathering under the small 'Khoss' over there, while the old men sitting in the greater 'Khoss'... they would not sit doing nothing, they would always do something useful with their time, make ropes and baskets out of palm tree leafs among other things."

(Interviewee C, May 2015)

Interviewee (B) is a younger man, in his 40s, who remembers how he and his friends used to play under the, previously mentioned, small 'Khoss' of the neighbourhood. Interviewee (D) provides another view on the use of the same neighborhood's great 'Khoss'. He is younger than the previous two interviewees thus he provides a narrative of the space from his view as a child among the other children and young men of the neighborhood. He says that the 'Khoss' was a space for playing for the children of



Fig.56: depiction of playing by the khoss from memory of interviewee (D), source: author, 2015.

of the area, divided into different age groups, each would play together from noon after they return from schools or the fields with their fathers. It is still a living tradition that most Siwan working men sleep at noon after a morning work period which starts after sun-rise. During which, he mentions, all the children of the area would gather in the 'Khoss' and play hide-and-seek in its neighboring edge of the old fortress among a variety of other games. The territorial division of the 'khoss's is clearly noticeable as rivalry takes place between children from different neighbourhoods, each from their 'khoss', in playing. Nevertheless, one of the important applications of this urban design feature as a gathering space is a central 'Khoss' which was situated on the edge of present-day market-place. As mentioned by interviewees (B) and (C), this central 'Khoss' functioned as the

main market-place for the oasis where local farmers would sell their daily harvest of fresh vegetables and fruits in its shaded columned space. This space no longer exists as it lost its function and was torn down after the building of the main market square in the nearby zone 4. Accounts of such central 'khoss' can be found in historical accounts and photographs going back to the beginning of the 20th century. It is clearly found on Hassanein Bey's (1925) photograph of the oasis. Also,



Fig.57: Three examples of large ,khoss's, source: author, 2015.

Belgrave (1923) draws it in his depiction of the oasis centre. He further describes in his accounts:

“The largest of these sun shelters has become a little market, and a few decrepit old men spread out their wares in its shade—a few baskets, a dozen onions, an old silk, tattered waistcoat and some red pepper would be the stock-in-trade of one of these hawkers. What they say in the “suk” [Arabic word for market] corresponds

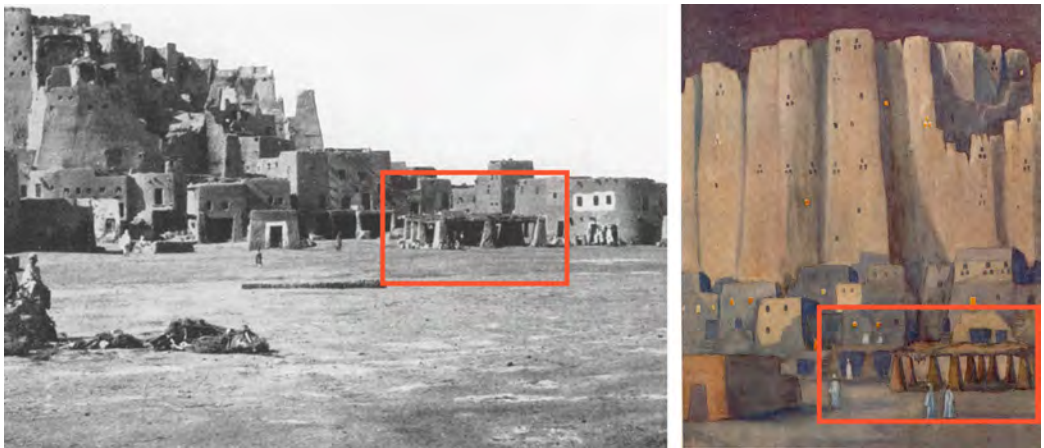


Fig.58: The central khoss as shown in historic material, left: historic photo from Hassanein Bey (1925), right: painting from Belgrave (1923), source: auhtor’s montage on historic material.

to the “ bazaar talk “ in India, and it is incredible how soon the most secret facts are known there.” (Belgrave, 1923: 101)

Nevertheless, the status of the ‘Khoss’ as the chief meeting place is gradually fading. Its function of social meeting is being transferred to other newly-bred urban design features within the urban fabric. One can assume that this is due to the changing life styles and pattern of daily-life activities of the inhabitants that holds a limited role of these types of traditional structures. The loss of its functional ties with the inhabitants implies a decrease in its functional integrity as a part of the historic urban landscape of the oasis. Two main ‘khoss’s are present in zone three and are still partially functioning in present times. Interviewee (C) describes one of these ‘khoss’s which belongs to his neighborhood. He mentions that it is used seldom for funerals and important meeting of the neighborhood. He further describes that there were previously some rooms directly connected to the ‘Khoss’, and of which only one remains functional. It is used for storing all the furnishing and equipment of the facility which is collectively maintained and managed by the inhabitant of the neighborhood. In terms of their structural integrity, these two ‘khoss’s are still structurally maintained; the previously men-

tioned one is maintained by the inhabitants while the other was renovated by an international renovation project among other houses in the area. On the contrary, the rest of the 'khoss's present in zone 2 are not in a bad state of conservation as they are not functional anymore.

The 'Khoss' has been a meeting and gathering place that maintained its presence through the collective efforts of its users and sustained its role in their daily-life patterns and it is strongly associated with the tribal leadership system which took place in the oasis where the local leaders would meet and discuss important matters. these structures were more than just seating places; they were platforms of daily social activity for interaction and bonding between neighbors from different age groups on the scales of neighborhoods or villages. Also, they are places that demonstrated collective responsibility and solidarity in times of hardships and in times of feasts. From another aspect, such form of meeting was always associated with productive actions; as previously mentioned people would use their time in the production of tools while children would learn lessons from them and actively play. Therefore, a spectrum of different functions from political, cultural, social, and economic took place in these urban design features making them hubs of the public life's social activities with their optional and necessary variations. With the change in the urban environment of the oasis and introduction of new urban spaces, this form of traditional social seating has changed in some aspects and dispersed into other space formulations in the new urban environment. One can also argue that the value held by the traditional form have changed with the fast pace of the modern age and shifting interests of local people but it is interesting to investigate how this function of social meeting previously held in the 'Khoss' has managed to disperse within the new structures of the oasis. In conclusion, three main points are concluded from the discussion on the 'Khoss' as an urban design feature:

- 'Khoss' is an urban design feature typical to the traditional urban fabric of the oasis. It reflected strong functional relationship between itself as a part of the physical structure of the built environment and its inhabitants as it absorbed a great portion of their political, social, cultural and economic rituals.
- One specific feature of 'Khoss' is its decentralization as, except for the central 'khoss', they were territorially divided according to associated neighborhoods and families.
- In the current time, 'Khoss's have lost most of its functional relations with the inhabitants where it no longer plays a central role in their daily lives. This

means that it has lost its functional integrity as a once integral part of the urban landscape which is reflected in its structural integrity.



Fig.59: Map showing ,Khoss's (UDF) distribution, source: author, 2015.

4.7.2 New formation of urban space

As previously mentioned, the 'Khoss' can be considered a compensation for the absence of public spaces in the traditional urban fabric. One can argue that the idea of having open large public space that would accommodate large numbers inhabitants seemed impractical due to different possible reason. The traditional urban fabric focused on the importance of maintaining a dense urban fabric to protect form direct sunlight and prevent the overheating of buildings, not to mention the limited availability of vacant land suitable for building due to security and political conditions previously discussed. Also the definition of the public meeting place was affiliated to specific user groups according to neighborhood division, families or specific group of houses, which further diminished the need for large public spaces. What could be noticed is that such mentality was changed with the modern expansions of the oasis beyond the boundaries of the historic city (zone 3) which is apparent in the formation of the marketplace square and area (zone 4). The market area, (zone 4), is situated in the intersection of three important roads connecting the Siwan center with the rest of the region; the main regional 'Marsa-Matrouh' road along the North-South axis, and the local roads going eastwards to Aghourmi village and 'Al-Dakrouh' area. Therefore, one can state that the market square is a node in the intersection of regional and local paths. The main regional path is considered as an urban design feature while the

market square itself can be broke down into a number of urban design features. The market square contains a central public garden acting as a node while the surrounding building form a continuous strong edge of shop fronts defining the urban space. These edges continue to form another smaller node in the form of a parallel street 'Azmy street' which is clearly defined by the shop fronts forming its edges. Another continuous edge of shop-fronts is formed on the Northern frontier of (zone 3). This new urban formulation of concentrated uses defines a center for activities of all sorts and showcases a number of urban design features that carry forms of activities in synergies.

4.7.2.1 Raised platforms as UDF

In the market area described above, strong edges form the urban space. They are composed from the arrangement of shop fronts side by side around the central Market square and the nearby 'Azmy' street thus plays an important role in its livability. According to Christopher Alexander (1977), the edge of the space influences the way buildings enhance and invites public life through offering possibilities for interaction. This results in an array of social activities and intermingling stimulated by the shop fronts' space formulations that attracts public life. This is where 'raised platforms' are introduced an urban physical features that turns these continuous edge to a carrier of social and economic activities. It appears in several shapes and applications as one of the distinctive features one could notice while walking through the oasis's marketplace. It is a raised flat space situated in-front of the shops and connected to the street via several steps. Regardless to the type of product or service offered by the shop, this raised platform serves as an extension to its space. In groceries and hardware stores of different kinds, the raised platform is used for storing and displaying the products. While in the case of a restaurant or a café, the platform is used as an extension to the indoor seating spaces. The main important role for this platform as an urban design feature is its accommodation for social meeting possibilities as it offers a space for the shop owners or workers to sit and engage in the passive optional activity of watching people or the social activity of meeting with other shop owners or friends and lay down for a few rounds of Siwan tea. The presence of the shop owners or workers in the market place is considered to be a necessary activity while the conditions of the shop's location as part of the market area's urban edge and the raised platform as the inviting urban design feature made the social meetings as forms of social activity possible. Therefore, these resulted social meeting are thus posi-

tioned as social activities which are based on a necessary activity. Nevertheless, some of these raised platforms function as cafes and restaurants, which means that the social meetings created are on a basis of optional activities. One example is the oriental café spread all over Egypt under the name of 'qahwa balady' [Arabic terms for 'local café']. It offers a space for social interactions based entirely



Fig.60: Variations of raised platforms (UDF), source: author, 2015.



Fig.61:Map showing Raised platforms (UDF) distribution, source: author, 2016.

on optional activities where the participants are not present there out of any economic necessity.

4.7.2.2 Private loggias as UDF



Fig.62: Variations of private loggias (UDF), source: 2015.

On the other hand, the presence of shops inside the historic area (zone 3) is very limited. Except for few workshops, the shops present in this area are of one typology, the 'bazaar', driven by the growth of touristic-driven investment in the oasis. They target tourists visiting the historic quarter and sell Siwan traditional products from other places of Egypt including textiles and salt products. A number of private loggias affiliated to some of these shops are to be found as urban design features that allow possibilities for optional or social activities; as the shop owners or workers would use them either for passive seating or for meeting friends and surrounding shop owners. Thus the social activity formed is a form social activity that is still based on a necessary activity. The dense urban fabric and non-uniform streets of the historic area makes these urban design features appear in various forms adapting on the shape of the edges of the urban fabric and

on the available space, on the contrary of the highly organized arrangement of shops and related platforms in the marketplace which form a strong and uniform urban edge. According to the available space in front of a bazaar or by a workshop, their owners would build their seating space where they would normally receive their customer and friends. One observed a variety of formulations of such loggias forming attracting small clusters of friends and work-colleagues at night while the rest of the historic center lingers in complete silence and darkness. Interviewee (D) owns a bazaar in the historic center where he spends all his day. He has built a seating area in front of his shop in a strategic location by the stairs leading up of the ancient Shali ksar and the ancient mosque. One could clearly see that he has developed a sense of ownership and personal affiliation to the space as he continuously cleans it and upgrade it by adding new benches, plants, rugs among other things. During the night, he receives his friends and costumers in this loggia where they would drink Siwan tea and hold long conversations. He views this activity as a strong part of maintaining a friendly relationship with his customers therefore a strong economic implication for this loggia. Another example is the private loggia of interviewee (A)'s father, who is an iron-smith and owns an old workshop in the middle of the historic center (zone 3) where he still works using traditional techniques in order to produce traditional tools. By the entrance of his one-room workshop, one finds a shaded loggia compromised of a bench and a wooden shade. Every afternoon after he finishes work, his friends gather with him in the loggia for long meeting extending until dawn when they would pray in the neighboring old mosque and return home. Interviewee (A) says that this has been his father's daily routine for quite a long time.

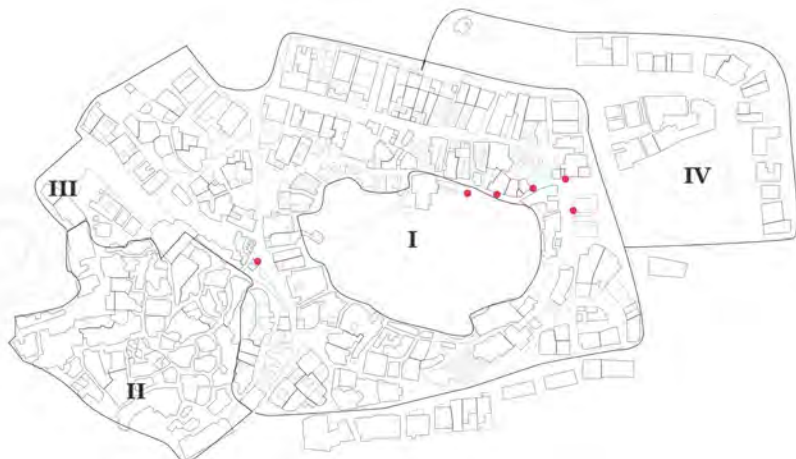


Fig.63: Map showing Private loggias (UDF) distribution, source: author, 2016.

4.7.2.3 Central public garden as UDF



Fig.64: Photos showing Public garden (UDF), source: author, 2015.

The new central garden as an urban design feature is situated in the middle of the market square which is situated in the intersection of regional and local roads. Therefore, one can begin his journey anywhere in Siwa from this point marking it as the center of the modern oasis. The public garden is in the center of a triangular urban space defined by a hard edge of buildings on three sides and with the edge of the historic center on the fourth one where it overlooks the ruins of the ancient Shali ksar. As previously discussed, this form of urban spaces is totally new to the oasis urban landscape where nodes of concentrated functions and uses were clustered in patches of 'Khoss's and small urban areas. Therefore, a new central recreational space marks a transition from the decentralized to the centralized. The concept of a public garden can be considered as a new model that holds a new meaning different from its traditional counterpart. Traditionally, the Siwan garden plays an integral part in the life of local inhabitants and their daily life practices including the necessary, optional or social types of activities. As explained by Al-Shafei (1999), the garden in its traditional definition is a part

of a balanced system of garden/spring duality where they exceed their functional economic qualities to include daily life and rituals. Gardens were main parts of the daily routines of males where they would go every day to work. Sometimes entire families would join for a picnic as the garden represented a semi-private space where all family members can enjoy outdoor recreation without jeopardizing their privacy. Women especially enjoyed the gardens' recreational function as it provides space for social interaction without the restrictions enforced on them in public space. Interviewee (D) describes his childhood; when he and his brothers would join their father in his working day in the garden. At an older age they would be working with him in the garden at least in summer when they do not have school. He says that they would play all day in the garden; building snares to catch birds and building toys. Even now, he says, his wife would go with other family members for a picnic in the garden where she can enjoy the outdoor space while maintaining her privacy. Therefore, one can assume that the introduction of the garden as a public space would have contributed to the change of the people's perception of public space as garden were always considered as a semi-public space. Second, one can claim that Siwan males are the only local members who would use such an exposed space along with immigrant families who might not share the same restrictions on privacy as their Siwan counterparts.

As for the garden, it is composed a fenced public space situated in the center of the square and accessible for everyone. It is planted with lawn and a series of stone paved alleys going through it. It is surrounded from the inside with a line of short palm trees that provides shade and a place for lying down beside other small trees distributed inside the garden. Three circular pergola seating units are situated across the garden. They provide shade from the mid-day's burning sun and a stone fence surrounding the edge of the garden with a height suitable for seating. The garden with its current arrangement and strategic location is an urban design feature that offers possibilities for seating and laying down in different times of the day. During the day, it offers a good location for a mid-day siesta or food-break for workers and travellers waiting for their buses. During the evening it offers good space for recreational meetings by local and immigrant participants where they lay down on the lawn or sit on the stone fence surrounding the garden while engaging in conversations and watching other participants passing by. This offers numerous possibilities for quick conversations between these participants walking or riding by the garden and those sitting on its edges. Such social meetings taking place in the garden are considered to be a social activity which results from an optional activity of participants choosing the garden to sit and

spend time where they meet other participants going through the practice and engage socially. Nevertheless, they encounter other participants undertaking the necessary activity of passing by and engaging in short social interactions. It is noticeable how other functions that are similarly based on optional and recreational basis from other urban design features on the surrounding edge would extend and blend with the garden. The oriental cafe is one of the function that ‘raised platforms’ as an UDF offers, which is similarly to that of the garden, displays social activities based on optional motivations. Nevertheless, when such structures are situated by the edge of the garden, it would extend its seating possibilities to reaching the garden, where people are served beverages inside the garden. Thus two urban design features would intermingle together further strengthen the livability and presence of public life in the urban space.

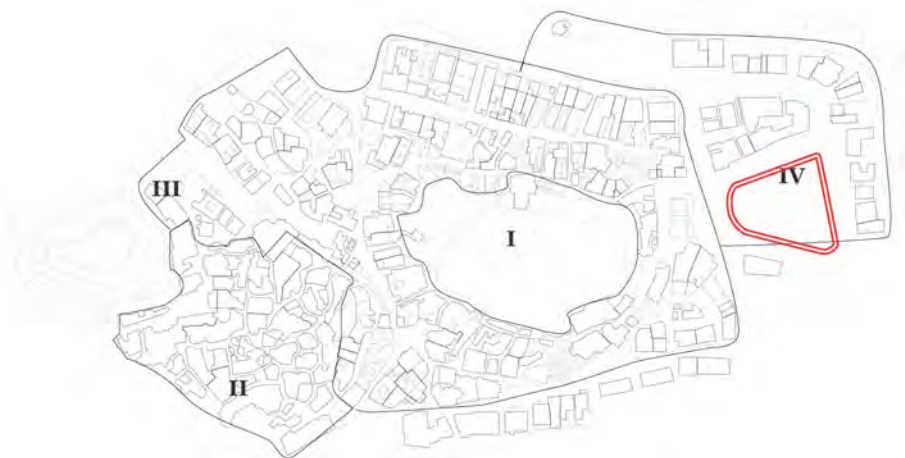


Fig.65: Map showing location of public garden (UDF), source: author, 2016.

4.7.2.4 Main roads as UDF

As previously mentioned the market area connects the different parts of the oasis together through important roads crossing its space. These roads are paths along which the market is positioned as one main node; a concentration of significant functions and usages that attracts large numbers of the oasis’s inhabitants. Similarly, the ancient Shaly ksar stands as a significant landmark along the same paths opposite to the market place. This attracts tourists and expats from all over the oasis along with their income generation possibilities. This makes this area as the main hub of activity and public attention of the oasis thus the perfect place for parading and celebration. On the occasion of weddings, large parading consti-

tuting of large numbers of motorcycles, cars and Lorries carrying tenths of family members would parade in celebration along the roads crossing the main market place. Parading takes place not only in wedding but during major events such as school football tournaments. Large numbers of students from the competing, boys and girls, schools would parade the market square in long rows of cars, and lorries. The level of exposure which the market provides along with the wide asphalt roads as paths cutting this urban space, makes it the destination for public parading. One considers this activity to be a social activity that is completely based on optional motivations which are celebration, thus are positioned in the far-most extreme of the social activity spectrum.



Fig.66: Photos of public parades in market square, source: author, 2015.

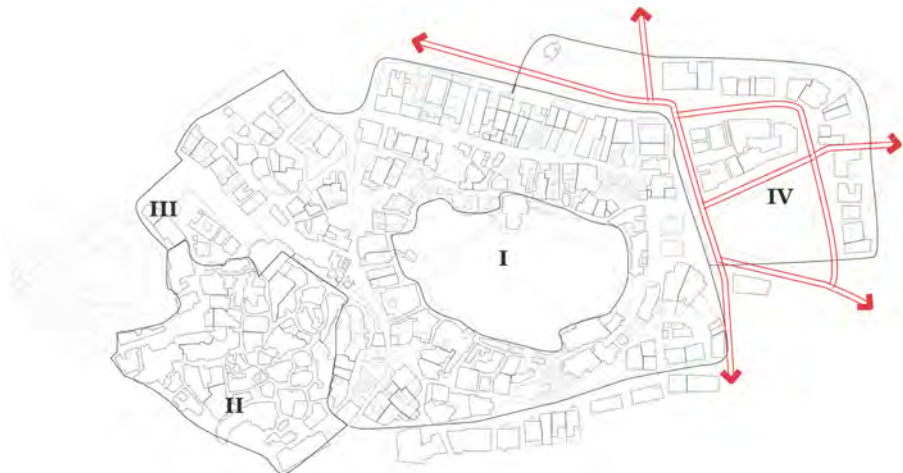


Fig.67: Map showing main roads as Paths (UDF) distribution, source: author, 2016.

4.7.3 Mosques and maqams: lingering rituals

Mosques constitute a significant element of the oasis urban landscape as old mosques are among the few old structures to survive to this day. This is due the



Fig.68: Photos of two main mosques in the focus study area, top: westerners mosque, bottom: ancient mosque of Shali, source: author, 2015.



Fig.69: Historic depiction of Zikr sessions taking place in Sidi Soliman tomb, source: Belgrave (1923).

fact that they kept their functional integrity, as they remain used by the inhabitants of the oasis. The main two mosques are the ‘Al-gamee al-ateeq’ [Arabic terms for the ‘ancient mosque’] and ‘gamee Al-awqaf’. The ancient mosque is situated on top of the Shali ksar. It is the only remaining functional and well-kept structure of the whole medieval ksar, as it has been recently renovated in 2010. The second mosque is situated over the neighboring ‘Adrar’ mountain, which is a part of the Westerners urban expansions after leaving the medieval ksar. Therefore, it is generally referred to as the Westerners’ mosque. This mosque was entirely replaced with a modern structure, yet it keeps in significant location and function as a recognizable landmark. Nevertheless, the ancient mosque remained to be the most significant landmark of the medieval ksar of Shali. Mosques forms a great part of the inhabitant’s daily activities, as Muslims pray five times a day. This keeps the mosques used from dusk till after the dawn with the end of the fifth prayer of the day. Other than that, mosques house periodic events and gatherings on the occasion of important religious dates such as the ‘mulid’ which is believed to be the birthday of the Islamic prophet Mohammed among others. On

such occasions, 'Zikr' is performed. 'Zikr' are events when a large number of people, all men, meet in the mosque as a religious celebration. They would perform a special way of traditional chanting while dancing in rings for hours praising their prophet and praying for God. Usually these 'Zikr's would have involve a feast before the beginning of the chanting followed by few rounds of Siwan tea. Belgrave (1923) mentions in his accounts of the 'Zikr' performed in the 'mulid' where he describes the ritual in full detail. It took place in the 'maqam' [tomb of Imam] of 'Sidi Soliman' which still exists till the moment. One observed small weekly 'Zikr' sessions taking place by 'Sidi Soliman' every Thursday as part of a lingering tradition. One is not sure whether it is traditional to make a weekly session or whether it is traditional to have it on Thursday but the activity itself and its place of incidence is traditional for sure. One also attended one of the larger 'Zikr' sessions taking place in ancient mosque of Shali. A feast was prepared inside the mosque as the members had their meals in the mosque's open courtyard following with few rounds of Siwan tea, then the chanting ritual began. It is also mentioned by the local inhabitants that a large annual 'Zikr' in 'mulid' takes place in the Westerners mosque where an large open space is available that allow for larger agglomerations of people. These types of social meetings represent a social activity that is based on optional cultural motivations when large numbers of people decide to meet in specific urban features that holds special meaning to them. Therefore, they are positioned in the far-most extreme of the social activity spectrum similar to the previous social activity of parading.



Fig.70:Map showing distribution of mosques and ,maqam' as UDFs, source: author, 2016.

4.8 Mapping synergies of urban design features and social activities

Deriving from the previous discussion, synergies between specific urban design features of the built environment and public activities are concluded. Urban design features are categorized under general physical principles that explain how people understand these urban features and perform their associated activities accordingly. Also, the evolution of the synergies were discussed in their historical context marking synergies that have a historical basis and survived to the present day and other historical synergies that have faded away leaving their structures as a reminder. Meanwhile the social activities to the urban design features are synergized to, follows the social activity spectrum as part of the conceptual framework created in the literature review. The spectrum reflects a variety of social activities beginning with those that are based on necessary activities and ending with those based on optional activities.

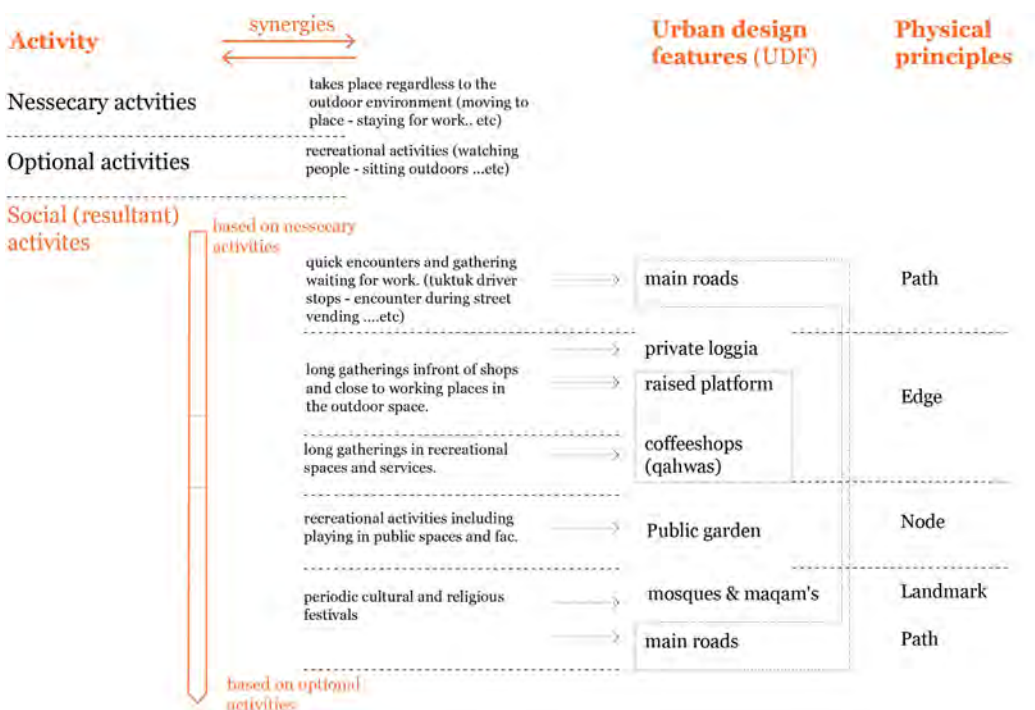


Fig.71: Diagram showing mapped synergies between UDFs (with physical principles) and activities, source: author, 2016.

4.8.1 findings

Deriving from the previous discussion, synergies between specific urban design features of the built environment and public activities are concluded. Urban de-

sign features are categorized under general physical principles that explain how people understand these urban features and perform their associated activities accordingly. Also, the evolution of the synergies were discussed in their historical context marking synergies that have a historical basis and survived to the present day and other historical synergies that have faded away leaving their structures as a reminder. Meanwhile the social activities to the urban design features are synergized to, follows the social activity spectrum as part of the conceptual framework created in the literature review. The spectrum reflects a variety of social activities beginning with those that are based on necessary activities and ending with those based on optional activities.

Concluding:

- **As for synergies including historical and traditional UDFs:** ‘Khoss’ absorbed a great portion of their political, social, cultural and economic rituals which means that as a UDF it represented a synergy that included various types of public activities from necessary to social activities; covering much of its spectrum too. This synergy is no longer active leaving the ‘khoss’s as historical structures with no strong functional basis. In other words, they became artifacts with no ritual. One of its most important features is its decentralization, as different ‘khoss’s covered different neighborhoods and districts of the old city. This is to the contrary of its later successors which are centralized; mostly concentrated in the market square (zone 4).

Another historical synergy is that between Mosques and ‘maqam’s and its related social activities. This is still strongly active maintaining a strong functional integrity. Therefore, the structural integrity of its associated structures is present in exception for the Westerners mosque which its vernacular structure replaced by a modern one.

- **As for the synergies that include new UDFs:** These synergies include the urban design features (raised platforms, central public garden, private loggias, and main roads). They are newly formed synergies that carry most of public social activities forms covering most of the social activity spectrum. They represent new functional relations being built by the inhabitants creating the artifacts through which they perform their rituals. One can claim that they have substituted the functional relations of the historical ‘Khoss’ but, on the contrary its historical predecessor, they are centralized representing the new center of the oasis. Upon mapping the urban design features representing synergies with their relat-

ed activities, one concludes that:

- Most of the new UDFs representing active synergies are situated either inside (zone 4) or on the external edges of zone (3) with that of (4). This is true except for only one UDF (private loggias) which is situated inside the borders of the historic center (zone3). This exhibits a clear attraction of active synergies outside the historic center.
- All the inactive UDFs, representing the ‘Khoss’, are situated inside the historic center (zone1-3) as they are part of a historical synergy that no longer exists.
- Therefore, a clear distinction between levels of public activity between the historic center and the market area is clearly exhibited. As most of the active synergies are situated in zone (4) or directly linked to its borders, while UDFs inside the historic center carry very little active synergies. Zones (1 &2) contain no active synergies therefore do not hold any significant forms of public activities.

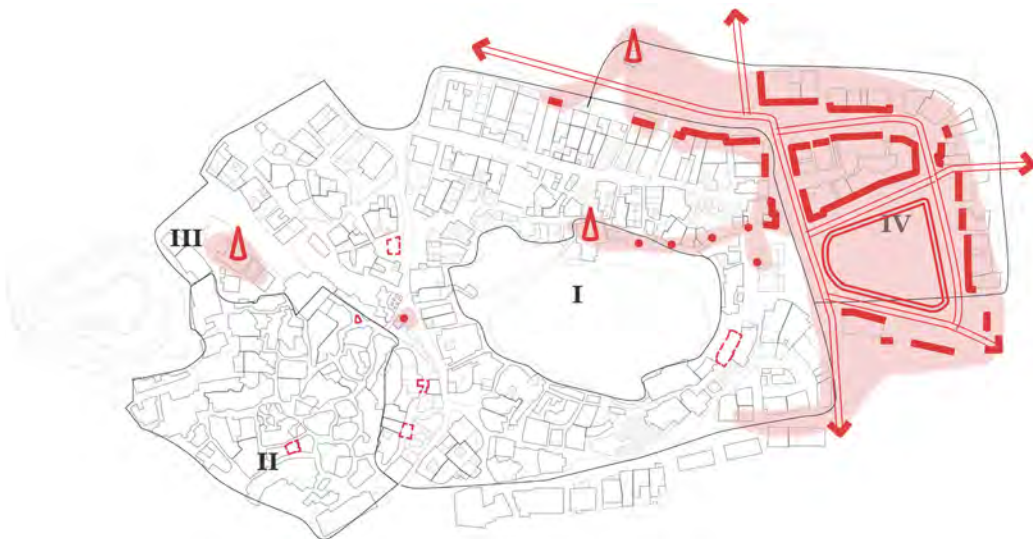


Fig.72: Map showing active synergies of UDFs and activities, source: author, 2016.

4.9 Conclusions on chapter

Upon connecting the findings from the mapping of the typologies and transformation patterns of the physical structures along with that of the mapped synergies between urban design features and public activity, one concludes:

- Local developed typologies of physical structures (modern and mixed structures) are linked with active synergies of public activity.

- 1) These typologies features are associated with active UDFs. The modern

structure typology usually includes shops in the ground floor where 'Raised platforms' are included as an integral part of these shop, while, as previously discussed, raised platforms are UDFs representing active synergies of public activity.

2) Upon linking the distribution of active synergies of public activity and transformation patterns of local physical structures, one finds that:

The more developed these local physical structures are the more they are connected concentrations of active synergies thus high public activity, while the more far from the active edge and market area they get, the less developed they are.

Referring to the previous finding that most of the highly developed local physical structures are positioned either on the edge of zone (3) or inside zone (4), this is the location where active UDFs representing strong physical principles (node, path... etc) are present. For example, the edge of zone (3) with zone (4) stretches along the asphalt road representing a 'Path', meanwhile in the center of zone (4) the public garden is situated representing a significant 'Node'.

This suggests a strong mutual relationship between development of locally oriented structure typologies and active synergies of public life. On one hand, the more developed local structure typologies are, the more they seem to foster active synergies. On the other hand, the more closely situated they are to active UDFs, the more their development is stimulated. This is also have its impact on the integrity of the historic urban landscape as the local typologies that develop active public life are the same that negatively affect the landscape's structural and visual integrity as previously mentioned in the description of their features. Therefore, one can understand that the most developing structures that are associated with urban design features, bearing strong perceptual physical principles, fostering strong public activity are those that represent the current strong functional relations between physical and non-physical elements of the landscape. While at the same time, these structures negatively impact the Historic Urban Landscape's integrity.

- On the opposite side, vernacular structures and non-locally developed new-vernacular structures are the only structure typologies that can positively affect the integrity of the HUL. Nevertheless these structures are not linked to active synergies of public life.

1) On one hand, and as previously found, vernacular structures have lost their functional integrity as places for habitation for local dwellers while their traditionally associated UDF 'Khoss' was also found to have lost its functional integrity no longer allowing active synergies of public life. One clear example is zone (2); looking back in the distribution of vernacular structures and UDFs, zone (2) has the highest concentration. Nevertheless, this zone neither holds any active synergies for public life nor has any locally developed or inhabited structures. Meanwhile all the other vernacular structures, situated in zone (3), are strictly un-inhabited by local dwellers and are, at least, transformed into a hybrid mixed structure.

2) On the other hand, despite that new vernacular structures are developed structures that have relatively positive impact on HUL's structural and visual integrity, they do not associated with any forms of active synergies of public activity. Their distribution is concentrated towards the center of the historic center where no active UDFs are present. Furthermore, they represent isolated structures that despite of being inhabited offer no possibility for fostering active UDFs. This is maybe related to its user group of foreign expats or temporary tourists who cannot offer significant contribution to local daily public life. Nevertheless, it is worthy of mentioning that the presents of tourists as a potential source of income for local groups does encourage some forms of social activity based on necessary economic activity which can be an opportunity.

3) The only historical synergy including historically significant urban design features is that of mosques and 'maqam's. The surviving synergy including significant cultural and religious activities offers a good example of vernacular structures maintaining their functional integrity and inherited forms of social activities. One sees these synergies as opportunities for expanding the functional uses of the historic urban center while still depending on the user group of local inhabitants who, as could be deduced, are seeds for potential synergies of public activities provided the presence of stimulating urban design features.

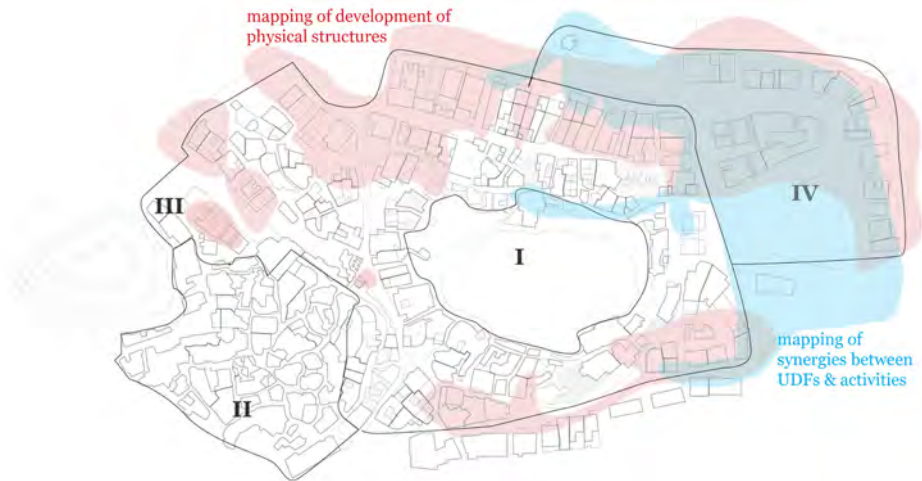


Fig.73:Map showing the layering of the mapping of locally- developed physical structures on the mapping of active synergies. source: author, 2016.



Chapter 5: Conclusion and Recommendation

5 Conclusion and Recommendation

The several findings discussed in previous chapters are summarized and further commented on in this chapter. The chapters aims to draw general conclusions based on collected and summarized key findings from the lines of investigation in order to reach the aim of the research. Furthermore, the chapter aims to provide recommendation on how to revitalize the historic city in light of understanding the Historic Urban Landscape of the case-study and the concluded key findings.

5.1 Summary of findings

Historic cities and historic urban centers impose a major contemporary challenge for urban conservators and planners. Dealing with historic cities became a necessity not only for its preservation but for the continuation of the cultural values and identities they represent. Historic cities can be seen as an opportunity to improve our modern cities and retrieve a useful tool in disposal to achieve better urban environments. Thus the quest is not to preserve a past and long gone heritage but to create new quality heritage. This can be achieved only through looking to cities as a part of a whole; an urban landscape that includes historical and non-historical urban environment. One needs to look into cities as an entity that is continuously shaped and forged in response to its dwellers' needs and imposed challenges. Only then one can look into the reasons behind the disconnection of historic cities from the evolution of our urban environments.

In order to understand the historic city as a historic urban landscape the understanding and development of the following ideas and concepts was necessary:

- The understanding of the development of two significant ideas: first, the **inclusion of the historic city into the heritage system thus identifying it as an object of significance and cultural value**. Second, the development of the concept of landscape from a subjective depiction of an image to a complex organism of **varying inter-related elements that is subject to objective examination**.
- Pinpointing the main principles of HUL to guide the creation of a conceptual model for the investigation of the case study. The first principle is the ‘comprehensiveness’ of the urban landscape to include its physical and non-physical elements in a dual relationship where the urban fabric is composed according to its dwellers; thus unraveling a social and cultural aspect behind the formation of the city. The second principle is that of ‘over-layering’ where the landscape is seen as successive layers accumulated through time reaching our present layer. The third principle is ‘the regeneration of urban heritage’ which redirects the aim of the conservation of HUL to the future - generated layer of the landscape. Accordingly, the formation of a system model where HUL is composed of over-layered structures each representing the landscape at a given period of time. Each layer is then composed of its two tangible and intangible elements developing functional relationships in between.
- On the scale of the single layer, the relation between the built environment (as the tangible element) and its dwellers (as the intangible element) can be understood as a triadic of physical structures – activities – meaning; where people act within the spatial boundaries of their built environment through performing various types of public activities and guided with the meaning they bear for this built environment. This can be translated into explainable synergies between urban design features in the built environment and associated activities performed by its users. **Such urban design features are understood within a frame of a set of physical principles that affect one’s perception of the physical structures.**

Siwa oasis is an example of a historic city under rapid transformation to which it has been recently subjected throughout the past decade. Siwa is an inter-related system of urban settlements, hydrological elements and transitional routes. The formation and evolution of the oasis’s urban structure follows a certain model for growth. One finds that the functional integrity of the urban structures representing the historic urban landscape of the oasis is lost with the oasis’s modernization

shifting away from its local cultural identity. While new urban structure is created following new functional relationships reflecting the inhabitants' desire for modernity and changing of life-style. This makes the examination on the present and past functional relationships between the physical elements and non-physical elements of the landscape a necessity in order to understand the current state of the urban landscape and its state as a historical landscape. One finds that:

- The model of growth of the oasis begins with highly condensed urban settlements that acted as nuclei for urban expansion in successive layers of the landscape. This explains the composition of the urban fabric of the built environment where concentric urban areas representing successive eras of urban development with the medieval 'Shali' ksar in the middle.

- The functional integrity of the model of urban structures representing the historic urban landscape of the oasis is lost as they substituted by modern models to which new functional relations are established.

The relationship between the built environment and its inhabitants is a vital component in its decoding and understanding its features and characteristics. Furthermore, the physical structures of the build environment represent the motivations and inspirations of its creators, therefore the structures are to be understood in context of its users and defined through them. Nevertheless, their users' mode of habitation is not the only factor in their creation, a historical perspective is required to explain the morphology and transformation of their style.

The dynamics of the development of the physical structures forming HUL's built environment are to be understood along with its behavior in relation to the historic urban center. This says a lot about whether HUL represented by its built environment is attracting or repelling urban development, and what type of urban development does it currently foster, and how models of urban development represented in the transformation patterns of the physical structure affect the integrity of HUL. One concludes that:

- Different directions of urban development are taking place to the physical structures of the built environment following different user groups and are positioned differently in respect to the boundaries of the historic urban center.
- The locally- motivated urban development of physical structures is attracted in the direction looking outwards from the historic urban center and on

surrounding areas. This means that the far-most it gets from the center of the historic urban center, high developed (transformed) locally motivated structures are found.

This is explored within the second line of investigation (Chapter 4, part 1), the physical structures of the Siwan built environment are examined and categorized into typologies according to their features, user group, and impact on the integrity of HUL. These typologies are considered as milestones in the transformation process of the physical structure which goes in two directions according to the user group of their inhabitant with different typologies as their end-state of transformation. Through the lines of these transformation processes the different typologies are mixed together in order to reach a highly-developed structure representing the end of this line of transformation. Therefore, one acknowledges the presence of two distinctive groups of structures subject to different directions of transformation representing two different user groups (local inhabitants, and tourists and expat) as they are positioned differently in relation to the historic urban center.

As one finds that locally - motivated urban development of physical structures tends to push itself away from the center of the historic area looking outwards to the fringes with the marketplace and surrounding areas. This is to the contrary to the other direction of urban development representing tourism and expats as its user group, which tends stay deep within the historic center.



Fig.74: Conclusion diagram 1, source: author, 2016.

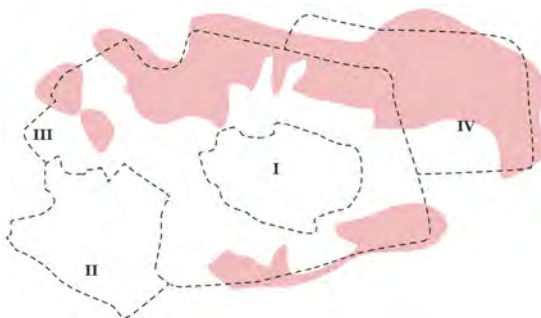


Fig.75: Conclusion diagram 2, source: author, 2016.

Within the third line of investigation (Chapter 4, part 2), synergies between specific urban design features of the built environment and public activities are concluded. Urban design features are categorized under general physical principles that explain how people understand these urban features and perform their asso-

ciated activities accordingly. Also, the evolution of the synergies were discussed in their historical context marking synergies that have a historical basis and survived to the present day and other historical synergies that have faded away leaving their structures as a reminder. Meanwhile the social activities to the urban design features are synergized to, follows the social activity spectrum that reflects a variety of social activities beginning with those that are based on necessary activities and ending with those based on optional activities. Therefore, synergies are explored where they are defined according to their historical background, activity (active/ inactive), and typology of UDFs and associated form of social activity. One concludes that:

- 'Khoss' resembles a historical synergy of UDF that has lost its functional integrity as a once integral part of the urban landscape as they have lost most of its functional relations with the inhabitants where it no longer plays a central role in their daily lives.
- The historical synergy represented by the 'khoss' has been substituted by synergies of newly formed different UDFs which, on the contrary its historical predecessor, are centralized representing the new center of the oasis.
- The only historical synergy including historically significant urban design features is that of mosques and 'maqam's. It represents significant cultural and religious activities that have survived to the present layer of the landscape.

A clear distinction between levels of public activity between the historic center and the market area is clearly exhibited. This is concluded from mapping the urban design features representing synergies with their related activities. As most of the active synergies are situated in zone (4) or directly linked to its borders, while UDFs inside the historic center carry very little active synergies. Zones (1 &2) contain no active synergies therefore do not hold any significant forms of public activities.

From connecting the findings from the mapping of the typologies and transformation patterns of the physical structures along with that of the mapped synergies between urban design features and public activity, research suggests a strong mutual relationship between development of locally oriented structure typologies and active synergies of public life. Therefore, one can understand that the most developing structures that are associated with urban design features, bearing strong perceptual physical principles, fostering strong public activity are those that represent the current strong functional relations between physical and non-physical elements of the landscape. While at the same time, these structures

negatively impact the Historic Urban Landscape's integrity. Furthermore, one concludes that:

- Locally developed typologies of physical structures (modern and mixed structures) are linked with active synergies of public activity.
- The more developed these local physical structures are the more they are connected concentrations of active synergies thus high public activity, while the more far from the active edge and market area they get, the less developed they are.
- Vernacular structures along with non-locally developed new-vernacular structures are the only structure typologies that can positively affect the integrity of the HUL. Nevertheless these structures are not linked to active synergies of public life.

5.2 General conclusion & recommendation

Therefore as a general conclusion, one returns to the third principle of HUL which is the 'regeneration of urban heritage'; where the aim of the conservation of HUL is to re-establish a continuation of the flow between historic artifacts and new rituals in order to form the future of the urban heritage. At the same time, one understood the strong relation between the three elements of place: physical structure, activity, and meaning, representing the two types of the constituting elements of the urban landscape: physical and non-physical (first principle of HUL). These concepts are represented through the research investigation lines, where these relations are examined in respect to its historical strata (second principle of HUL). This is through the identification of transformation patterns of physical structures and synergies between urban design features and forms

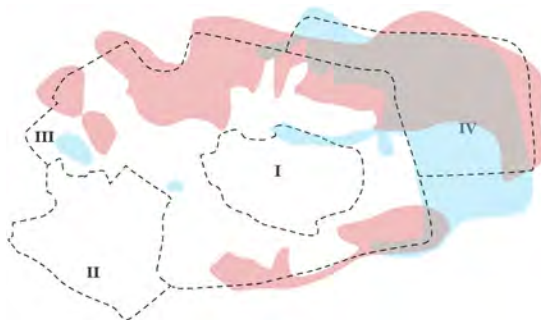


Fig.76: Conclusion diagram 3, source: author, 2016.

of public activities. Therefore, one can state that building on previous findings; the revitalization of the oasis's HUL represented by its historic center is through tackling these examined relations including the physical structures, UDFs and activities. Therefore, one concludes that the revitalization of HUL can be achieved in two lines of action:

The first line of action is that of urban development and synergies of public activity. As discussed in chapter 2, Jacob (1960) defines the reason for the success of public spaces as being able to bring people into them and that the question lies in the ability to do so, also Appleyard (1980) adopts the concept of livability as an indication of the success of public spaces. Throughout the research, successful public life is resembled by active synergies of UDFs and associated activities. Then it is found that successful public life is associated with the local urban development of the physical structures thus the urban landscape. This means that in order to achieve local urban development, active synergies are required. Looking back to the findings this can be achieved through:

- The reactivation of inactive historic synergies such as 'khoss' through finding new functional relations for it as traditional urban designs feature that reflects strong vernacular identity.

- The enhancement and protection of active historic synergies such as that of 'mosques and maqams'. They resemble an opportunity for the overall enhancement of public activity in the historic urban center through religious cultural activities.

- The creation of new synergies in relation to their present active counterparts in the existing center of the oasis (the market place: zone (4)). This does not mean necessarily to imitate the exact present synergies in the market place, but rather acting to extending the oasis center to include the historic urban area as an integral part of it next to the existing market place.

The second line of action is that related to retrieving the qualities of HUL through proper urban development. Jokilehto (2010) redefines development as the realization of the cultural and environmental potential of these elements forming the landscape. That is through the unveiling of its potential in order to retain its significance and value. This process is described by Stefano Bianca (2010) as the way to bridge culture with need for development in order to achieve genuine cultural development, mentioning how culture and development can be interdependent where development needs culture in order to be absorbed by the local

community and culture needs development to maintain a level of creativity and innovation. Thus, one can state that proper urban development resembled in re-thinking the transformation patterns and typologies of the physical structures forming the urban landscape. This is to serve the enhancement of HUL's structural and visual integrity which would not be achieved excepts through achieving a strong functional relationships between local inhabitants as a user group and a re-thought model of modern structure that bear the authentic qualities of the vernacular predecessor; acting as its successor as a vernacular model (new quality urban heritage). This can be achieved through:

- The re-thinking of the vernacular model positioning it in as a median between people's modern needs and challenges, and the necessity to respect the cultural identity of HUL represented in its vernacular model. Debaieh (2011) tackles this subject of looking into the future of local vernacular architecture of desert communities similar to Siwa oasis. In her study 'A Future for the Past of Desert Vernacular Architecture', she focuses her case study on the historical town of Balat in the Dakhlah oasis located within the Egyptian western desert. Finally, one claims that the revitalization of HUL is a process that combines the two lines of action; one representing the activation of the physical structures through vital public life stimulated by strongly meaningful urban design features, while the other re-shapes this urban development to serve the achievement of quality urban landscape that acts as a continuation of the cultural identity. Pursuing either lines of action without the other cannot achieve the revitalization of HUL. This can be explained as by only focusing on the re-activation of the public spaces of the historic urban center (first line of action), strong urban development will certainly follow. Nevertheless with managing such urban development, it will appear in its present typologies whose features threats and weakens the HUL. On the contrary, pursuing only the second line of action will not result in the revitalization of the historic urban center as local urban development is stimulated by strong public activity that attracts people. For local inhabitants it seems pointless to invest inside the historic urban center while it is not locally active.

Annendix

1 Samples from sketches gathered in dairy during walkthroughs via direct non-participant observation sessions. Different forms of public activities are collected and are then analyzed and categorized according to conceptual framework (activity spectrum).





SITTING
in
QAMAH



Bus.



AAAA!
or FOOTBALL
TEAM

SITTING UNDER
THE SHADDE OF
A COPEE



TWO GIRLS
PLAYING



WARRIORS
PEOPLE



PLAYING
TOO



AROUND
THE
HILL



KIDS PLAYING
in RUINS.



PLAY
with
TOYS...



KIDS PLAYING
in SAND
Beside
HOUSE



KIDS
playing with
KITES.

2 Information on interviewees of in-depth unstructured interviews .



Interviewee (A)

(A) is an enthusiastic young man who enjoys speaking about historical Shali. He is 33 yrs old and works as a guard responsible for the security and monitoring of the historic site of Shali assigned from the Egyptian ministry of state of Antiquities. He works after the evening with a local contractor in the field of construction. He is a local and was born in the old Westerners area beneath Shali fortress. In the age of seven, he moved along with his family out from the once crowded Westerners quarter. He bears memories about how things looked like in the ancient quarter, knows some of the previous and current inhabitants and stories of their livelihood. His father owns and operates a workshop situated in the center of the old street dividing the East and West quarters. As a previous resident, his family and relatives owned some of the old houses in the area. (A) owns a modern house outside the historic center.

Interviewee (B)

(B) is an old man in his seventies. He has lived his entire life in one of the districts in the historic urban center and therefore holds a lot of memories and information about the historic city center. He works as a night guard in one of the inner city hotels.



Interviewee (D)

(D) is a young man in his early 30s. He work in a bazaar inside the historic center which he owns in partnership with another man. He spends most of his day in the bazaar where he receives guests and friends. (D) lives in his father's house on the border of the historic center. His house used to be a vernacular structure but was rebuilt by his father in the modern concrete skeleton system. (D) has spent his childhood playing in the narrow quarter of the ancient city thus holds memories of his experience of the historic city as a child.



Interviewee (c)

(C) is a man in the middle age of forties and works as local staff manager of one of the hotels situated in the historic center. He spent his life in the same area before moving away to build his own house in the outskirts of the oasis. Nevertheless, he has been and still spends most of his time in the historic center.

Bibliography

- Alexander, Christopher (1977). *A pattern language: towns, buildings, construction*. New York: Oxford university press.
- Appleyard, Donald (1981). *Livable streets*. Berkley: university of California press.
- Bandarin, Francesco & Van Oers, Ran (red.) (2012). *The Historic Urban Landscape: Managing heritage in an urban century*. UK: John Wiley & Sons.
- Bandarin, Francesco & Van Oers, Ran (red.) (2015). *Reconnecting the city: The Historic Urban Landscape and The Future of Urban Heritage*. UK: John Wiley & Sons.
- Belgrave, Dalrymple C. (1923). *Siwa: the oasis of Jupiter Ammon*. John Lane.
- Blottiere, Alain (2000). *Siwa: the oasis*. Atterine: Harpocrates Publ.
- Bianca, Stefano (2010). *Historic cities in the 21st century: core values for a globalizing world*. *Managing historic cities, World heritage papers No.27*. France, Paris: UNESCO, pp.27-33.
- Collins, Christiane Crasemann & Collins, George R. (1986). *Camillo Sitte: The Birth of Modern City Planning: With a translation of the 1889 Austrian edition of his City Planning According to Artistic Principles*. USA: Dover publications.
- Cosgrove, Denis (1985). *Social Formation and Symbolic Landscape*. Totowa, New Jersey: Bannes and Noble.
- Council of Europe (1995). *Recommendation on the integrated conservation of cultural landscape areas as part of landscape policies*. [online] Available at: <https://wcd.coe.int/ViewDoc.jsp?id=537517>.
- Dabaieh, Marwa (2011). *A future for the past of the desert vernacular architecture: testing a novel conservation model and applied methodology in the town of Balat in Egypt*. Phd thesis. Sweden: Lund university press.
- El-Shafie, Mervat (1999). *Phenomenology of built environment: Interpreting the relationship between people and nature in remote communities: the Siwan experience*. New Zealand: Lincoln University.
- Fakhry, Ahmed (1990). *Siwa Oasis*. Cairo, Egypt: The American University in Cairo press.
- Fakhry, Ahmed (2003). *Bahriyah and Farafra; with a new introduction by Anthony J. Mills*. Cairo, Egypt: The American University in Cairo press.
- Gehl, Jan & Sevarre , Birgitte (2013). *How to study public life*. Washington: Island press.
- Gehl, Jan (2011). *Life between buildings: using public spaces*. Washington: Island

- press.
- Gabrielli, Bruno (2010). Urban planning challenged by historic urban landscapes. Managing historic cities, World heritage papers No.27. France, Paris: UNESCO, pp.19-25.
- Geotcheus, C (2006). Cultural landscape and the department of defense. Clemmson: Clemmson university.
- Hassanein Bey, Ahmed Mohammed (1925). The lost oases: being a narrative account of the author's explorations into the more remote parts of the Libyan Desert and his rediscovery of two lost oases. New York : Century Co.
- Jackson, John Brinckerhoff (1984). Discovering the Vernacular Landscape. New Haven: Yale UP.
- Jokilehto, Jukka (2010), Reflecting on historic urban landscapes as a tool for conservation. Managing historic cities, World heritage papers No.27. France, Paris: UNESCO, pp.53-63.
- Jokilehto, Jukka (2010), Notes on the definition and safeguarding of HUL. City & Time, Vol.2, No, p.4. [online] Available at: <http://www.ct.cecibr.org>.
- Jacobs, Jane (1961). The death and life of great American cities: the failure of modern town planning. London: Peregrine books.
- Lynch, Kevin (1960). Image of the city. Cambridge, Massachusetts: MIT Press.
- Lynch, Kevin & Rodwin, L. (1958). A theory of urban form. Journal of the American institute of planners, Vol. 24, No.4, pp.201-214.
- Müller, Liana & Gibbs, David (2011). Reading and Representing the Cultural landscape- A Toolkit- Final Draft.
- Martini, Viviana (2013). The conservation of historic urban landscapes: An approach. Vol.1- Urban conservation theories and history of the cities. Dissertation. Venice: university of Nova Gorica graduate school.
- Martini, Viviana (2013). The conservation of historic urban landscapes: An approach. Vol.2- The methodological approach. Dissertation. Venice: university of Nova Gorica graduate school.
- Major Dun, T.I. (1933). From Cairo to Siwa. Across the Libyan Desert with Armoured Cars. London: Schindler bzw.
- O'Hare (1997). Tourism and small coastal settlements: a cultural landscape approach for urban design. Unpublished Phd thesis. Oxford: Brookes university.
- O'Donnell, Patricia M. (2008). Urban Cultural Landscapes and the Spirit of Place. 16th General assembly of ICOMOS, 29 September to 4th October. Quebec: ICOMOS.
- Pagano, Tullio (2011). Reclaiming Landscapes. Annali d'Italianistica, 29, pp. 401-16.

- Petrucchioli, Attilio & Montalbano, Calogero (red.) (2011). Siwa oasis: actions for sustainable development. DICAR: Dipartimento di Ingegneria civile e Architettura, Politecnico di Bari.
- Rasouli, Mojgan (2013). Analysis of activity patterns and design features relationships in urban public spaces using direct field observations, activity maps and GIS analysis: Mel lastman square in Toronto as a Case study. MA thesis. Canada, Ontario, Waterloo: university of Waterloo.
- Replh, Edward (1976). Place and placelessness. London: Pion.
- Sauer, Carl (1925). The Morphology of Landscape. University of California publications in Geography, Vol.2, No.2. California: university of California publications, pp.19-53.
- Salheen, Mohamed (2001). A comprehensive analysis of pedestrian environments: The case of Cairo city center. Phd thesis, Heroit-Watt university. Edinburgh: Edinburgh college of Art.
- Smith, Julian (2010). Marrying the old with the new in historic urban landscapes. Managing historic cities, World heritage papers No.27. France, Paris: UNESCO, pp.45-51.
- UNESCO World Heritage Center- Management of World Heritage Sites in Egypt (2012). Urban Regeneration Project for Historic Cairo: First report of activities July 2010- June 2012.
- UNESCO World Heritage Center (2009). World Heritage Cultural Landscapes: A Handbook for Conservation and Management. France, Paris: UNESCO.
- UNESCO World Heritage Center (2005). Vienna Memorandum on World Heritage and Contemporary Architecture- Managing the Historic Urban Landscape. France, Paris: UNESCO. [online] Available at: <http://whc.unesco.org/archive/2005/whc05-15ga-inf7e.doc>.
- UNESCO (1976). Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas. General Conference 19th session, Nairobi, 26 October to 30 November. [online] Available at: <http://www.icomos.org/unesco/areas76.html>.
- UNESCO (2011). A New International Instrument: The Proposed UNESCO Recommendation on the Historic Urban Landscape (HUL). Report to intergovernmental committee of experts, 25 to 27 May. [online] Available at: <http://whc.unesco.org/en/activities/638>.
- UNESCO World Heritage Center (1994). Nara Document on Authenticity. [online] Available at: http://www.international.icomos.org/charters/nara_e.htm. (Also reproduced as Annex 4 of Operational Guidelines.)

- UNESCO (1962). Recommendation concerning the safeguarding of the beauty and character of landscapes and sites. [online] Available at: http://portal.unesco.org/en/ev.php-URL_ID=1307&URL_DO=DO_TOPIC&URL_SECTION=201.html.
- UNESCO (2013). New life for historic cities: The historic urban landscape approach explained. France, Paris: UNESCO.
- Van Oers, Ron (2010). Managing cities and the historic urban landscape initiative- an introduction. Managing historic cities, World heritage papers No.27. France, Paris: UNESCO, pp.7-17.
- Veldpaus, Loes & Roders, Ana Pereira (2013). Historic urban landscapes: An assessment framework. 33rd Annual Meeting of IAIA ,International Association for Impact Assessment' Conference Proceedings, 13 to 16 May, Calgary Stampede BMO Centre. Calgary, Alberta, Canada. [online] Available at: www.iaia.org.
- Veldpaus, Loes & Roders, Ana Pereira (2013). Historic urban landscapes: An assessment framework Part II. PLEA2013 29th Conference- Sustainable Architecture for a Renewable Future, 10 to 13 September. Germany, Munich.
- Whitehand, Jeremy (2010). Urban morphology and historic urban landscapes. Managing historic cities, World heritage papers No.27. France, Paris: UNESCO, pp.35-43.
- Whyte, William H. (1980). The social life of small urban spaces. New york: project for public spaces.

ملخص

في السنوات الأخيرة، تعرضت المدن التاريخية الى تحول سريع تحت ضغط ما بين الزيادة الديموغرافية و الحاجة المستمرة للتطور. بينما تميل الأنماط العالمية للتطور الى تجاهل الثقافة و الهوية المحلية بينما تستجيب الى التحديات و الاحتياجات الفورية المفروضة بواسطة المجتمعات الحديثة. بالتالي، تتأثر المناطق المدنية التاريخية بشكل كبير بالتغيرات المدنية التي تحدث عالميا في صورة مشاريع تجديد و احلال أو التطوير التلقائي السريع. فهم اصبحوا عرضة للتدهور و في حاجة الى حماية و حفظ دائمين. تعد واحة سيوة مثال للمدينة التاريخية التي تعرضت للتحول السريع طوال العقد الأخير. هي جزء من المستوطنات الصراوية العامية في صحراء مصر الغربية و الصحراء الكبرى في أفريقيا. و قد توسعت الواحة بشكل كبير في السنوات الأخيرة في حين فقدت مناطقها المدنية التاريخية قيمتها الوظيفية. بدون جهد لحمايتها أو حفظها، ستختفي سريعا تلك المدينة التاريخية. و من أجل البحث في مشكلة المدن التاريخية، يعتبر المشهد العمراني التاريخي (Historic Urban Landscape HUL) نهج عصري مهم في مجال الحفاظ التراث. فهو نهج فعال وضعته منظمة اليونسكو (UNESCO) ردا على الضرر المتعرضة له المدن التاريخية حول العالم. مسترشدة بمبادئ و قواعد الHUL ، يستكشف البحث الطبيعة المدنية للواحة بهدف فهم علاقة البيئة القائمة و مستخدميها كعنصرين أساسيين للطبيعة. يقوم البحث بترجمة تكوين البنية المدنية للواحة منذ نشأتها. و بالنهاية، يسعى البحث الى استكشاف كيف دراسة ال HUL للحالة يمكن أن يساعد في حمايتها و تنشيطها.

الكلمات الرئيسية: المدن التاريخية، المشهد العمراني التاريخي، المشهد، التراث العمراني، البيئة المبنية، النشاط البشري العام.

إقرار

هذه الرسالة مقدمة في جامعة عين شمس وجامعة شوتجارت للحصول على درجة العمران المتكامل والتصميم المستدام. إن العمل الذي تحويه هذه الرسالة قد تم إنجازه بمعرفة الباحث سنة 2016 هذا ويقر الباحث أن العمل المقدم هو خلاصة بحثه الشخصي وأنه قد اتبع الإسلوب العلمي السليم في الإشارة إلى المواد المؤخوذه من المراجع العلمية كل في مكانه في مختلف أجزاء الرسالة..

وهذا إقرار مني بذلك،،،

التوقيع:

الباحث: على سمير السيد

التاريخ: 07/25/2016

فهم المشهد العمرانى التاريخى لواجهة سيوة:

العلاقة بين النشاط البشرى و البيئة المبنية فى تكوين المشهد
العمرانى

مقدمة للحصول على درجة الماجستير فى العمران المتكامل والتصميم المستدام

أعداد: على سمير السيد

لجنة أشرف

أ. انتيه شتويمان
أستاذة التنسيق الحضرى و البيئى
جامعة شتوتجارت

أ.د محمد عبد الكريم صالحين
أستاذ التخطيط و التصميم المتكامل
جامعة عين شمس

التوقيع

لجنة الحكم
أ.د.....الممتحن الخارجى
أستاذ.....
جامعة.....

أ.د.....
أستاذ.....
جامعة.....

أ.د.....
أستاذ.....
جامعة.....

تاريخ المناقشة:.....

الدراسات العليا

أجيزت الرسالة بتاريخ:.....
موافقة مجلس الجامعة .../.../...

ختم الإجازة
موافقة مجلس الكلية .../.../...

جامعة عين شمس



جامعة شتوتجارت



02/25/2016



فهم المشهد العمراني التاريخي لواجهة سيوة:

العلاقة بين النشاط البشري و البيئة المبنية في تكوين المشهد العمراني

رسالة مقدمة للحصول على درجة الماجستير في العمران المتكامل والتصميم المستدام

إعداد

على سمير السيد

المشرفون

أ. أنتيه شتوكمان

أستاذة التنسيق الحضري والبيئي

جامعة شتوتغارت

أ.د. محمد عبد الكريم صالحين

أستاذ التخطيط والتصميم المتكامل

جامعة عين شمس

