

University of Bahrain

College of Engineering



**Department of Architecture
and Interior Design**

The Impact of the Open-Plan Residential Interior Design Trend on Bahraini Culture and Users

**A thesis submitted in partial fulfillment of the requirements for the M.Sc.
degree in Architecture Interior Design**

Submitted by:

Zuhoor Ali Kadhem

20161662

Supervised By:

Dr. Nehal Almurbati

(Assistant Professor)

University of Bahrain

Kingdom of Bahrain

September 2022

University of Bahrain

College of Engineering

**Department of Architecture
and Interior Design**



The Impact of the Open-Plan Residential Interior Design Trend on Bahraini Culture and Users

A thesis submitted in partial fulfillment of the requirements for the M.Sc.
degree in Architecture 'Interior Design'

Submitted by:

Zuhoor Ali Kadhem

20161662

Supervised By:

Dr. Nehal Almurbati

(Assistant Professor)

University of Bahrain

Kingdom of Bahrain

September 2022

Defense Committee's Approval

The Discussion Committee met on 14-Sep-22 In MS teams. Upon discussing the student whose details are stated above in public, the discussion committee recommends the following:

The student is awarded a grade **P** in the thesis subject.

- ☐ Without making any changes to the thesis.
- ☒ After making the modifications attached with this decision.

Discussion Committee Members Approval:

<u>Name</u>		<u>Signature</u>
1. Dr Nehal Almurbati	(Advisor)	- 
2. Prof Najlaa Allani	(Internal Examiner)	- 
3. Dr Hadeel Regal	(External Examiner)	- 

Abstract

Culture and architecture are of strong connection in phenomenology. Scholars has investigated both aspects upon different scales. While home level it is more crucial. One of current topics that implies both, is the residential open-plan trend. The open-plan is known by making no boundary walls between living and dining, or kitchen space. As it is a worldwide concept, it is not designed in corresponding to Bahraini culture. Therefore, the research aims to investigate the suitability of open-plan residential trend upon Bahraini culture and users. To reflect on respecting cultural values for a better home experience.

The research has implemented ethnographic approach and triangulation of data to insure reliability of data. Conducted interviews with professionals' group and open-plan inhabitants, along with exploring homes case-studies. Mapping the linkages between culture and open-plan home experience from architects, academics, and users perspective. The interviews are analyzed using Nvivo program, aligning with grounded theory needs of thematic analysis. Also, case studies are done to explore the difference among middle class traditional Bahraini homes, hybrid architecture, and the recent open-plan homes. That is to understand how the life-style changes by the architectural boundaries.

The research confirmed the relationship between architecture and culture implementation in homes. Highlighting the role of architects, designers, and cultural change, in parallel with globalization. Concluded with a set of proposed solutions for better implementation of open-plan in reference to Bahraini culture. This will contribute to fill the gap in the knowledge and to set a starting point for further research on the Bahraini/Gulf culture and architecture.

Dedication

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

- الواجب للإسلام والعروة

A wise man once said: “Instead of imprecating the darkness, light a candle and then imprecate the darkness.”

To Islam and Bahrain, to a better lived home,
To my father with love,

Acknowledgments

The research journey was the most difficult and exciting to get through with all life events. I'm thankful to Allah for giving me strength to pass through.

I would like to express my gratitude to all members of my family. To my father "PhD. Ali Kadhem" who wrote in his thesis (الإنسان المثالي هو العاقل و الشجاع و الحكيم), "*The ideal person is the sensible, brave, and wise*" to be staying in my mind through any decision to take. He as well has always stood for more significant achievements in education. To my mother and brothers: Kumail and Maitham, who have known what is best for me and supported me behind the scenes. To my sister "Sawsan" for giving me strength while she is 6,312 km away. To my nephews "Ali, Laith, and Zaid" who cheered me day after day during my research. And not to forget "Ali Maitham, Reem, Abdulla, Ali Kumail, and Bashar" who brought joy to our lives. To Maryam Hammad, Kawther Hassan, Zainab Matrook, and Mohammed Baqer, for their kindness and support.

With respect and appreciation, I'm grateful for my supervisor Dr. Nehal Almurbati, who made the journey smoother with her outstanding support, patience, guidance, and inspiration. I could not make it without her. Special thanks to Dr. Reem Sultan, Dr. Hawraa Al-Shaikh, Dr. Fatema Qaed, and Dr. Hanaa Al-Jowdar for enhancing my knowledge during Bachelor's and Master's degrees. To all my teachers in life, thank you for helping me reach where I am today.

I express sincere thanks to everyone who has supported me during the data collection, open-plan homeowners, researchers, and leading architects. My gratitude also goes to my dearest friends, Nabaa Ahmed, Kawther Al-Mawlani, and Nooraa Shehabi, who led me to the bright side and have always been there whenever needed.

Finally, I am thankful for the circumstances that directed me to harness the opportunities, to take advantage of the sun and storm, to turn worthless sand into a precious pearl.

Glossary

Term	Explanation
Architecture	The materialistic built environment, including the interior space planning
Arabian gulf culture	An Islamic culture of hospitality, modesty, and privacy.
Culture	A robust set of values that guides how daily activities are performed
Courtyard	An enclosed space in the middle of the traditional houses, open to the sky.
Extended family	It is the smaller families as part of the more prominent whole family. For example, The son/daughter gets married to form an extended family.
Hospitality	A trait in which house owners welcome and appreciate their guests or relatives
Home culture	The way in which activities are governed at home experience
Homeness	Feeling relatable and attached to the home place.
Impact	Any actual change or alteration to an existing case that might be negative
Lived experience	Translating a home to its immaterial journey as lived and felt by the users
Majlis	A formal room usually used for men guests. It was previously designed as a closed space. Recently it is also labeled on residential plans in open spaces to mark the guests' area
Open-plan house	A house with any zone open to another. For example, a hall open to another seating area, a hall to a kitchen, a dining to a hall. Not necessarily all zones are open.
Setback	The corridors area around the house. A building code to provide essential services such as electricity, water, and drainage
Trend	An act of development or change towards a specific idea or product to be widely used
Traditional Bahraini home	A label to the old Bahraini courtyard houses before the occurrence of globalization. They were designed by the home users themselves before the architects' influence.
User	A person who accommodated/visited a family house

List of Figures

Fig 2.1 Sample Chinese Home Plan (Source: Yang, 2007).....	14
Fig 2.2 Sample Traditional Syrian Home (Source: Hekmat Ismail, 2015)...	15
Fig 2.3 Cultural Change Path (Source: Hekmat Ismail, 2015).....	15
Fig 2.4 Culture as Part of Sustainability Approach (Source: Opoku, 2015)	16
Fig 2.5 Guidelines For Sustainable Housing Design (Source: Fujihira, 2019)	17
Fig 2.6 Types of Spatial Privacy (Source: Khozaei, 2009)	21
Fig 2.7 Sample of Open-Plan Design (Source: Smith, 2022).....	27
Fig 2.8 Motives of Open-Plan Choice (Source: Alfirevic & Simonovic- Alfirevic, 2016)	29
Fig 2.9 Types of Openness (Source: Alfirevic & Simonovic-Alfirevic, 2016)	30
Fig 3.1 The Research Approach (Source: Author).....	38
Fig 3.2 Interviews SOP (Source: Author).....	40
Fig 3.3 Analysis Procedure (Source: Groat & Wang, 2013).....	41
Fig 3.4 Nvivo Coded Themes (Source: Author)	42
Fig 4.1 Courtyard House Façade (Source: Author)	47
Fig 4.2 Urban Structure Around Courtyard House (Source: Author).....	48
Fig 4.3 & Fig 4.4 The Courtyard House Transformation And Zonning	50
Fig 4.5 Enclosed and Exposed Zones (Source: Author)	52
Fig 4.6 Visual Connection Map (Source: Author).....	53
Fig 4.7 Courtyard House Circulation (Source: Author).....	55
Fig 4.8 User Journey Path (Source: Author).....	55
Fig 4.9 Narrative of Home Experience (Source: Author).....	56
Fig 4.10 Son's House Façade (Source: Author)	58
Fig 4.11 Son's House Plan (Source: Author).....	58
Fig 4.12 Son's House Plan Zoning (Source: Author)	59
Fig 4.14 Enclosed and Exposed Zones (Source: Author)	63
Fig 4.15 Visual Connection Map (Source: Author).....	62
Fig 4.16 Son's House Circulation Map (Source: Author).....	64
Fig 4.17 Narrative of Son's Home Experience (Source: Author).....	65
Fig 4.18 Path Narrative of Son's Home (Source: Author)	67
Fig 4.19 Grandson's House Façade (Source: Author)	69

Fig 4.20 Grandson's House Zoning (Source: Author)	70
Fig 4.21 Visual Connection Map (Source: Author)	73
Fig 4.22 & 4.23 Enclosed and Exposed Spaces, Circulation Map (Source: Author)	74
Fig 4.24 Sectional Narrative of Home Experience (Source: Author)	76
Fig 4.25 Journy Map Narrative (Source: Author)	77
Fig 4.26 Grouping of Codes Based on Themes (Source: Author)	79
Fig 4.27 Flow of Codes Generated By Nvivo (Source: Author)	80
Fig 4.28 Open-Plan Codes Based on Number of Coded Items From Nvivo (Source: Author)	81
Fig 4.29 Word Cloud of Culture Generated By Nvivo (Source: Author)	83
Fig 4.30 Word Cloud of Bahraini Culture Generated By Nvivo (Source: Author)	87
Fig 4.31 Word Cloud of Home Culture (Source: Author)	110

List Of Tables

Table 3.1 Qualitative Approach Strengths and Weaknesses (Source: Groat & Wang, 2013)	37
Table 4.1 Percentage of Open and Private Areas (Source: Author)	51
Table 4.2 Enclosed an Exposed Zones Percentage (Source: Author)	52
Table 4.3 Percentage of Visual Connection (Source: Author)	53
Table 4.4 Son's House Zones Percentage	59
Table 4.5 Visual Connection Map Percentage (Source: Author)	62
Table 4.6 Enclosed and Exposed Percentage (Source: Author)	63
Table 4.7 Percentage of Zones (Source: Author)	69
Table 4.8 Visual Connection Percentage (Source: Author)	72
Table 4.9 Exposed and Enclosed Area Percentage (Source: Author)	73
Table 4.9 Analysis Themes Based on Objectives (Source: Author)	78
Table 4.10 Users Priorities Based on Gender (Source: Author)	92
Table 4.11 Accessible Places in Mixed Gender Gatherings (Source: Author)	103
Table 4.12 Accessible Places in Females Gatherings (Source: Author)	104
Table 4.13 Accessible Places in Male Gatherings (Source: Author)	104
Table 4.14 Findings of Case-Studies (Source: Author)	120

Table of Contents

Cover page	ii
Defense Committee’s Approval Page.	ii
Abstract	ii
Dedication	iv
Acknowledgments	v
Glossary.....	vi
List of Figures	vii
List of Tables.....	viii
Table of Contents	ix
Chapter 1: Introduction.....	1
1.1 Overview.....	2
1.2 Research Issue.....	4
1.3 Aims and Objectives	5
1.4 Significance of The Study	5
1.5 The Scope of The Study	6
1.6 Limitations and Constrains	6
1.7 The Structure of The Thesis	7
Chapter 2: Theoretical Background	8
2.1 Culture and Architecture	9
2.1.1 Architecture Shaping Lives	9
2.1.2 Home Meaning, Placemaking and It’s Role As a Culture Generator	10
2.1.3 Traditional Architecture as A Reflector of Cultural Change	13
2.1.4 Sustaining Homes	16

2.2 Bahraini Culture and Architecture.....	18
2.2.1 Bahraini Cultural-Values Affecting Design.....	18
2.2.3 Traditional Bahraini Interior Architecture	24
2.2.4 The New Hybrid Interior Architecture	25
2.3 Open-Plan Interior Trend	26
2.3.1 Globalization and Interior-Design Trends	26
2.3.2 The Open-plan Trend	27
2.4 Conclusion	33
Chapter 3: Methodology	34
3.1 Research Paradigm	35
3.2 Research Design	37
3.2.1 Interviews	39
3.2.2 Case-Studies	43
3.3 Limitations.....	44
3.4 Conclusion	45
Chapter 4: Analysis and Findings	46
4.1 Live Case-Studies Analysis.....	47
4.1.1 Case study 1: The grandfather house	47
4.1.2 Case Study 2: The son’s house.....	58
4.1.3 Case study 3: The grandson’s house.....	69
4.2 Interviews Analysis.....	78
4.2.1 Exploring Bahraini home culture	82
4.2.2 The open-plan residential projects in Bahrain	94
4.2.3 Homeness	110
4.2.4 Sustainability and solutions.....	113
4.3 Findings	118
Chapter 5: Discussion.....	121
Chapter 6: Conclusion, and Implications	129

6.1 Contribution to knowledge.....	130
6.2 Proposed action plan	130
6.3 Conclusion	131
6.4 Limitations.....	132
6.5 Recommendation for further studies	133
References	134
Appendices	142
Appendix A: Research plan schedule.....	142
Appendix B: Interviewees Background.....	143
Appendix C: Interview Consent Form	146
Appendix D: Interviews Questions selection based on objectives	148
Appendix E: Sample Interviews.....	154
Appendix F: Sample plan solutions proposed by architects.....	163

Chapter 1: Introduction

“The house is a reflection of culture and civilization, as the family is a micro-level society”
Almahmoud (2015)

The introduction chapter provides an insight to the research overall. Starting with a background overview to the selected matter, providing the reader with a general understanding to the case. Then highlighting the research issue; introducing the gap in knowledge and the significance of filling the gap. Followed by the aims and objectives, the scope, limitations, and finally the thesis structure.

1.1 Overview

It is stated that architecture practice as a human-activity is ancient (Unwin, 2003). Additionally, it involves materialistic aspects (building, matter..) and immaterial aspects (experience, culture..) (Salman, 2016). In such, the materialistic creates the immaterial user-experience. Consequently, it is stated; spatial design cannot be separated from the user's way of living as personal needs (Talib, 2001). Thus, home is the most unique case of architecture due to it's strong association to user's identity (Macgregor Wise, 2000). Similarly, Tuedio (2014) argues that defining the sense of home is a challenging issue due to the fact that a home refers to human identity in his/her place.

In addition, Rapoport (1991) also states that houses are directly associated with beliefs, insights, and how people live in a place. Furthermore, a home can also describe as a place of security, well-being, and comfort. However, Gauvain, Altman and Fahim (1985) as cited from (Sixsmith, 1986) defines home as “*a crucial site of cultural activity and cultural expression*” Correspondingly, Rapoport (1969) indicated that “*a house is a human fact*” and is highly associated with culture. Due to the certainty that home is the physical representation of an optimal space to express original needs and beliefs.

Thus, culture and architecture are interconnected. It is stated that a community culture collectively carries out the architectural living environment (Opoku, 2015; reza Karimi azeri & Kari, 2014) . While culture is identified as an organizational way in which activities, rituals, and social acts are performed by a group of people or a community, as carried between generations (Keesing, 1974). Architecture involves the design of a place for specific events and users' demands or culture (Unwin, 2003). Ideally, the users' demands in a place must be characterized by their traditions. Since it's stated that spatial environment influences user's behavior (Duvernoy, 2012; Lasswell & Deasy, 1990). Hence, traditional architecture is known to serve user's need at home depending on their cultural values (Makhlina, 2020).

Significantly, Talib (2001) argued; recently new housing designs are adopted indicating a shift toward global designs rather than local. With the world heading to globalization, homeowners have started to get influenced by other house designs from different parts of the world (Mahgoub, 2007). Therefore, it is thought that globalizing “homes” would lead to a loss in users’ culture addressed in the lived experience of place. In such, Talib (2001) stated; every country heads towards a rapid change in culture and way of living, yet it might cause negative or positive impacts. Additionally, in the late 20th century, both globalization and oil peek affected the gulf culture and community (Abdelsalam and Rihan, 2013). The community came to a sudden fortune with the improved standard of living, it has allowed them to enhance their houses to modern designs.

The open-plan design is known as merging home spaces with no walls separating the zones (Wallender, 2021). The rapid architectural development in Bahrain toward open-plan homes led the researcher to investigate the impacts of open-plan trend. While all the historical movements have gathered to create the rich cultural values in Bahrain, in addition to being an Islamic country. The gulf culture is unique in terms of home culture and has its own values (Abu-Gaueh, 1995). In a glance (Almahmoud, 2015) stated that the gulf region was a simple community of mostly fishermen and pearl divers prior to oil discovery; due to the harsh climate and limited natural resources. However, the community values and togetherness were strongly offered. As an overview of Bahrain, home privacy is precious to the community. Also, celebrating occasions together and valuing the neighbors represent some of the main pillars of the culture (Salman, 2016). In terms of privacy, even though the home is considered a private zone worldwide, it is more rigorous in Bahrain.

On a prior research on preserving Bahraini culture, it has argued that it is strongly associated to maintaining Islamic values (Karolak & Veljanova, 2010). Consequently, maintain cultural values at home is crucial in Bahrain. This research aims to investigate and evaluate the open-plan trend upon Bahraini culture and users experience. Thus, Bahrain is selected as a case representation of an Islamic and Arabian gulf country. Due to its substantial culture, in addition to the accessibility for collection of data.

1.2 Research Issue

Multiple researchers have investigated various factors affecting home culture in gulf region. On urban scale, Al Khalifa (2015) researched “*Urban Sustainability and Transforming Culture in the Arabian Gulf*” selecting Bahrain as a case. On home scale, Alenazy (2007) investigated modern housing influence upon applying culture at home in Kuwait, and similarly Alkhateeb (2015) on Saudi context. The Gulf culture is associated with Islamic values, which makes it at high demand to be preserved and un-interrupted (Abu-Gaueh, 1995). Thus, the open-plan architectural interior design has been noticed to be trending in Bahrain. In global scale, the open-plan trend has been investigated upon family experience but not a culture (Attfield, 1999; Clarke, 2011). Additionally, it was tested upon suitability to Muslim homes, in a small-scale study, and has uncovered some impacts (Bakri, 2021).

A home is the fundamental place for adhering to culture in a world of diversity (Seamon, 2008). Additionally, it is stated that “*traditional housing gains its name due to its close relationship between the functional needs of the occupants, the culture, and the climate*” (Amer, 2007). Consequently, the research issue lies in the open-plan as a globalized design (Clarke, 2011), not traditionally influenced by the community needs. While traditional Bahraini architecture had the power of corridors and courtyards (Soares Saraiva & Serra, 2017), the open-plan comes as the opposite.

As the Bahraini culture has always been in demand to be preserved for future generations (Karolak & Veljanova, 2010). Therefore, tackling the open-plan positive and negative impacts in the case of Bahrain in-depth, and relating to culture would fill a crucial gap. Hence, the research matter explores the relations between the adaptation of open-plan residential interior design in modern Bahraini houses and its outcome on Bahraini users and culture. Thus, to recall and reach the research objectives, the research questions are refined as listed:

1. What is the current Bahraini culture?
2. What are the values affected by open-plan design?
3. Does the open-plan fits to the current culture?
4. What are the current and future impacts of the open-plan to users and guests?
5. What are the passive and active solutions to designing homes in Bahrain?

1.3 Aims and Objectives

Although there are various studies on modern home planning in Gulf, the open-plan is not yet evaluated. The aim of this research is to investigate and evaluate the impact of the open-plan trend in Bahraini residential houses on users and culture. The users include Bahraini inhabitants lived-experience and their guests. It is to verify the appropriateness of implementing the stated trend in serving the community culture. Also, possible future impact in altering the family culture is considered. To achieve this aim, a number of objectives have been set:

1. To investigate the current Bahraini home culture and emphasize the role of architecture in influencing the culture implementation and spatial decisions.
2. To investigate how the openness approach has affected the daily life for users in Bahraini homes.
3. To draw conclusion on the importance of designing interior architecture in correspondence to culture and to assist applying Arabian gulf identity culture at home.
4. To document sustainable architectural solutions derived from the user's experience based on Arabian gulf home needs.

1.4 Significance of The Study

Few studies were conducted on how globalization has affected certain cultures by altering the built environment in Arab region (Al Khalifa, 2015; Alenazy, 2007; Alkhateeb et al., 2014; Mokhtar, 2010). Thus the open-plan has not been investigated upon a certain culture nor Gulf context. While the investigation will clarify its impact from different perspectives both positive and negative, this study will contribute to fill the gap in knowledge. That is to utilize the benefits of the trend and avoid the drawbacks in such critical case. Serving both architects and home owners to design better homes through evidences. Moreover, it is working in parallel with Bahrain vision 2030 that demands for adequate housing. Additionally, as the investigation needs to address the current culture, the research it will provide a decent documentation, that will serve future researches.

The case of Bahrain represented the Arabian Gulf countries due to similarities in home culture. The research contributes not only to the Gulf community, but also

to other Arabian countries that apply those values to their homes. The proposed research will contribute to the following aspects:

1. Understanding how a certain interior design trend, such as the open-plan, can affect the implementation of culture. To help maintain Bahraini home values through planning the lived-experience.
2. To create a connection between research, architecture in practice, and the users lived-experience in Bahrain regarding home designs.
3. Delivering supportive data for further research, as interior design planning research in Bahrain have been limited.

1.5 The Scope of The Study

The study concentrates on exploring of current and possible future impacts of the residential open-plan trend. It demonstrates both negative and positive impacts on a qualitative approach. The research boundaries lay studying the gap between conservativeness of culture and openness approach in designing residential spaces. Moreover, creating connection among research theories, practice, and actual lived-experience through professionals and open-plan inhabitants. Comprises in-depth interviews with total of 19 interviewees and three homes case-studies.

While it is serving Gulf region, the data is only gathered from Bahrain as a selected case to avoid dispersion of data and insure ease of accessibility. The period of research is one year collectively (2021-2022) and includes theoretical background, alongside documentation of Bahraini home culture, data collection, analysis, and conclusion. The research under the selected boundaries will contribute on generating a better implementation of culture through planned architecture; to inspire any designer.

1.6 Limitations and Constrains

The research touches on immateriality case of architecture summed under the title of culture and home experience. Thus as any other nontangible research it has confronted some limitations in the following aspects:

1. Limited time was a major constrain with the selected methodologies, along with the quantitative analysis for the rich raw data.

2. The interviews have been limited to the age group of 30 and above, to draw out their experience of culture before globalization and recently. While it is the age-group concerned in building homes, it cannot be generalized.
3. The conclusion has been drawn by analyzing the collected data from interviews, hence a margin of error might apply as a qualitative sample cannot indicate the whole population thoughts. Yet, the data has considered triangulation of data and both genders opinions.

1.7 The Structure of The Thesis

The thesis structure consists of six chapters as stated by Baturo & Cottier (2010). The first includes the introduction to the topic along with the aims and objectives. The second reviews related literature and emphasizes on the ideas behind the selected topic. The third states the research methodology including the instruments and analysis methods. The fourth includes the findings of the research. The fifth opens a discussion on the findings and reflects in relation to the reviewed literature. And last, the conclusion and recommendation for further research.

Chapter 2: Theoretical Background

Rapoport (1982, 52) stated "*It is the social situation that influences people's behavior, but it is the physical environment that provides the cues.*" As cited from (Abu-Gaueh, 1995)

It has been stated by researchers that contemporary architecture has new nature, this nature relates to ideas rather than emotions

“Contemporary architecture (and art) sought to dissociate itself from the world of emotions and connect the design process to the world of ideas, thus creating a rational relation between building and man, devoid of any emotion” (Pontikis & Rofè, 2016)

While This has been discussed by a great number of authors in literature. Pallasmaa (1992) argues home is the most complex case of architecture where it implies intimacy, memories, aspirations, and rituals. Additionally, von Goethe (n.d.) stated *“He is happiest, be he king or peasant, who finds peace in his home”*. Thus, to create a building filled with homeness emotions, Rapoport (1991) debated, houses are places to reflect religion and socio-culture, while home meaning has distinct values amongst various cultures. The value of culture stands above many aspects when designing houses. Yet, the trending contemporary architectural case associated with homness has been the open-plan design in Bahrain.

According to Makhlina (2020), both culture and architecture impact on one another. Therefore, this chapter will review earlier related studies to understand the matter in depth and create a base for discussion of collected research data. To start from the general case of architecture followed by culture in relation to architecture, then the Bahraini culture, and ending by the open-plan issue that emerged in modern residential architecture opposing Bahraini culture and traditional architecture.

2.1 Culture and Architecture

Architecture and culture are interweaved together as seen in historical architecture. This influences various civilizations in terms of architecture development and building style. (Beecher & Pile, 2002)

2.1.1 Architecture Shaping Lives

To begin with, place is a fundamental element in architecture phenomenology as argued by Unwin (2003). The definition of place has been a topic of debate between phenomenologists. According to Unwin (2003), place is a matter of combining architecture and habitation to create the human experience in a particular

location. While Seamon (2002) stated that place is a relationship between body and space. On the other hand, the Oxford English dictionary defines place as a space in use, or a person's home. That is to say that both phenomenology and everyday communication language, defines' place uniformly.

Marco Frascari describes architecture as a formation of regulated spaces using architectural and sensory elements. Indeed, an architectural place controls the movement and behavior of a person through its design and circulation (Frascari, 2011). Furthermore, individuals spend majority of their times indoors in buildings. Certainly, the surrounding environment haptics affects how people feel and think in a place (Harrouk, 2020). For example, there are workplaces that are designed to evoke creativity while other places are dull and depressing. There are many traits that affect human behavior in a place (Duvernoy, 2012). Multiple research have been conducted to study how certain changes in the interior can affect the people. A review by (Jalil, Yunus and Said, 2012) was conducted to measure the environmental color impact on human behavior and has concluded that it has an impact on: feelings, accomplishment, bodily processes, and actual settings. While a notable Romanian saying states that the earliest 7 years of a child's life experiences in his family space reveals how his future will be (Makhlina, 2020). In such, architectural interior design goes beyond functionality, having the ability to manipulate communities' heritage and culture (Breeders, 2021). That concludes, researchers agreement on architectural impact upon users both positively or negatively.

From another perspective, lived immaterial spatial experience can also be related to home experience (Salman, 2016). It has been argued by scholars that architecture is divided to materialistic and immaterial experience. Verhaeghe (2017) stated as cited from (Forty, 2004, p.138) "*What the students 'produced' from their training was not 'architecture', but drawings, commonly referred to as 'designs' "*. This demonstrates that drawings are one part of architectural materiality. However, drawings are the first step to an architectural space. Then, once the users accommodate the designed space, they create the other part which is the immaterial experience. Thus, immaterial includes emotions, and other values, that are connected to people and space (Salman, 2016). In addition, it is said that a space cannot be understood by analyzing it, yet it must be addressed by the users on that space to translate the place to meanings (Freshwater, 2005).

2.1.2 Home Meaning, Placemaking and It's Role As a Culture Generator

A residential building can be referred to as a house, a home, or a dwelling. Yet, each title has a whole different meaning as noted in literature. First, it has been argued that a house is a building, a form, or a materialistic structure (Coolen and Meesters, 2011). Most researchers agree with this definition. Moreover, a house is what architects, engineers and building experts deal with (Ellsworth-Krebs, Reid and Hunter, 2015) as they propose the design of a materialistic structure. Interestingly, Kavalir (2015) described a house as a set of “bricks, roofs, rooms and doors”.

However, a building is the common ground between a house and a home. Under the title ‘home sweet home’ Kavalir (2015) added that a house is a place for habitation, while a home is where habitation happens. What transforms a house to become a home is the addition of family recreation and comfort in that place (Coward, 2018). Therefore, it can be concluded that home is associated with people in place rather than the place itself. Sixsmith (1986) added that it is personalization of a house that turns it into a home. Besides, theorizing ‘home’ came after researchers’ acknowledgment that there is more beyond the structure of a house (Ellsworth-Krebs, Reid and Hunter, 2015).

Heidegger in 1971 proposed the idea of “dwelling”. He claimed that “not every building is a dwelling”. There are different types of buildings that are not designed as human dwelling. For example, shops, courts, and schools are meant to assist people to dwell. It has been argued that dwelling refers to retaining, recognizing, and appreciating that place (Obrador, 1995). To state it clearly, dwelling in a home is “being-in the world”. That is to emphasize the intimacy of the home along with the time and place bond (Roy, 2017). Moreover, the connection between that building and feeling of a dwelling cannot be separated. It is said to be an imitation of “*the brain and the body*” relationship (Obrador, 2016).

To design the most suited dwelling, placemaking and few other guidelines must be taken into consideration. Prior to explaining the guidelines, placemaking must be identified. It has been argued that a place is a space with unique attributes. That is to say placemaking is adding the desired characteristics into a specific location (Sime, 1986). Having said that, designing a quality home requires implementing the basic human needs beforehand. According to Healthy Housing Reference Manual (2009) the psychological needs in a home include sufficient privacy, communication moments, facilities to perform daily life, maintenance, visual beauty, and correspondence to local society norms. However, Steuteville (2014) agreed with some of the manual proposed guidelines as users’ needs added

safety, hospitability, authenticity, accessibility and comfort. It is stated that the main focuses in placemaking includes life enhancement and accomplishing specific aims (Steuteville, 2014).

Through decades, different cultures have shaped buildings into existence worldwide. Every culture has its own interior architecture approach due to its needs and location characteristics (Makhlina, 2020). A culture is described as the language, artistry, social aspects, politics, economics and historical backgrounds of a community (Bennett, 2007). While some argued; culture is immaterial aspect that role behaviours and emotions (Keesing, 1974). In fact, a culture is a set of morals along with certain knowledge that are inherited through families (Ettehad, Karimi Azeri and Kari, 2014). However, it has been argued that tribal background, racial, ethnic, chosen religion, societal hierarchy, distance, and environmental differences also form every part of a culture (Hessam & Sotoue, 2016). All elements contribute to the architectural spaces and it's user experience. Thus, it is stated that cultures are not statics, time changes culture (Opoku, 2015). While Keesing (1974) argued that cultural change is a form of adaption in parallel to the surroundings. Creating conflicting views of cultural change.

Makhlina (2020) has mentioned that every culture has started creating their first type of dwelling using materials that are available in their surroundings. Also, they design their dwellings to stand up to the weather circumstances. Moreover, it has been stated that architecture is a combination of science and art that also acts as a mirror for the cultural activities (Ettehad, Karimi Azeri and Kari, 2014). In addition, Sotoue and Hessam (2017) said that traditional architecture is the most harmonious type of architecture as it expresses a culture in the shape, size, and color along with material choices. Traditional architecture has been mostly shown in residential buildings in the past and present. What makes it unique and lasting is that traditional architecture has arose from within the communities and is designed by the locals (Hessam & Sotoue, 2016).

The connection between home and culture is therefore evident. Seamon (2000) describes home as the basic generator of a culture. That is because people act in a unique way at home, describing their identity in their place. Furthermore, the sense of belonging to a 'home' defines belonging to a certain culture. Additionally, the customization of a home to match certain mindset is what makes it the heart of creating cultures (Tuedio, 2014). It is the authentic experience of what a society needs in a building to perform daily activities what makes the building a culture

generator. That is because, home is where unconscious behavior occurs, along with feeling of “*at-homeness*” (Seamon, 2000).

In addition, even though home is a family place, it is also designed to allow socializing. That is called ‘the social home’ (Sixsmith, 1986). Indeed, socializing creates another experience in home. That is to say, social experience varies in different cultures. Framing this experience perimeter acts also as a culture generator (Keesing, 1974). For instance, the Islamic socializing behavior is different from any other culture like the Christian culture.

To summarize what has been discussed, culture starts from home as it is the place of comfort and full expression of one’s identity. Culture is a mindset, behaviors, and socialization. It is manifested in that place called ‘home’ where most of the inhabitant time is spent (Obrador, 2016). Then again, as architects took the role this decade, they are the culture generators (Grant & Fox, 1992).

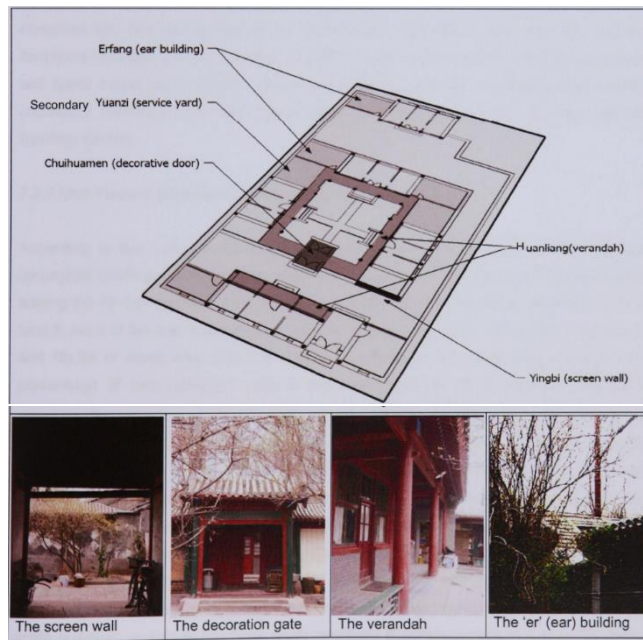
2.1.3 Traditional Architecture as A Reflector of Cultural Change

Architecture and culture are two sides of a coin. They both affect each-other. In addition, architecture reflects the identity of the inhabitants as they belong to it (Ettehad, Karimi Azeri and Kari, 2014). Therefore, previous literature researched traditional architecture and its cultural norms. Further investigation will go through the old architecture and how culture has shaped it.

Certain cultures create different circumstances that must be addressed. Moreover, a famous saying asserts that “*architecture becomes a frame for constructed situations*” (Charitonidou, 2021). It is stated that the spatial boundaries indicate the social/ cultural boundaries (Abu-Gaueh, 1995). Moreover, Kavalir (2015) claims that every culture has a distinctive meaning for what can be called ‘home’ rather than a house.

In a study in Beijing, China traditional houses have been studied in parallel with the community culture (Yang, 2007). The housing design has been linked to their religion ‘Daoism’ which focuses on man, nature and calmness. Besides the culture of Fengshui, as well as their environmental aspects. Homes were designed as courtyard houses to reflect gardens ‘nature’ as a central point, and has continued for thousands of years as a carry on of civilization. Fig 2.1 shows the elements of a sample courtyard house in Beijing, the researcher has addressed that it’s an

embodiment of Beijing culture which is distinct than western housing as mentioned (Yang, 2007).



However, the urbanization has influenced changes in some parts of neighbourhoods. The study addressed a massive shift towards multistory flats along with the acceptance of one-story courtyard houses which was linked to economical shift and urbanization (Yang, 2007). Additionally, the researcher highlighted that the transformation of the physical structure of dwells comes along with a change of cultural norms and behaviours in space indicating adaptability.

Fig 2.1 sample Chinese home plan (source: Yang, 2007)

Similarly, The traditional housing in rural Syrian areas is individual house centered in a farm and clustered courtyard houses in other locations (Hekmat Ismail, 2015) (Fig 2.2). However, the needs, structure, and purpose of Syrian courtyard houses differ from the Chinese traditional homes. As mentioned, Syria belongs to an Islamic culture that prioritize privacy in home which was the main influence to courtyard design. The courtyard house has supported privacy for veiled women to perform daily activities in an outdoor space. Besides, the double courtyard allowed gender segregation to host men and women guests while maintain their privacy.

However, the researcher argued that the contemporary housing designs are discrete from cultural needs due to developers designing with no reference to inhabitants demands on privacy and culinary traditions (Hekmat Ismail, 2015). Therefore, it has been stated that contemporary life and globalization has been the main influencer to cultural change. Fig 2.3 shows the path of cultural change happened in Syria as stated by interviewed designers. Thus concluded the need to integrate end-users' requirements in designing phase to propose more appropriate designs that aligns with the current culture. It also highlights the role of designers/architects in cultural change.

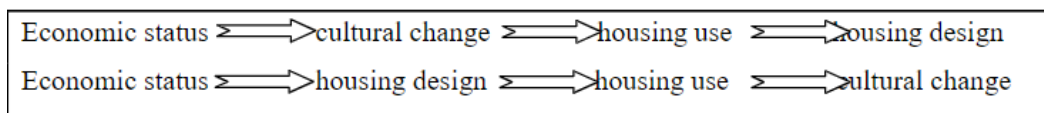
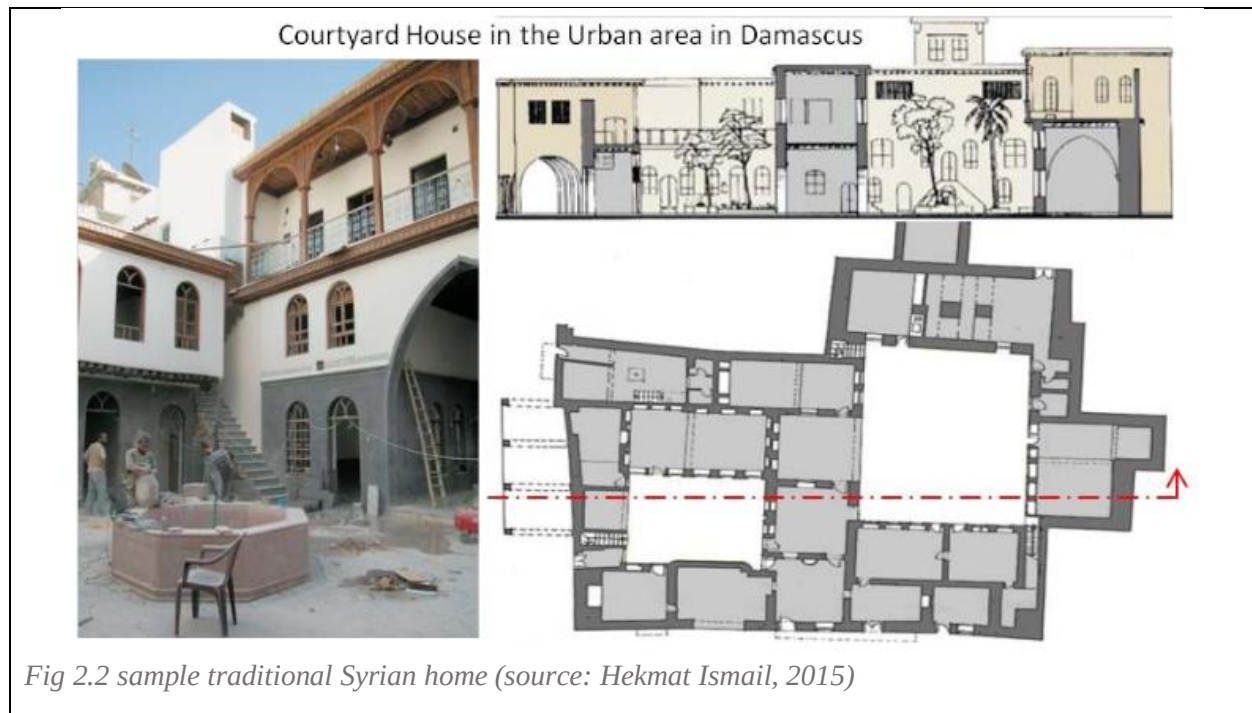
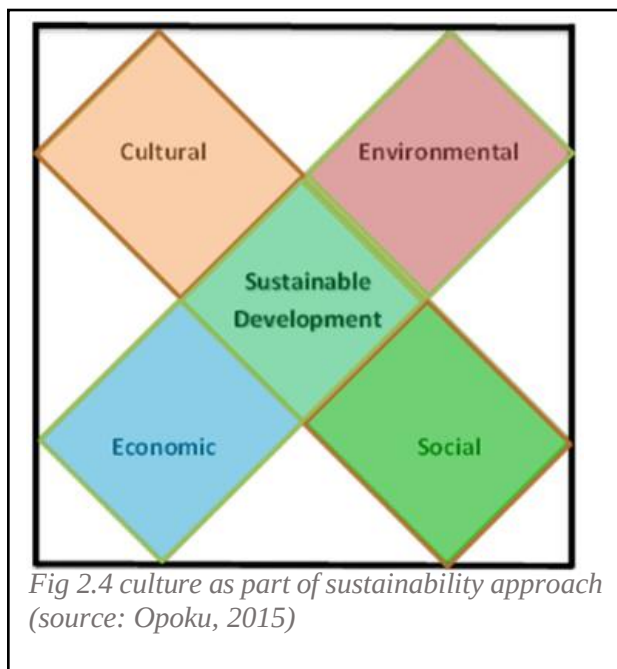


Fig 2.3 cultural change path (source: Hekmat Ismail, 2015)

Additionally, Golkowska (2017) has investigated Qatari women needs of privacy on different space designs. In contrast, the cultural change due to globalization has promoted gender equity. It was reflected in spatial planning as well. To clarify, previous Muslim housing were called ‘architecture of the veil’, as it gave high privacy to the residents and neighbors as well (Belk & Sobh, 2011). The traditional housing of Qatar were inward courtyard houses creating spaces for men and others for women, underlining the sense of religiosity and women secrecy. Recently, it is argued that home has experienced influence from the west which promoted open kitchen as an example that doesn’t fit with the culture. It is undesirable since its designed to encourage gatherings while its not the case to Arabs. The kitchen is kept for cooking and preparations only. Thus, Belk & Sobh (2011) have linked spatial privacy to wealth in Qatar. Since wealth helped designing new rooms to each need.

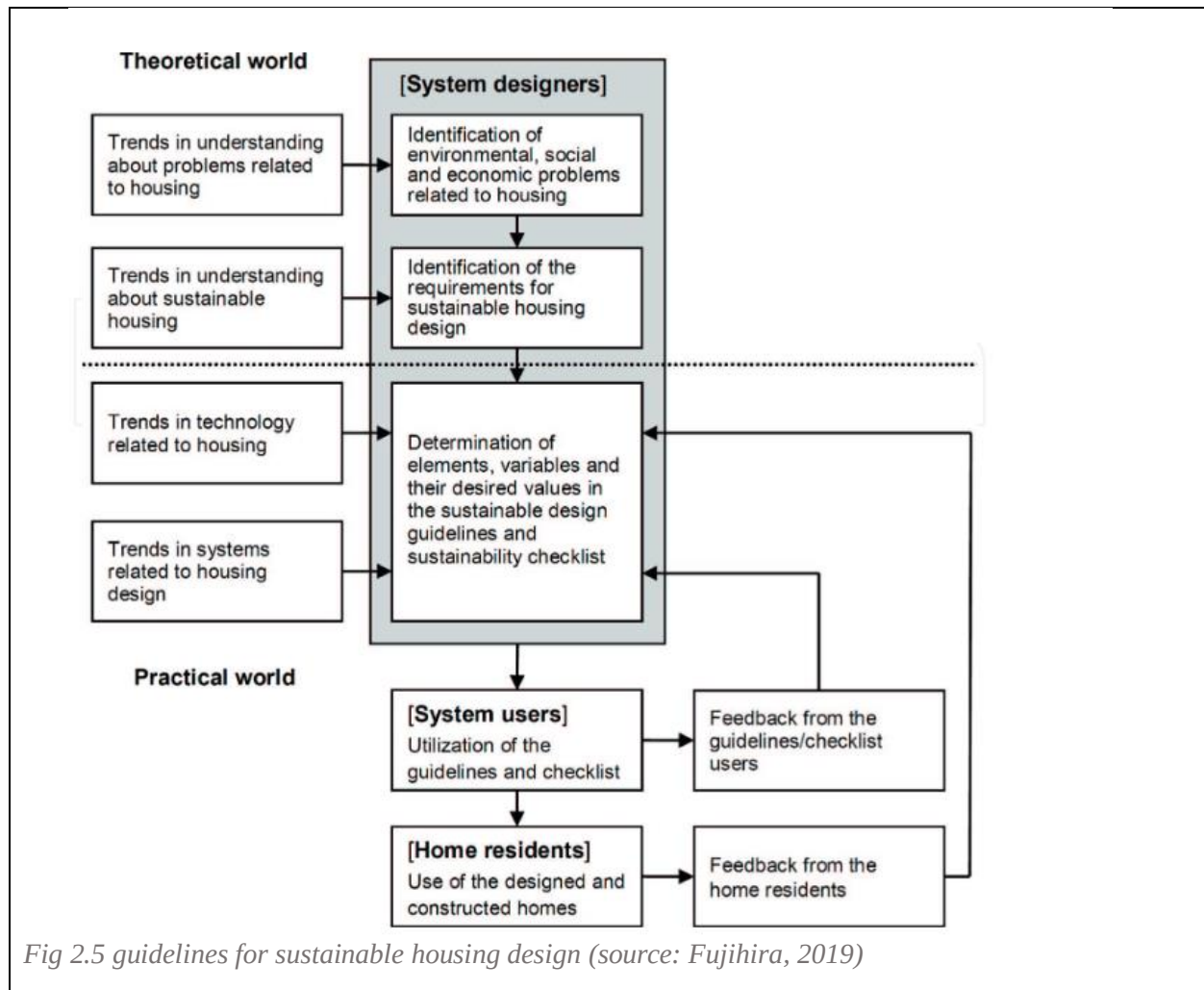
Consequently, Zhang (2016) argues that there are four principles that act to create a cultural interior design conception. First it is the climate and natural environment in the region. Second is the humanistic attributes and spirituality needed in a place such as a prayer area that needs to be private, calm, and clear to focus in. The third characteristic is designing with high intensity of harmony to give a certain atmosphere along with emotional abundance. Fourth, is to combine both “locality and time”, thinking back to “Being-in-the-world”, thus it is to use the same historical elements to maintain the cultural values (Zhang, 2016). Additionally, a humane design is said to reflect human needs and perceptions in space to maintain lifestyle (Lasswell & Deasy, 1990). Thus insuring it’s continuity is vital.

2.1.4 Sustaining Homes



Opoku (2015) has argued; culture is linked to understanding natural resources and human-existence in an environment. Therefore, cultural sustainability is an essential approach to enhance human lives and sustain needs for future generations. As a result of this research, a model for sustainability is proposed in Fig 2.4 adding culture to the sustainability approach. Similarly, it is argued that humans are in intense need to have a cultural-identity as it promotes to self-satisfaction (Tweed & Sutherland, 2007). Additionally, sustainable housing is achieved by enhancing inhabitants well-

being while reducing the environmental load (Fujihira, 2019). As housing are occupied for many years, renovations goes against sustainability. Therefore a comprehensive strategy is proposed to serve users’ in Fig 2.5 providing a process in which design decisions are re-evaluated through the design process according to user needs in space.



Additionally, sustainable heritage is practice of preserving that cultural heritage in a lasting approach that can be implemented in built environments, as stated by Tweed & Sutherland (2007). For example, many Gulf countries have taken initiatives to sustain cultural heritage, the Bahraini cultural authority has managed to take this approach in relation to old architectural buildings in Bahrain and has settled many projects (Bahrain Authority for Culture and Antiquities, 2019). However, it is significantly exceptional to maintain culture from within homes as it contributes to residents daily life.

In conclusion, sustainable heritage is a must at this decade due to rapid changes in the world. Sustainable heritage can be accomplished through different approaches which allows change yet, conserves identity. Saleh (1991) presented samples of housing designs that match Arabian culture as stated “*we had to arrange for the availability of the vast dwelling with which man’s psychology his customs, and*

tradition shall match with: as messenger Mohammed said: vast house means happiness, the narrow house means misery” However, more investigation is needed to understand Bahraini culture in relation to architecture.

2.2 Bahraini Culture and Architecture

The Bahraini culture has always been under high demand to be documented and preserved. Due to its crucial location in the middle of Arabian Gulf, it has been exchanging social beliefs and goods in the same time, thus its culture is indeed unique. Additionally, Kazerooni (2002) stated; the Arabian gulf architecture was designed based on Islamic traditions. Therefore, several studies have shown attempts to preserving the Islamic Bahraini culture (Al Khalifa, 2015; Almerbati, 2016; Karolak & Veljanova, 2010; Salman, 2016). In the same manner, as culture is related to architecture, Rapoport (1998) argues that a home has a special need to be designed explicitly to that certain culture. Because home is directly connected to individuals way of living. Thus, this section analyze the Bahraini culture in relation to architectural needs, which will be reflected to preserve the Bahraini culture in contemporary open-plan housing.

2.2.1 Bahraini Cultural-Values Affecting Design

Despite years of research, the cultural values expressed at Bahraini home remains briefly addressed in the literature. Documentation of present Bahraini culture has been limited. However, the gulf context is greatly similar in culture. Sobh & Belk (2011) states; Gulf countries are unique over the other Muslim-Arab countries. Highlighting its solid adherence to cultural values. Therefore, the section will create the context of cultural values upon Gulf countries literatures. It will go through values that are evaluated to affect the interior design planning. That is to analyze how they were implemented on the home experience previously. Consequently, to create a base line of comparison between the cultural need and the research aim of investigating the open-plan design impact on Bahraini culture currently.

According to Al-Naim (1998) the socio-cultural aspects are the most influencers to home formation, and is agreed by (Abu-Gaueh, 1995). According to Al Balani (2019), due to the geographical location of Bahrain it has experienced multiple religions, yet when Islam arose it has prevailed and been the greatest influencer to the community culture. Upon values, (Sobh et al., 2013) have suggested that one of the main cultural values in Arabian Gulf is hospitality and is mainly “based on Islamic teachings”. However, it is argued that home-culture is diverse between families of various socio-economic classes, yet the basic culture remains to serve all (Abu-Gaueh, 1995). Thus, it can be recognized that the Bahraini culture is an Islamic culture and is crucial to maintain its values within home environment. The main Islamic home culture values as suggested by Almahmoud (2015) include: women modesty and privacy near foreigner men guests, the value of family, home comfort, respecting neighbors, and hospitable to their guests as synthesized from Qura’an. While other social or traditional roles influencing home-experience goes under ‘home comfort’ include performing daily activities such as cooking and dining. All to be discussed in further details.

2.2.1.1 Privacy

Privacy is the leading cultural value in Arabian Gulf countries among all as discussed by previous literatures. Although privacy is an international value, Abu-Gaueh (1995) argues; Saudi homes express privacy by adding more spatial dividers than other nations. That is due to their robust reliability upon Islamic cultural values in space. Notably, Alkhateeb et al. (2014) research on space design and privacy in Saudi homes asserted privacy link to individual boundaries, as well as needs affected by other people or surrounding environments. While in another publication Alkhateeb et al., (2015) stated as cited from (Newell, 1995; Pedersen, 1982; Westin, 1967) “*privacy as the person’s state of existence: being safe; feeling secure; comfortable; and in control*”. Therefore, home privacy can be translated to the spatial boundaries set for users to maintain their comfort.

Arguably, it is stated that privacy can be translated to two meanings “*privacy as cultural aspect is khososiya while religious privacy is sitr*” (Salman, 2016). Explaining women privacy upon her body exposure and privacy upon performance of individual activities. Similarly, Alenazy (2007) research on Kuwaiti home privacy has proposed home privacy as a women need. As stated, maintaining privacy of

women is an essential social-need in residential spaces to help maintain her social role. Elaborating, as women must be covered in Islamic culture; home comfort is maintained by allowing enough privacy from foreign men sight. Likewise, it is argued that women Hijab in Muslim countries has been reflected in the architectural dwelling design to veil her physically and visually (Webster, 1984). Yet to clarify, Muslim women are allowed to stay un-veiled near close relatives such as her husband, brothers, sons, and uncles as stated in Qura'an

“tell the believing women to reduce some of their vision and guard their private parts and not display their adornment except that which ordinary appears thereof, and to draw their heads` cover over their chests and not display their adornment...” (Quran, 30, 24: 31).

Khozaei (2009) has clarified stating the relationship defines how a women interact with a man. A “Mahram” is a man with either marriage bond or close blood ties to a woman. Thus, anyone outside this zone is a stranger and a women should be modest near him. Therefore, Abu-Gaueh (1995) stated that privacy serves those limitation of social-interactions, management of interactions, and maintaining self-identity.

Thereafter, Webster (1984) stated that Muslim communities designed homes to provide privacy for family members and guests, yet particularly for women members dwelling or visiting the house. Al Aali (2006) Also agreed, as women wear Hijab, the need on such privacy was reflected in planning homes. Where religious and sociocultural aspects is the governing aspect for place and movement for Muslims (Golkowska, 2017). Similarly, the women presence and activity in space is governed by the Islamic laws and culture (El-Shorbagy, 2020). Consequently, it has been stated: *“Islamic architecture aims to support, and not to obstruct, Muslims in fulfilling duties.”* (Almahmoud, 2015). Clearly, all researchers have agreed on the importance of privacy in Islam especially to females, and it's association to home spatial design. Hence, it's stated that built boundaries between spaces defines the visual and physical accessibility to strangers (Abu-Gaueh, 1995; Khozaei, 2009). As spatial control also influence privacy.

2.2.1.2 Other Related Values

Additionally, privacy is linked to other religious values such as gender segregation, and women acts of modesty. Golkowska (2017) argued, due to women modesty requirements, body gestures and behavior must be regulated near men.

Therefore, gender segregation is applied to maintain their comfort of movement. Additionally, the Quraan has forbidden certain women's voice pitch near men *"If you fear Allah, do not be too complaisant in your speech lest those with diseased hearts should covet you"* Al-Ahzab (33:32)

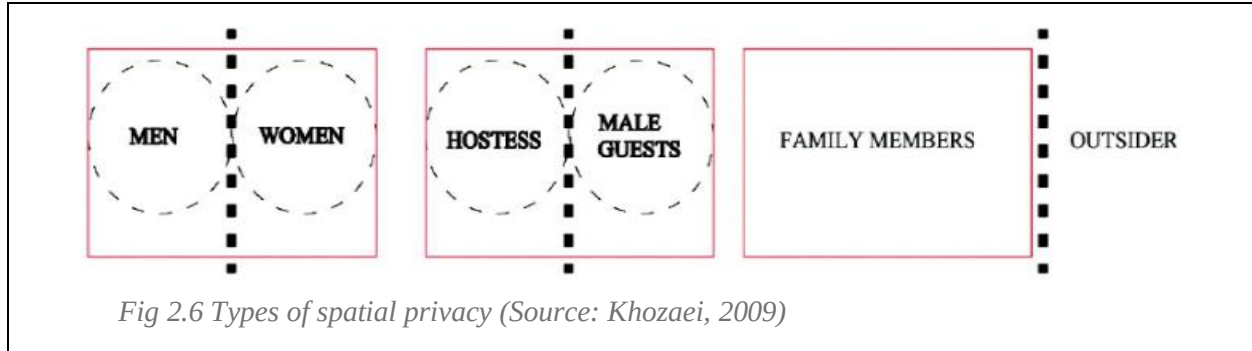


Fig 2.6 explains how different scales of privacy applied in a space, separating men from women and strangers from family. Consequently, it's stated that Saudi homes are designed to separate genders by creating separate zones for male/females, responding to traditions and Islamic values (Abu-Gaueh, 1995). Similarly, Khozaei (2009) as cited from Hisham (2003) asserts that gender-separation is part of Islamic home privacy. Also, it is stated; as spaces are gender separated it assist women stay un-veiled with comfort, even with presence of men guests in the house (Belk & Sobh, 2011). Therefore, home refers to the female kingdom, and Men Majlis is kept public. That is to maintain sacred home sanctity "hurma" (Abu-Gaueh, 1995; Belk & Sobh, 2011).

Additionally, on homeness, Islam has highlighted the term 'Sakan' for home, as a description of holiness to a home value (Sobh & Belk, 2011). Indicating a statement of serenity, safety, and peace, for the Muslim inhabitants. Similarly, it is stated; a Muslim should create a domestic space that matches his individual and social life to reach spiritual endeavors (Abu-Gaueh, 1995). While aesthetics, hygiene and home-life are valued. On similar ground, it is stated that women spaces are designed to standout on aesthetics. And so does the females when they gather, as a Qatari women has stated that they leave modesty by the door, and enjoy showing fashionable clothing (Belk & Sobh, 2011).

Furthermore, 'good smell' is highly appreciated in Gulf homes, reflecting good hygiene (Belk & Sobh, 2011). Adding as cited from (Corbin, 1986; Douglas, 1975) *"Pleasant smell and bad smell correspond to what is clean and dirty which are symbolic concepts more than physical ones"*. Which is also considered as an act of hospitable home, where they also offer scents to their guests as part of rituals.

2.2.1.3 Hospitality

The prophet, Mohammed, said: "*those who believe in Allah and doomsday have to warmly welcome their guests*" as cited from (Alenazy, 2007). It is stated that hospitality is one of the main values that indicated social-behaviors and influenced residential architecture (Salman, 2016). Similarly, researchers argued that hospitality should not disturb privacy of residents, as privacy and hospitality are interconnected (Alenazy, 2007; Alkhateeb et al., 2015a). On respond, Sobh & Belk (2011) stated; the Majlis was added as act of open-invitation to men guests that wouldn't interfere with family privacy.

Additionally, the act of socialization and hospitality in the community includes neighbors and the larger family members, they would gather on a meal or on afternoon tea without any previous invite needed (Cooper, Spilling and Nevins, 2020; Al Khalifa, 2018). Similarly, Belk & Sobh (2011) added; the guests' space conveys 'honor' to the visitors, and feeling as they're most welcomed. The main house door used to be open throughout the day, as women were always at home welcoming her guests (Salman, 2016). While men added that they meet on prayer time and walk out to their palm-tree farms as welcomed by a different friend each time (Al Khalifa, 2018). However, it is stated that it's not the same culture now, and is performed differently on other locations in Bahrain. Salman (2016) argued; it is due to change in neighborhoods demographics, and women are currently leaving to work for long hours as well. However, many occasions are still celebrated and hosted at home with relatives and friends.

2.2.1.4 Dining and Cooking Experience

On another perspective, cooking and dining experience is also part of home-culture and is distinct worldwide. Al Balani (2019) has argued that every country in the gulf region has it's unique favorite food, and to Bahrain it is dates, rice, and fish. While Al Aali (2006) added, Bahraini food has a lot of spices and as it's an island, seafood is consumed and cooked regularly at homes. Thus stating strong smell causing unfavorable scent issues if done in indoor kitchens (Al Aali, 2006; Salman, 2016). As is previously, cooking used to occur on the open courtyards. In such, as home scent is linked to privacy and hospitality (Belk & Sobh, 2011), it is stated that outdoor kitchens are strongly implemented in Bahraini homes. That is to control

cooking smell, yet the indoor kitchen is kept useless or lightly used (Al Aali, 2006; Salman, 2016).

Additionally, it is stated that preparation kitchen is a private home space, and so does the family dining; or it can be semi-private to serve both guests and users (Alkhateeb et al., 2014). Similarly, Belk & Sobh (2011) argued that females help their men by preparing food for male guests as an act of hospitality, therefore the need of private cooking space is vital. However, the dining experience is not deeply explored in literature. Thus, Alenazy (2007) stated that men are accustomed to eat on the majlis floor, gathering around one large plate. Yet the tradition continued for some and stopped for others, while women guests are only served meals on dining-tables with individual plates currently.

2.2.1.5 Social-Bonds

Another aspect that influences homes, is the community social bonds, on the family scale and their guests. It has been argued that Bahrainis have a strong sense of family appreciation, (Cooper, Spilling and Nevins, 2020). Al Aali (2006) states that families tend to spend time together in the grandfathers houses even though it is built on a very small area; it has sufficient places for all. In parallel, it is stated that many families live in the same house to accommodate at least three generations, due to their strong bonds (Cooper, Spilling and Nevins, 2020). What's more, Almerbati (2016) asserted that the courtyards in old houses was the place for kids and women of those different generations, to perform activities and enjoy their time in a private open space daily. Yet currently, extended family adapted to weekly gatherings which in parallel impacts on the spatial planning (Salman, 2016).

Adding, on neighborhood level beside what's mentioned on hospitality. The houses are constructed attached to one another; the wealthy near to the underprivileged and depend on each other to help and live (Al Aali, 2006). Also, it has been argued that earlier neighbors used to be linked by family or tribal bonds. The Bahraini community has a strong sense of responsibility towards each other. They used to build their homes together by their hands, yet as the social bonds got lost, it has been substituted with money to build (Al Khalifa, 2018). And so does the traditional practices of women daily visits have faded (Salman, 2016).

As Al Khalifa (2018) stated on northern villages culture shift has been documented as influenced by many factors. Education shift beside oil boom followed by women getting education and participating in the work field has led to

cultural change on the community and single-family level. While in other context, it has been evident that Arab culture has been affected by globalization beautifying western culture (Abushariah, 2018).

Nevertheless, as all aspects has been discussed, the literature is varied in dates and locations between Gulf. Therefore, the gap lays in the current home culture not being recorded thoroughly in Bahrain to be evaluated to the current residential trend.

2.2.2 Traditional Bahraini Interior Architecture

Reviewing the traditional homes in Bahrain gives a guide of how culture used to be implemented. Most traditional homes in Bahrain are courtyard houses, as influenced from the pre-Islamic era, and are implemented in other middle eastern countries as well Al-Hashimi (1996). However, Kazerooni (2002) argued; it is influenced from the prophet Mohammed house, and Muslims has followed for easy application of gender segregation and privacy. On another perspective, Khalaf (2012) stated; the choice of Arab buildings designs used to be influenced by climate, to include location choice, shape, planning, structure, colors, materials, considering sun angles and wind direction. While there are different opinions, all can be accurate.

Additionally, as public building and spaces used to only occupy males, women are limited to using homes, taking role as wives and mothers (Golkowska, 2017). Therefore, it is considered a private domain for females to be informal, moving freely, and exposing their beauty (Alenazy, 2007). Consequently, spatial separation is implemented to maintain females privacy. It is stated that Bahraini homes layout is inward designed, where the main entrance leads to a corridor and then to the courtyard. While the majlis comes before that, and is the only room with external windows (Kazerooni, 2002). Thus, the windows positions is said to mark the private from public (Golkowska, 2017).

The courtyard house plan was designed to occupy Bahraini style of living in and the daily activities performed in it with a high privacy (Sirriyeh, 2005). As Gulf courtyard homes are all similar, (Al-Naim, 1998) said the traditional homes in Alhasa are consisted of 3 parts, public, private, and functional. Yet there are other spaces in each section depending on the house design. Thus, that hirarcal movement has prevented strangers look to the indoor section (Khozaei, 2009). Moreover, the courtyards are used for many activities such as gatherings, eating, sleeping, and

hosting events (Salman, 2016). And Al Aali (2006) added, *“A lot of the times the kitchen will be part of the courtyard that has water and fire or a stove”*

On respond to climate, traditional homes are said to be deigned to serve the climatic and social needs using accessible materials which in pararlell serve economic and environmental attributes (Kazerooni, 2002). As homes are designed by the builders, they're further aware of the location needs, therefore each room has its own properties (Al Aali, 2006). Therefore, the old Bahraini residential architecture can be used as an example for reflecting culture and sustainability in design.

2.2.3 The New Hybrid Interior Architecture

By 1950 traditional architecture came to an end (Kazerooni, 2002). As similarly stated, the unique traditional architecture was affected by modernization and has followed western styles after the oil-discovery (Alenazy, 2007). Additionally, as those styles were marketed, it has developed a loss in privacy (Sobh et al., 2013).

On clarification, the Majlis is no longer a must in homes, large living areas has replaced it's existence, and both genders got invited to same place (Salman, 2016). While argued, traditional homes were inward designed relying on natural cooling system, and current are outward relying on air-conditions, creating unsustainable development (Khalaf, 2012). Also, traditional homes were built on the whole land (Kazerooni, 2002), while current outward requirements created waste of small strips of land around the house (Al Aali, 2006). Additionally, kitchens got built to European standards, causing smell issues, which led to having more than one kitchen in many cases (Al Aali, 2006). While he added, traditional homes used to accommodate more guests even in smaller rooms, while some modern houses did not.

All in all, those mentioned issues were mentioned to be linked modernity. Kazerooni (2002) stated; the discovery of oil has allowed implementation of new architectural designs due to availability of other materials in the region and higher incomes, triggering cultural collapse. Similarly, architects and academics has argued that modernization trends has influence culture (Almerbati, 2016).

2.3 Open-Plan Interior Trend

It has been addressed that residential open-plan design topic is lacking in the scientific literature. Thus, the collected details would clarify its meaning among the west while the research would fill the gap of its details and impact in Bahrain. To begin with globalization and interior design trends first and followed by the open-plan history, influence, and application.

2.3.1 Globalization and Interior-Design Trends

Obrador (1995) states that the dwelling has been affected by globalization and that the intimacy in a home has been altered. To start with, Relph (2005) describes globalization as an act of exporting goods and ideas all over the world. That exporting act has changed cities and created vulnerable cultures (Kofman & Youngs, 2008). Although globalization has contributed to economic success in cities around the world, its impact on identity of cities must be measured. That is to maintain harmonious equilibrium amongst regional identification and financial systems (Relph, 2005).

It has been argued that human identity is disturbed by the physical surroundings, and it is a recent concern after the emergence of globalization (Obrador, 1995). Remarkably, it is said that globalization is acting as an uncontrolled strength upon the sense of locality in any place (Kofman and Youngs, 2008). To clarify, the idea of globalization has been taking away the place identity keeping no uniqueness. Correspondingly, phenomenology of place as the uniqueness of human experience (Cresswell, 2008), is being damaged by copying places.

Abushariah (2018) has argued globalization have three main dimensions: economic, political, cultural, and media. Stating western culture has invaded Arab culture and disturbed it's strength. In brief, globalizing ideas act upon cultural identities. All of the referenced research criticize it's influence on the sense of locality. Then again, globalization is circulating trends to individuals in the same manner.

On the other hand, there are many interior trends that are not technology related. For example, the use of new materials, new design approaches, and treating interior

design as an art piece (Hasell & Scot, 1996). In parallel, Ikea furniture company has made it's furniture pieces a global interior design trend by its advertising approach (Novotni & Tóth, 2020). That has certainly made homes around the world looks similar and will indeed create an impact on spatial identity. To sum up, open plan trend is considered a new design approach, and as Hassel (1996) said “*current trends must be recognized, and future impacts anticipated*”. Additionally, “*The effects of globalisation and westernisation upon Muslims are significant, and certainly this affects their architecture and built environment.*” (Salman, 2016)

2.3.2 The Open-plan Trend



Fig 2.7 sample of open-plan design (Source: Smith, 2022)

The main concern of research is upon the emerging open-plan trend on the residential sector. The academic literature lacks basic aspects of open-plan research on gulf context. Thus, the few existing upon other contexts are explained and recognized, developing an understanding upon existing data.

2.3.2.1 History, why ? where?

Alfirevic & Simonovic-Alfirevic (2016) have described the open-plan concept as “*the principle of spatial integration of functions.*”. Similarly, it is stated; an open-plan house implies attaching shared home spaces such as: kitchen, living, and dining rooms all in one enormous space, devoid of separating walls (Wallender,

2021). Thus, it's linking places and activities in a shared open-space. To begin with, the history behind the open-plan must be drawn.

Additionally, Alfirevic & Simonovic-Alfirevic (2016) stated; the term open-plan was first presented to the architectural vocabulary by the 1950s. Researchers stated open-plan trend has emerged in housing after 2nd World War in western countries (Alfirevic & Simonovic-Alfirevic, 2016; Attfield, 1999; Wallender, 2021). Also, it is stated; the open plan has been trending in housing design since the 1990s until now, and are inscribed as modern architecture and a result of design aesthetics (Dowling, 2008; Wallender, 2021). While Taylor (2022) claimed the open-plan housing became more popular over the years. However, there are no clear traces of open-plan history in the literature upon Arabian gulf countries.

On the concept, Alfirevic & Simonovic-Alfirevic (2016) claimed; the idea of open-plan was inspired from Japanese homes in the 11th century that allowed flexibility in space. Thus, on the 20th century, a number of architecture giants has applied the flexibility concept to their designs which marked the beginning of the trend (Alfirevic & Simonovic-Alfirevic, 2016; Elliot, 2002; Mobley, 1975; Wallender, 2021). Clearly due to architects influence to modernity and luxury along with comfort and flow, the open-plan got attention in modest homes as easy implementation (Elliot, 2002). Nonetheless, it has been stated in a research upon European context; “*open plan is accepted as the natural domestic-support for family living.*” (Dowling, 2008). Hence, the open-plan has trended reaching to be ‘the normal’ in western context (Wallender, 2021), therefore the reasons behind the loss of traditional architecture to modernity (Bakri, 2021) must be acknowledged. Multiple explanations were presented in the literature.

Mobley (1975) argued the main reasons behind the trend is small-size housing in addition to creating informal comfortable family activity space, and also the feeling of wideness in exchange with claustrophobia. Similarly, Taylor (2022) also linked open-plan to affordability and sense of wideness, which indeed a valid point. Additionally, on feeling of wideness, a number of interviewees stated that open-space feels fresh and relaxed (Dowling, 2008). Likewise, Marcoux (2020) added, open-plans allow easy user circulation and flow of natural light. Also, it is argued the open-plan is used as fashionable architecture that shows-off aesthetics (Attfield, 1999). On the other hand, Alfirevic & Simonovic-Alfirevic (2016) stated that there are internal and external motives to the choice of open-plan shown in Fig 2.8.

External plan openness	Internal plan openness
a) Natural influence: - living space orientation towards natural motives and the surrounding views, - living space orientation contrary to the direction of strong and dominant winds, - living space orientation towards the south (in northern countries) - blocking the sunny sides of the living space (in Tropical areas), etc. b) Influence of present surroundings: - living space orientation contrary to the sources of loud noise, - living space orientation contrary to visual, acoustic, olfactory and other disturbances in densely populated areas, etc. c) Social influence: - orientation towards backyards and atria in places with potential social unrests, - orientation towards backyards as part of cultural and construction heritage (Near East), - living space orientation towards its surroundings in socially stable and quiet areas (northern Europe), etc.	a) Tenants' lifestyle and habits: - the need for space for frequent social contacts with members of extended family and friends, - the need to appear presentable and to emphasize the social status, - the need for intensive presence of servants in the living space, - the need for aesthetics and the perception of space comfort, etc. b) health status and age of tenants: - the need for easier manipulation for persons with special needs, - the need for peace and even total isolation from outside influences, etc. c) The concept and layout of primary bearing structures: - the presence of wide spans in the living space, - the presence of skeletal constructive system, - the presence of significant deleveling in the living space, - configuration of living space, etc. d) Family structure and life organization in the flat: - the need for play area in multi-member families with small children, - the need for intensive use of kitchen in families with children or in cases when mother or father do not work, - the need for visual control of small children while preparing food, - the need to communicate with other family members while preparing food, etc.

Fig 2.8 motives of open-plan choice
(Source: Alfirevic & Simonovic-Alfirevic, 2016)

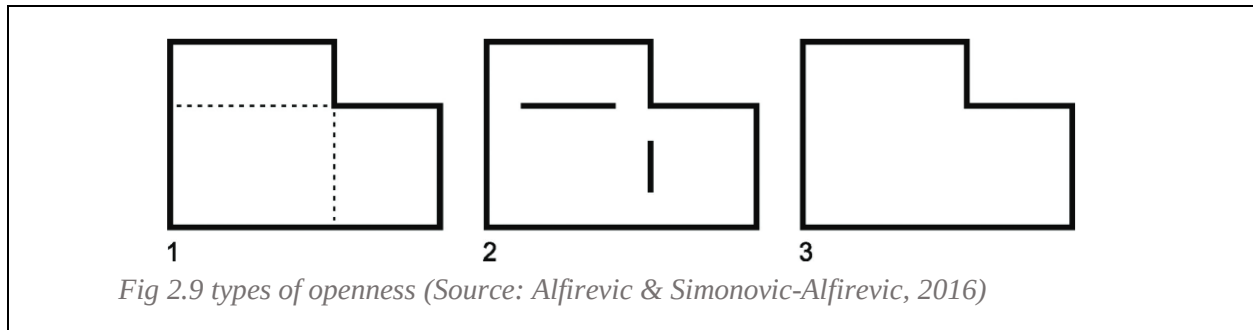
External influence includes responds to site orientation and social influences, while internal include lifestyle, aesthetics, comfort, and family structure. Mull (2020) has agreed to (Alfirevic & Simonovic-Alfirevic, 2016; Mobley, 1975) as stated; the open-plans were marketed to remove barriers and increase connection between family members. Wallender (2021) added to the same manner; the addition of open-kitchen to the open-space allows the mother to prepare meals while watching the kids. Therefore, the idea of family togetherness is highly present on open-plan concept. While it has been mostly implemented and accepted by “*young growing families*” (Mobley, 1975; Wallender, 2021). The connection was presented by Mobley (1975) as he linked the openness to activities performed mostly for kids comfort of movement.

Additionally, as open-plan was linked to world war earlier, it has been argued the open-plan was planned to give maximum freedom for individuals (Attfield, 1999). While others has linked it to the new construction methods that gave the ability to discover modern planning choices in relation to small plot sizes, along with modern thermal controllers (Elliot, 2002). Despite researchers and writers holding different point of views, all motives are equally vocal until proven wrong. Thus, as the reasons of open-plan choice were discussed, the application of open-plan in

home design must be addressed. That is to highlight other researchers' perspective on the actual user-experience in space and validity of the allegations after accommodation.

2.3.2.2 Types of open plans

According to (Wallender, 2021); as open-plan is a concept of combined functions, the plan types were labeled according to purpose, a kitchen-dining room, a dining-living room, or kitchen dining living held all in one space. Highlighting the openness by the spaces combined and noting that 'kitchen dining living room' is the extreme openness. Similarly, Alfirevic & Simonovic-Alfirevic (2016) stated the open-plan started by merging two functions in one such as the cooking and dining or dining with living. However, Alfirevic & Simonovic-Alfirevic (2016) had another labeling to open-plans. Fig 2.9 shows the different categorization of open-plans according to openness and partitioning.



It's claimed that home openness is divided to (1) flexible partitioning, (2) fluid space, (3) all-in-one-space. They indicate the freedom of movement, visual accessibility, and spatial flexibility. To clarify, flexible partitioning indicates the use of sliding partitions between spaces inspired of Japanese homes, which allows both enclosure or openness creating fluid/ all-in-one spaces. Where fluid space design creates integration between zones by partial openings that keeps boundaries. Also, all-in-one fully integrates functions and spaces without boundaries, which is the extreme application as stated (Alfirevic & Simonovic-Alfirevic, 2016). Consequently, both researchers agreed on the extreme type, however, one has highlighted the openness between spaces while Wallender (2021) noted the type of functions combined in space. Which indeed both are valid to discuss different positives and negatives on user-experience.

2.3.2.3 The design dilemma of architectural trends impact

Although previous studies were limited to a certain context, several researchers have addressed the open-plan positive and negative aspects, indicating part of a user impact and experience. While in Gulf context, modern architecture / homes were explored in relation to culture. The section will go through open-plan research on other contexts followed by similar researches on the Arabian/Muslim context.

Attfield (1999) has stated “*popular adaption of modern design was used to assimilate social change and modern-ization*”. A closer look to the literature, the eldest research that investigated open-plan is two case-studies of family activities on multiple life phases (Mobley, 1975). It has stated as cited from Agan (1950), “*The requirements for a family dwelling change during the life of the family*”. Then proposed a hypothesis that open-plan can accommodate families through identified stages of life cycle successfully. Yet, concluded the open-plan as family area created an informal space for all family activities and minimized the cost of having another formal space. While on the suitability, it was successful in some stages in particular plan shape. Nonetheless, later by time and reaching extended-family stage, it needed adjustment to carryout overlapping activities comfortably (Mobley, 1975).

Comparably, another research was conducted upon families and open-plan in Australian context (Dowling, 2008). It has cited that open-plan brings social equality to all users of genders men, women, and state as parents and children. Thus, it reached to contradicting points of views. Some families were happily living in open-plan, while others found it stressing and has adapted by creating rules in how to use the open-plan. The satisfied families said it helps in surveilling children while performing other activities and felt togetherness. While for stressing families who were higher percentage, the open-plan was not used for the family due to fear of clutter and children safety, therefore it's kept as nonfunctional formal space. Thus, they keep a closed room upstairs for kids (Dowling, 2008). It has settled four varieties of open-plans uses, a place for kids along with clutter, minimalist (absence of kids), public but limited on kids, and a formal space. Therefore, it is depending on inhabitants' way of living either confined or living comfortably, yet it has served family togetherness and modernity sense. Then again, it has been linked to feelings of relaxation, love, and anxiety for women, which is linked to maintain ideal home neatness around kids (Dowling, 2008). Therefore, both researchers has investigated open-plan upon family level, homeness, and suitability. Summarized in open-plan

not being flexible enough for all families especially on the extreme openness (Dowling, 2008; Mobley, 1975).

Additionally, It is stated that people would know that there are some disadvantages of the open-plan trend, yet they want the “good from both” (Fairs, 2020). Explaining that they need family time, and also some privacy. In addition, Marcoux (2020) confirms that open-plan approach has truly triggered the way people live and experience the home place. However, both writers have argued that the covid pandemic would be the actual end for open-plan houses design. That is because of the need for closed places for online meetings (sound and visual privacy) and the disease spreading type (Fairs, 2020; Marcoux, 2020).

On the other hand, Setien (2015) has investigated residential open buildings by case studies. Open residential buildings are multi-story buildings that accommodate multiple families, each to has an enclosed area of empty open-plan. The researcher argued that it allows each family to design their space, add walls or zones according to their needs while minimizing the cost of demolish. Ultimately, the research concluded its efficiency to flexibility and sustainability of a living environment. Similarly, it has been stated that open buildings serves on long-standing with environmental shifts and changes of social needs continue (Beckett & Alexandrou, 2000).

Moreover, Marcoux (2020) argued that most of daytime is spent around the kitchen and in open-plans it's the center of home. In 2010 a research was conducted to evaluate eating behaviors in open kitchen homes, remarkably it is done as a scientific research not architectural (Rollings, 2011). It has noted considerable connections between openness of kitchens along with increase or decrease in eating based on social familiarity. Which is directly connected to comfort of users, their health measure, and hospitality of space. Furthermore, a number of authors have recognized and studied the open-plan impact on air quality and smell control. In a recent study, air quality was measured on open-plans Hong Kong small houses (Cheung et al., 2019). It has emphasized on the pollution of cooking in open-space, which confirmed its exposure on all family members. It is stated that the amount of pollution is directly affected by the way of cooking and ventilation. Similarly, Taylor (2022) has highlighted the spreading of unwanted cooking smell on open-plans.

Also, it is argued; air-conditions has helped in spreading pollutants (Cheung et al., 2019). On the same manner, upon large scale open-plan houses, Clarke, (2011) stated the thermal control on open-plans is weak. Thus, even in a cold country such

as Australia, open-plans highly depends on air-conditioning and heaters to maintain comfort. Other writers has also agreed on the disadvantage of open-plan on thermal comfort, leading to high cost of heating and cooling (Taylor, 2022; Wallender, 2021). Additionally, some of the other disadvantages include absence of privacy, and poor sound control (Bakri, 2021; Taylor, 2022; Wallender, 2021), which collectively impacted homeness and culture (Attfield, 1999).

Thus, on the Arab/ Muslim culture, previous studies were limited. Bakri (2021) has investigated open-plan design upon Muslim context yet in Indonesian culture. It has highlighted “*there is a contradiction between Islamic and modern housing*”. In correspondence with (Taylor, 2022; Wallender, 2021) it has also underlined the lack of privacy in open-plan houses which goes against Muslim needs of privacy to maintain user’s comfort (Bakri, 2021). However, it’s argued that open-plan enhance family communication, thus it can be applied in semi-public zones (Bakri, 2021). Additionally, several studies have shown connection between modern homes and difficulties in applying culture in Gulf countries (Alenazy, 2007; Alkhateeb, 2015; Salman, 2016). It is argued that many architects and designers along with their clients are influenced by western designs, labeled as advanced designs with no reference to local culture (Salman, 2016). Which is the main concern of the research. Similarly, Alenazy (2007) stated; the intention of a home was to “*nourish the spiritual, human, and social needs of occupants*” while modern architecture failed to achieve it. Thus, modern homes in those studies were generalized upon different planning styles. Although research has illuminated similar aspects, open-plan homes has never been previously investigated in Gulf context.

2.4 Conclusion

To conclude, going back to the research question, the research aims to investigate the open-plan in relation to Bahraini culture. The open-plan is a new trend in residential architecture that has not been investigated in Gulf yet. Additionally, home is strongly connected to culture as lived experience (Rapoport, 1969a). Abushariah, (2018) has highlighted the need to preserve Islamic Arab culture by confronting globalization ideas, and called to research and educate people to glorify back the Arabian culture. Although studies were published by a number of authors, the open-plan case in relation to Bahraini culture is still insufficiently explored. Therefore, this paper aims to investigate the open-plan impacts, filling the gap in the literature, and serving users needs by evidence.

Chapter 3: Methodology

“Another way of viewing a research design is to see it as an action plan for getting from the questions to conclusions.” (Rowley, 2002)

As concluded from the literature, various spectrums and relationships of culture and spatial design were investigated through research. To recall, the research aims to explore and investigate a critical case of the residential open-plan trend's impact on Bahraini users. The Bahraini home culture involves not only the residents spatial experience, but their guests as well. It is argued; as researchers creates judgements upon existing architecture "*all work done by the other arts is put to test. This knowledge is the child of practice and theory*" (Andreas, 2022). Consequently, this section will go through the methodology aligned to the research aim. The adopted methodology will take into consideration the understanding of current cultural values, how home-owners reflect it in their home design decisions, and the open-plan appropriateness. That is to create a base for better home experience.

Initially, the chapter will go through the research paradigm and research design supported by reasons of selection. Introducing the chosen methods along with sampling technique, data collection procedure, research instrument, and analysis method. Followed by limitations of the chosen methodologies in carrying out the research aim.

3.1 Research Paradigm

After conducting a detailed literature review, as presented in Chapter Two, it's necessary to consider an integrated approach as seen from multiple authors. That is to carry out organized research; to investigate the residential open-plans and respond to the research issue successfully. Besides, to produce valid research outcomes, it is crucial to consider and understand the research philosophy and methodology prior to processing any research.

Yet first, a research paradigm must be identified. According to Kivunja & Kuyini (2017) a research paradigm is a set of philosophical beliefs that a researcher adapts, to choose the supporting methodologies in collecting data as well as in producing the conclusion. While the first to establish research paradigms is Thomas Kuhn (1962) as cited in (Kivunja & Kuyini, 2017), it suggested that it is "*a philosophical way of thinking*". Similarly, Groat & Wang (2013) introduced the research paradigm as the outermost framework of the research. Additionally, it is stated; "*any research project is guided by a set of beliefs that are widely known as paradigms*" (Killam, 2013, as cited by Almerbati (2016). Therefore, a research paradigm is a mindset chosen to proceed a research. Thus, literature noted that very few attempts have been recorded at describing a comprehensive guide to architecture research methods and paradigms (Andreas, 2022).

Alternatively, prior research suggests that architectural research can apply postpositivist, naturalistic, and emancipatory (Andreas, 2022). While the book of architectural research methods suggested ethnography, phenomenology, grounded theory, integrative approach (Groat & Wang, 2013). Where the difference clarifies the lack of clear approaches presented for the architectural field.

Nevertheless, a vast number of prior research in literature has applied ethnographic research paradigm on similar research matters, investigating culture and architecture in different context and locations (Alkhateeb et al., 2014, 2015b; Dowling, 2008; Golkowska, 2017; Hekmat Ismail, 2015; Salman, 2016). In the light of ethnography, (Genzuk & Bast, 2003) reported ethnography is a research method that relates to social science and takes accountability for participants personal experience as representatives of a group or culture. Indeed, the research aims to investigate the cultural change in the open-plan case. Thus, the research is identified as Ethnographic research due to its association with a design issue and the user personal experience. Furthermore, it is argued that an ethnographic research method should include access to the field, participants observation, semi-structured interviews, inscriptions, and human ethics (Serrant-Green, 2007).

Additionally, ethnographic paradigm doesn't comprise to reflect back on the collected data and propose a further action plan. The third objective of the research requests to draw conclusion as a set of recommendations for the investigated issues. Significantly, (Pettigrew, 2000) has proposed to implement both ethnography and grounded theory joined, where the ethnography provides a solid base for grounded theory analysis. Hence, grounded theory is identified as the difference between the realities that occur daily, and the explanations behind the participants acts in accordance to themes (Suddaby, 2006). Additionally, grounded theory was successfully established as seen in cited literature (Al Khalifa, 2015; Almahmoud, 2015; Golkowska, 2017; Salman, 2016). Further, this research will implement grounded theory to present adequate details of data, to embrace the sense of authenticity, yet also enhance the data by creating ongoing analyses as suggested by (Suddaby, 2006). That is achieved by allowing emergence of new themes through the analysis of ethnographic data (Pettigrew, 2000).

The design approach will align with the research paradigms. The research design section presents the used methods and reasoning, comprising: the research issue, research design, the population of the research. While each chosen

methodology is further detailed next, to clarify analysis methods, research instruments and pilot study application if needed.

3.2 Research Design

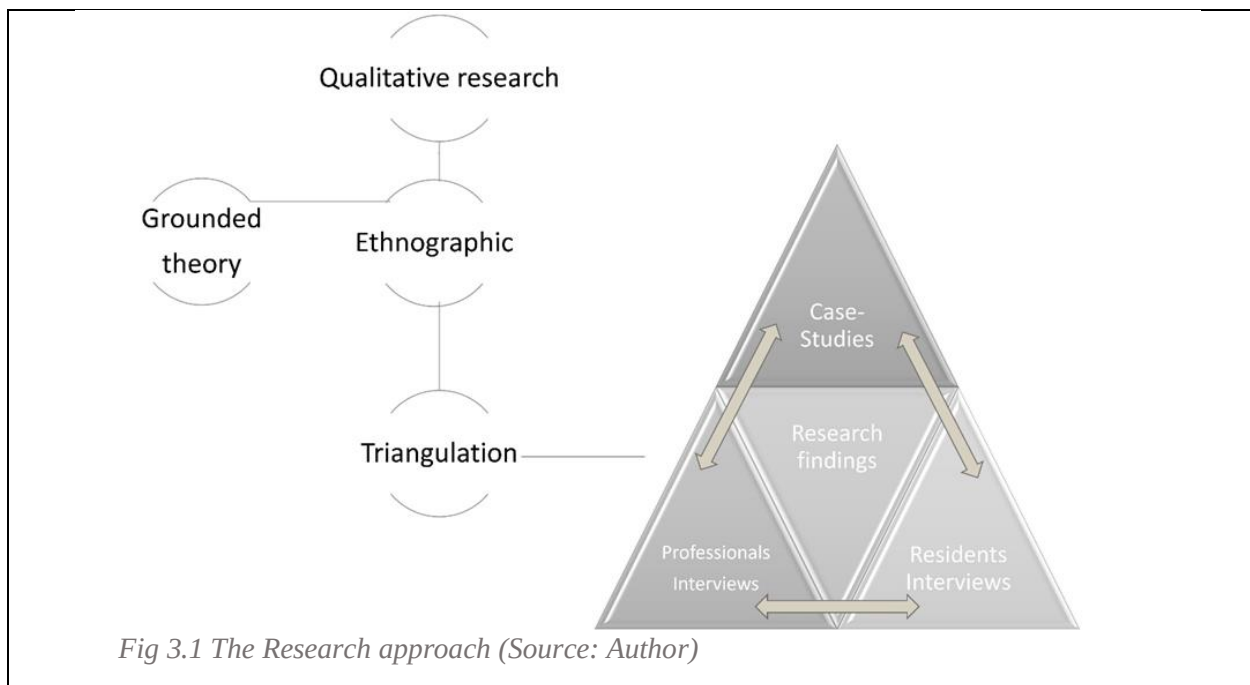
As the research paradigm has been identified, the research design will follow. Hence, a research design refers to the chosen research methodologies to be applied as the main data collection approach. Groat & Wang (2013) suggests interpretive-historical, qualitative, correlational, experimental, modelling, logical argumentation, case study, and combined strategies as main architectural research methods. Which can all be considered qualitative approaches. Hence, a qualitative approach seeks to understand aspects of social life in the form of written information focusing on quality of data rather than quantified data (McCusker & Gunaydin, 2015). As the research is touching into a complex human interaction with architecture, confined upon Bahraini culture and open plan, it's quality rather than quantity. Which works in parallel as ethnographic is qualitative. Additionally, Table 3.1 highlights the strengths and weaknesses of the approach.

Strengths	Weaknesses
Capacity to take in rich and holistic qualities of real-life circumstances	Challenge of dealing with vast quantities of data
Flexibility in design and procedures allowing adjustments in process	Few guidelines or step-by-step procedures established
Sensitivity to meanings and processes of artifacts and people's activities	The credibility of qualitative data can be seen as suspect with the postpositivist paradigm

Table 3.1 qualitative approach strengths and weaknesses (Source: Groat & Wang, 2013)

Hence it is argued that ethnographic research might face reliability issues, therefore it suggested triangulation of data sources (LeCompte & Goetz, 1982). Flick (2018) similarly stated ethnographic research implicitly relies on multiple data; thus, together with triangulation it ensures accuracy authenticity. Triangulation is a qualitative research design that uses several methods or sources to build an inclusive understanding of an issue (Carter et al., 2014). Additionally, the research relies on primary data to insure authenticity and addition to the knowledge.

Fig 3.1 shows the chosen research approach overall. As it is suggested that ethnographic is observational research, exploring live case studies is utilized. It is selected to go through home plan transformation between previous and recent planning as found in previous research by Mokhtar, (2010). That is to understand the user-experience in home place in regard to Bahraini culture. Consequently, this will draw attention to the actual lived experience along with the planned experience. In parallel, it is an observation of existing and anticipated impacts of open-plan approach. The other qualitative method is to perform semi-structured interviews. It is with Bahraini family members who has dwelled in an open-plan house, professionals who has been designing house plans in Bahrain, and researchers that holds knowledge in the case of Bahrain. This will create a link between all three main characters in the interior architectural design field. Prior researches on similar issues of architectural case along with human interactions has primarily applied case studies and interviews (Al Khalifa, 2015; Hekmat Ismail, 2015; Razali & Talib, 2013; Salman, 2016). Which has been also suggested in previous discussion upon ethnography (Serrant-Green, 2007).



Hence, the combination of both methods will eventually lead to an informative answer on the impact of the open-plan design approach. That is to fill the gap in knowledge in the selected topic relating cultural values to design decisions and architectural articulation of place making.

Moreover, the research in parallel implements evidence-based design. As stated, it is a process of using most recent evidence collected from research to make design decisions with clients; to create a better built experience (Hamilton & H. Watkins, 2009). Similarly, Bae et al. (2019) has argued that it's advised to increase the research linking between human experience and architectural environment to improve Evidence-Based design by further data. The methodology has been implemented by multiple similar researches on culture and Gulf architecture, yet not all has stated it clearly (Al-Wafi, 2006; Al Khalifa, 2015; Alenazy, 2007). However, Hamilton & H. Watkins (2009) clarified that Evidence-Based design is a process to create multiple designs based on project context but not a unified answer. Thus, the collected data of home experiences occurred earlier are analyzed to create a base of evidence. That is to draw sustainable solutions as part of the grounded theory approach.

To ensure the flow of research process a research time-plan is proposed in Appendix A, shows the starting date of each task, and the duration needed. The tasks are split after acknowledging the needs of each approach to set a realistic applicable plan. However, each selected method is presented next with its details of selection and process used to collect and analyze data.

3.2.1 Interviews

As discussed earlier, interviews will be conducted one-to-one with professionals and inhabitants of open-plan homes for triangulation of data. As stated a user-experience gives a broader look of how reality felt by a person (Salman, 2016). The professionals will be divided to two parts: researchers, and practitioners, which has been similarly conducted by (Almerbati, 2016; Salman, 2016) to link theory and practice. Providing an in-depth understanding of user-experience in space and professionals remarks on design choices aligned to culture. Alsaawi (2016) cited from (Seidman, 2012:8-9) the use of interviews shows “...an interest in other individuals' stories because they are of worth”. Therefore, the interviews are in-depth, mostly open-ended to insure application of grounded theory to emerge ongoing themes (Groat & Wang, 2013). While also semi-structured; previously planned yet allowing more elaborated open answers to certain points highlighted by the interviewee (Alsaawi, 2016).

Sampling technique and size

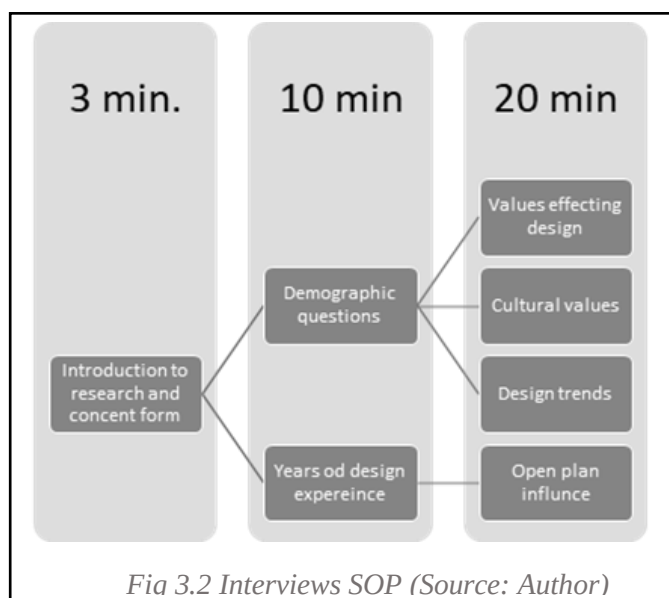
It has been agreed that the selection of interviewees will be based on particular nodes to insure the accountability of the research. Having said that, (LeCompte &

Goetz, 1982) agrees that a selection of controlled group interviewees, enhances the research outcomes. Therefore, each group of interviewees (ie. Researchers, architects, and users) has a similar base qualification to begin with. The selected researchers should have previous experience on architectural research and users experience in place. Understanding of cultural issues and Bahraini culture is set as preferable knowledge as well. While the Bahraini architect's group has been selected based on years of experience; a minimum of 10 years in residential projects field. That is to have more in-depth information of the architectural marketplace and how housing designs has changed through years. Thus, it has happened to be a mixture of architectural offices' owners and projects developers.

Furthermore, the selected Bahraini interviewees for the user's experience has been addressed based on their period residency, a minimum of one year roughly, along with their age group of 30 and above. The selected age assures a real understanding of the Bahraini culture before the globalization hit. **Appendix B**

Additionally, the interviewees has been reached through connections from the researcher and supervisor expertise by snowballing technique. It is a flexible and convenient way to reach a desired group, simplified as a creation of referral network (Parker et al., 2020). The desired number of interviewees was 5 to 5 in professionals and 5 to 5 in genders of open-plan users. It's to create equal results in comparison between genders and professionalism, providing different opinions while avoiding repetition of data; due to qualitative in-depth approach (Salman, 2016).

Data collection Procedure



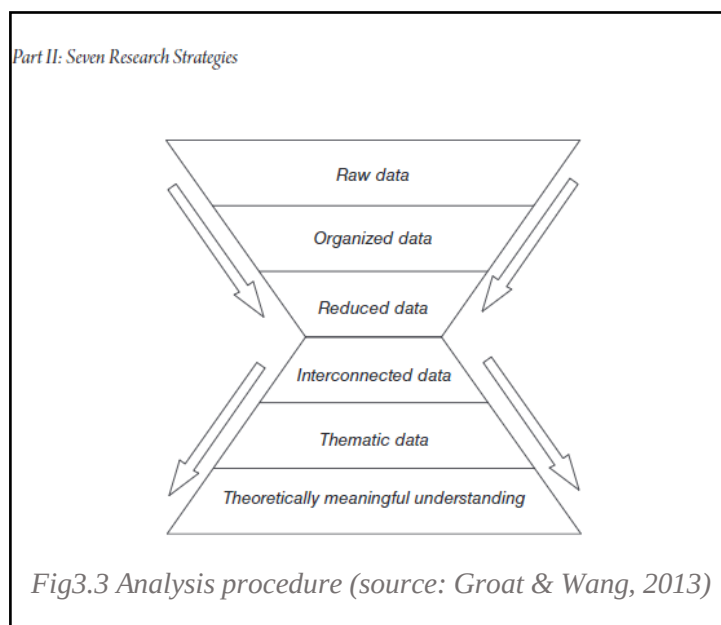
The data collection starts by selecting the qualified interviewees. As such, the researchers, architects, and users, has selected populations matching the need of the research. Moving forward, the interview timing is scheduled with each interviewee in a suitable timing for both. As per the scheduled timing, each interview has been conducted individually in a live video call due to covid restrictions. For ethical purpose a consent form is provided prior to

interview, found in Appendix C. Standard operative procedure (SOP) is used to insure the legitimacy of all interviews as shown in Fig 3.2. It shows the three phases of the interview including introduction, opening questions and the research question on the main final phase. It is planned as 30-40 minutes interview. The interview has been recorded as voice memo, and notes of important statements has been taken during as well.

Research Instrument

As further report on the SOP of interviews, the introduction of research falls as the first part. Thus, the second part of research questions lays on demography and experience level for researchers and architects, while years of residency on an open-plan house for the users. In addition, the third phase of interviews that includes the actual desired research demands. Consisting of 10-15 open-ended questions structured as WHY and HOW questions as suggested by (Groat & Wang, 2013) to gain better understanding of the replies and the thoughts behind it. Appendix D includes the question sets for each group aligned with the research objectives. The architects and researchers had a set of same questions to clarify the difference between architectural thoughts in practice and theories. Then again, another set of questions were proposed for architects only. This can draw out the un-documented data about the open-plan application in Bahrain. Additionally, the users who experienced open-plan as a home had a different set of questions. Yet, it is targeting the same codes inspired of the research objectives; to investigate the open-plan impact from different perspectives.

Analysis Method



After completion of interviews, the recorded voice interviews have gone through transcription into written text documents. As per the interviewee's requests, some has demanded to speak in Arabic to insure fluency and flow of ideas in parallel. Therefore, the Arabic interviews have been translated to English to

generate unified base for data analysis. Fig 3.3 shows the process implied to reach the meaningful understanding. Due to qualitative data and grounded theory research (Pettigrew, 2000) states that grounded theory requires the theory to be grounded in the data creating codes and the emerging themes to compare the collected data. Hence, the NVivo programs has been proved successful in analyzing this type of data (Hoover & Koerber, 2011; Soliman & Kan, 2004). Previous researches in similar context has also applied it (Alkhateeb et al., 2015a; Almerbati, 2016). Thus, the raw data of interviews is analyzed using NVivo coding program. The analysis method splits the collected data to a catalogue of codes, the codes are used as a reference to respond on the research bigger aim. Whereas a written analysis of the data is presented in analysis chapter, as a theoretical understanding aligned to the objectives. Fig 3.4 shows part of the interface of coded themes.

Name	Files	References	Created on	Created by	Modified on	Modified by
bahraini culture	12	31	2/16/2022 1:12 AM	ZA	3/12/2022 5:16 PM	ZA
covid	7	9	2/20/2022 11:20 AM	ZA	3/12/2022 5:15 PM	ZA
Culture definition	12	17	2/6/2022 1:03 PM	ZA	3/12/2022 2:29 PM	ZA
changing	11	15	2/16/2022 12:33 AM	ZA	3/9/2022 11:46 PM	ZA
examples	2	2	2/6/2022 1:05 PM	ZA	3/9/2022 11:45 AM	ZA
demography	20	21	2/6/2022 1:03 PM	ZA	3/12/2022 4:50 PM	ZA
globalization	15	41	2/16/2022 12:53 AM	ZA	3/12/2022 5:14 PM	ZA
home culture	16	44	2/16/2022 1:07 AM	ZA	3/12/2022 3:05 PM	ZA
home definition	10	14	2/18/2022 7:06 PM	ZA	3/10/2022 12:26 PM	ZA
impact of place	13	50	2/16/2022 12:58 AM	ZA	3/11/2022 8:06 PM	ZA
architectural theories	9	17	2/19/2022 1:48 PM	ZA	3/10/2022 1:12 PM	ZA
examples	4	6	2/16/2022 1:00 AM	ZA	3/10/2022 12:25 PM	ZA
land size	17	35	2/16/2022 1:00 AM	ZA	3/12/2022 5:10 PM	ZA
municipalities new codes	9	15	2/16/2022 1:04 AM	ZA	3/12/2022 4:45 PM	ZA
sustainability and climate	6	8	2/20/2022 3:29 AM	ZA	3/10/2022 1:48 PM	ZA
the open-plan	12	20	2/18/2022 7:12 PM	ZA	3/10/2022 1:48 PM	ZA
actual experience	9	55	3/10/2022 1:14 PM	ZA	3/12/2022 5:17 PM	ZA
adaption	16	41	2/18/2022 8:49 PM	ZA	5/19/2022 11:20 AM	ZA
architectural offices	14	57	2/19/2022 1:39 PM	ZA	5/11/2022 9:32 AM	ZA

Fig 3.4 Nvivo coded themes (Source: Author)

Pilot study

A pilot interview has been conducted with an architect to indicate the validity of the procedure and assigned questions. The interview started with justification of the research topic and purpose of the study. It took place online using Microsoft Teams software program as a live video call, the attendees were the researcher, the interviewed architect and the research supervisor. The interview took 30 minutes long which corresponds with the planned timing. The procedure went as favored.

The timing for each question has been distributed in parallel with the question type. In addition, the questions were thorough and valuable, the interviewee has answered evidently and explained the extra thoughts behinds the answers. By the end of the interview, the challenges have been addressed by discussion between the researcher and the supervisor. Some questions were modified to stand clear to the interviewees. Therefore, the pilot interview has successfully accomplished the goal and improved the interviews issues for the actual research. Appendix C shows sample interviews of an Architect and user.

3.2.2 Case-Studies

The case-studies have been suggested by multiple researchers to align ethnographic study and observation (Groat & Wang, 2013; Harwati, 2019). The approach is to look into the transformation of culture through home design cases in middle-class community. Therefore, three generations of a single family is required to maintain a unified cultural background. That is to assess how home feeling might be impacted due to the architecture. Showing traditional architecture, hybrid, and open-plan design. Therefore, case-studies are valuable documentation for home transformation in Bahrain as the literature suggests that home is aligned to culture.

Sampling technique

The pursuit has started by looking after accessible old traditional houses, but most accessible houses from ministry of culture are renovated and not actually used by their owners anymore. Therefore snowballing technique has been applied as well. Through acquaintances, a traditional house has been reached to start with. Adding, the other selected case studies are extended family of the same traditional house, his son, and the grandson house. Hence, all families have the same base of Bahraini cultural background as controlled variable, transmitted from the grandparent to the grandson. The grandfather house is a courtyard house, the son has a modernized majlis house, and the grandson is an open-plan owner.

Data collection Procedure

The data collection procedure starts by scheduling meetings with users to visit the site. That is to avoid time conflicts in reaching suitable timing for both the researcher and house owners. On site, collection of data occurs through interviews, photographs, observation, and walking through the space. Current and old

photographs were collected at the participants' homes. House residents are interviewed to understand their living experience. The interviews are spontaneous on site, yet, it's to recognize the differences in space use, and how the Bahraini culture is attained at that particular space. The responses are not voice recorded, nevertheless it's noted as headings and short statements to be reminded. Overall, the procedure on site starts by greeting and collecting demographic data, while other questions are evoked through the journey of exploring the site. Additionally, cases plans were requested/drawn to be analyzed.

Research Instrument

The case studies have used interviews and observation during the site visit to analyze the space. Through the tangible research process each site has been accessed twice to recall and gather the research requirements. That is to increase reliability and validity of the research outcomes. Besides, a phone device is used to capture pictures in order to be analyzed. While the collected pictures transformed to monochrome sketches and covered people's faces to insure privacy.

Analysis Method

Based on collected data, plans are used to visualize the analysis. Two-dimensional plans analysis is color coded according to the needed information, to include the visual privacy, enclosure, circulation map, and zoning. The visualized data is then analyzed in written text, supported by schedules of estimated percentages to quantify differences. PowerPoint was used to create the visualized analysis. Besides, narrative of each case is visualized using photoshop program producing a similar sectional view of the case. Also, a walk-through narrative is done through collecting the captured images of site. It is to clarify the actual experience for the reader, going through the homes. The findings then will conclude the analyzed data through a schedule of comparison. All in all, this will result in a clearer understanding of each case.

3.3 Limitations

Although the research approach is evidently efficient as suggested from the literature, the constraints must be acknowledged. In such idealism doesn't exist, therefore acknowledgement of limitations proves understanding of the chosen approach.

For interviews, the limited number of interviewees might cause data bias as the Bahraini culture is diverse between different locations. However, the discussed cultural values are generalized and existent in most locations. Additionally, as requested user-experience interviewees, inhabitants must have lived in an open-plan for a minimum of 1 year. Many didn't fulfill the condition, causing time constraints and changing the number of interviews conducted. Interviews done are with 6 architects, 5 researchers, along with 5 female inhabitants and 4 males; due to hard reach and time limit. Thus, it is in close proximity to needed numbers.

Moreover, the differences of the open-plan houses layouts is also crucial in changing the results. Nonetheless, it insured assessing generalized impacts of open-plan, to serve more population of house owners. For case studies, although cases cannot be generalized and called as a representative of all Bahraini homes through years, however, they do represent many homes built in that same period. Overall, qualitative approach is time consuming and needs high observational and analysis skills, which prolonged the research process.

3.4 Conclusion

To summarize, as the research aims to investigate the open-plan in relation to culture and users, qualitative approach is chosen. To get in-depth understanding of user-experience. Ethnographic and grounded theory are leading paradigms to the research aim as observational of culture and space along with reflection to propose evidence-based solutions. Thus, performing interviews with professionals, inhabitants, and case-studies insures triangulation of data. The analysis includes use of Nvivo, photoshop, PowerPoint and written analysis. All in all, a comprehensive approach to investigate current culture, the open-plan case, and recommend sustainable solutions.

Chapter 4: Analysis and Findings

“As a set of methods, Ethnography is not far removed from the sort of approach that we all use in everyday life to make sense of our surroundings”
(Genzük & Bast, 2003)

As the data has been collected through one-to-one interviews and live site visits, the chapter will analyze the raw data into recorded evidence. The gap in knowledge is being contained. As the history did not record the transformation of a residential house in Bahrain, documenting the revolution of home in Bahrain forms a significant addition to knowledge. Which in parallel resolves the connection between culture, home making, and modernity. The case studies are analyzed by visualization, planning, studying percentage of floor zoning and converting it to written text for clarification. Where Bahrain is a case from the Arabian Gulf context, those findings will eventually serve those countries. In addition, the interviews with architects, researchers, and users can fill the gap between knowledge and practice at this span. Thus, in this chapter both the interviews and case studies will be analyzed separately and concluded to findings.

4.1 Live Case-Studies Analysis

The live case studies have gone through the evolution of a particular Bahraini family housing transformation through the years. It consists of three case studies, the grandfather house, the father, and the son's house. That is to measure the change through families from the same cultural background in different housing layouts and how it has served or impacted their cultural values or homeness feeling. The case studies have analyzed the plans by zoning, enclosed and exposed spaces, the visual connection, the users' path, and the surrounding neighborhood. Besides, the user experiences have been analyzed from photographs of the spaces accommodated by the users and interviews with them.

4.1.1 Case study 1: The grandfather house

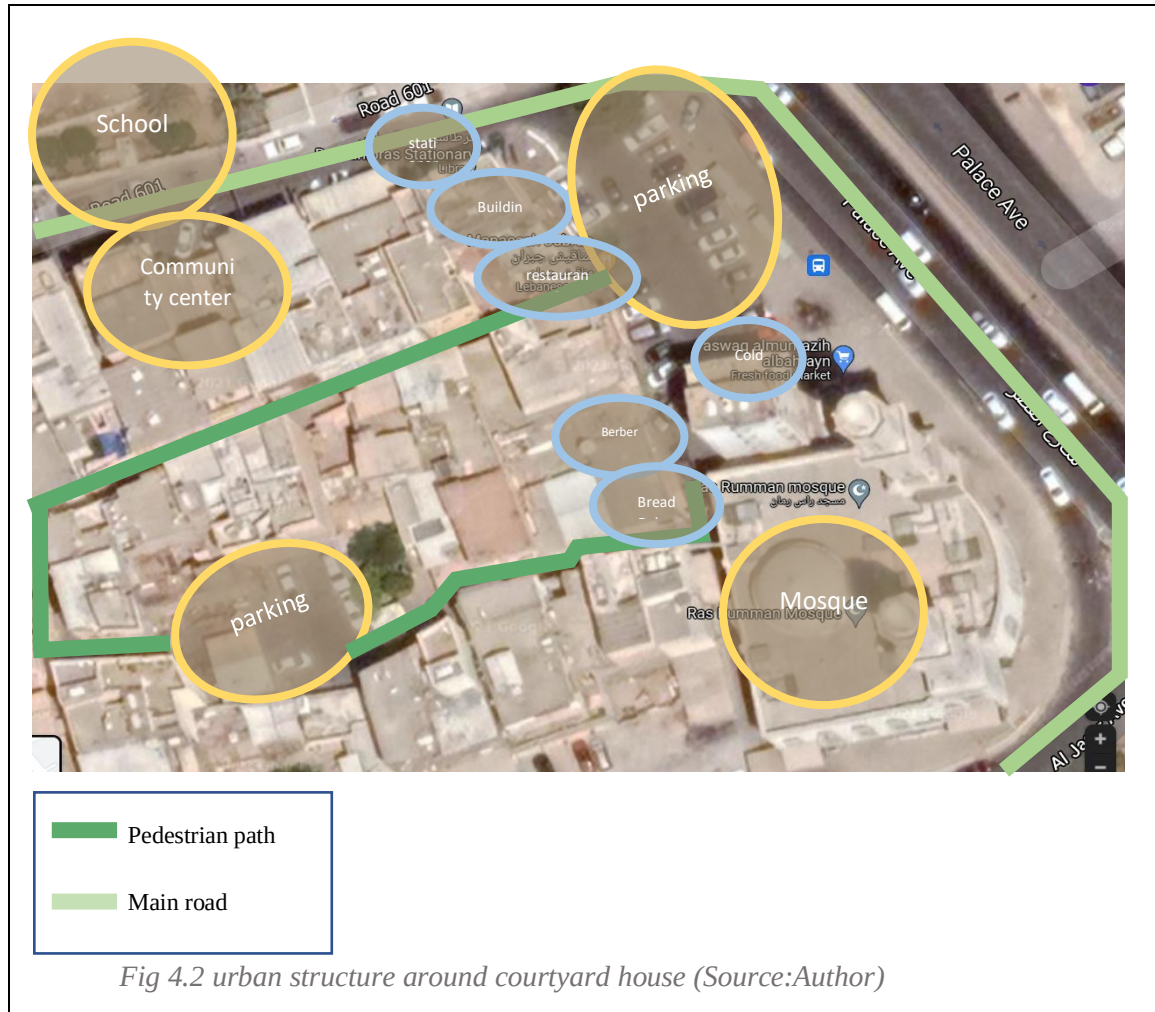
To start introducing the house history, the year of construction is not specified by the users as it is very old Fig 4.1. According to interviewee CX1: It started as a two-courtyard house with only the ground floor to include three rooms. It is said to be around 70 years old building. The grandmother gave birth to all her children in this house and is still living in it.



Fig 4.1 Courtyard house façade (Source:Author)

It is a classical Bahraini courtyard house located in an old neighborhood called a “Freej”. All of the house windows are open to the middle courtyard, the building material is thick stones, and there is no plan for it as it was designed by individuals on-site rather than architects. The plot is irregular in shape as they used to build additional rooms in the area surrounding the housing without any municipality’s restrictions. However, the total plot area is around 270 meters squared.

- **The surrounding community:**



The neighborhood Fig 4.2, as called in the Bahraini language “Freej”, used to be narrow and contained a lot of services. The housing used to be adjoined by walls. As stated by interviewee CX1; the neighboring housing are all relatives, and their sons also get married from those relatives. Consequently, they used to live in the same houses as extended families to be close to their family and to serve their relatives as a community.

The neighborhood in this case study contains a mosque, a school, a community center “Matam”, and a car parking lot to serve all neighbors. Besides, there is a traditional bread bakery, a men barber, a cold-store, restaurant, building material shop, and stationary. Therefore, the neighbors get all their needs from those nearby places and meet in them throughout the day. Thus, men in this neighborhood used to meet mostly outside homes. However, other locations in Bahrain had different ways of living.

-The building transformation:

The selected case has went through multiple transformations to occupy the user’s needs. As shown in Fig 4.3 the grey part was the first built area as the first family house; it included three bedrooms and two courtyards. Later, when the step-son got married, they have built a bedroom in the second courtyard for him to have a slightly separate place with his family. Around the same period, the idea of a built kitchen has popped up in the housing design, so it has also been built at the entrance of the same courtyard. Yet, it had taken from the open space, and they needed extra space to accommodate their animals. Therefore, they have surrounded the land near their house with a fence made of fronds “Areesh” to be the third courtyard. The third phase included building two rooms on the upper floor, cloning the same plan on the ground floor, to accommodate their sons as they got older. In the fourth phase, another room has been built on top of the third room, with a new staircase in the outer second courtyard. Later, the courtyard between the rooms was covered with a false ceiling and got paved with ceramic, along with the addition of a split AC unit. That is because the extended families that used to live on the ground floor have moved to new houses. And the last two sons’ families needed more separation and privacy. In the last phase, they have renovated the kitchen to be built with blocks as it was built with wood, and the step-son room has been rebuilt to serve as an outer majlis, and toilets have been built to serve the guests. Fig 4.4 shows the current as-built plan zoning. Nonetheless, during all stages of transformation no architect or designer has been hired, all decisions are made by user’s need in space. The renovation done has insured to maintain the old lifestyle as there are no sofas or dining tables, the only sofas are in the men Majlis.



Fig 4.3 & Fig 4.4 the courtyard house transformation and zoning

Percentage of area		Ground floor	First floor
Open spaces - accessible for all guests	Outdoor	20%	-
	Built space	10%	-
Private spaces (family courtyard, bedrooms-fully enclosed space..etc)	Outdoor	30%	20%
	Built space	25%	70%
Services (kitchen- stairs- car park- toilets..etc)		15%	10%

Table 4.1 percentage of open and private areas (Source: Author)

-User activities in place:

Around 50% of the land use is for the courtyards which is 20% accessible to all guests and 30% is for the family. And as stated by interviewee CX2: it is to perform multi-activities in, such as dining, washing clothes, gathering, and playing. Previously it was used for cooking as well. Interviewee CX1 said: men used to work till late hours as the area was near the sea most of them used to be fishermen, or even travel abroad for months. Therefore, the courtyards are mostly accommodated by women. The main courtyard near the bedrooms (Fig 4.4) has been used for accommodating women guests daily, where they would furnish it with a rug made of palm fronds. They would sit to chat or work on sewing while the kids were playing around them. And as stated earlier the neighborhood families are all related to a certain extent; therefore their daily guests are relatives as well.

The bedrooms take around 25% of the plot size, where they were also multi-purpose. When extended families have occurred, every family used to live in a single room where there is a bed for the father and mother, and a side floor seating area. Later at night, they add small floor mattresses on the same area for the kids to sleep on. Hence as stated by interviewee CX1; in summer, all kids sleep on the roofs to get better ventilation as it's cooler up there. In addition, the family room is only accessible for that particular family members. However, when the wife gives birth to a new child, her parents and close family members would visit her and stay in the same room.

- Minding cultural values in architecture:

Building architecture and culture

Cultural values are discussed to highlight the differences in planning in parallel with culture. Table 4.2 and Fig 4.5 shows the ratio between enclosed to exposed area, as part of serving privacy. Clearly, as the plan is designed inward around the courtyards, the enclosed space is 85%. While the remaining is exposed as it contains the animals and not much activities are performed near the entrance. It also has no windows overlooking it from the neighbors as all houses were designed inward and in same height.



Fig 4.5 enclosed and exposed zones (Source: Author)

Enclosed zone	85%	100%
Exposed zone	15%	0%

Table 4.2 enclosed and exposed zones percentage (Source: Author)

Additionally, Fig 4.6 shows the visual connection map. Evidently, as all spaces are confined, there is no visual connection to the outside. The courtyard design has given high privacy for the residents from the neighboring as they have their own enclosed outdoor spaces. However, on the indoor visual connection, it has been limited mostly to the single courtyard. That is due to the circulation planning.

Also, as the windows used to be made of wood, it has given very minimum view to the indoor courtyard as well. Yet, the windows have been changed on renovations to frosted glass which also maintained privacy.

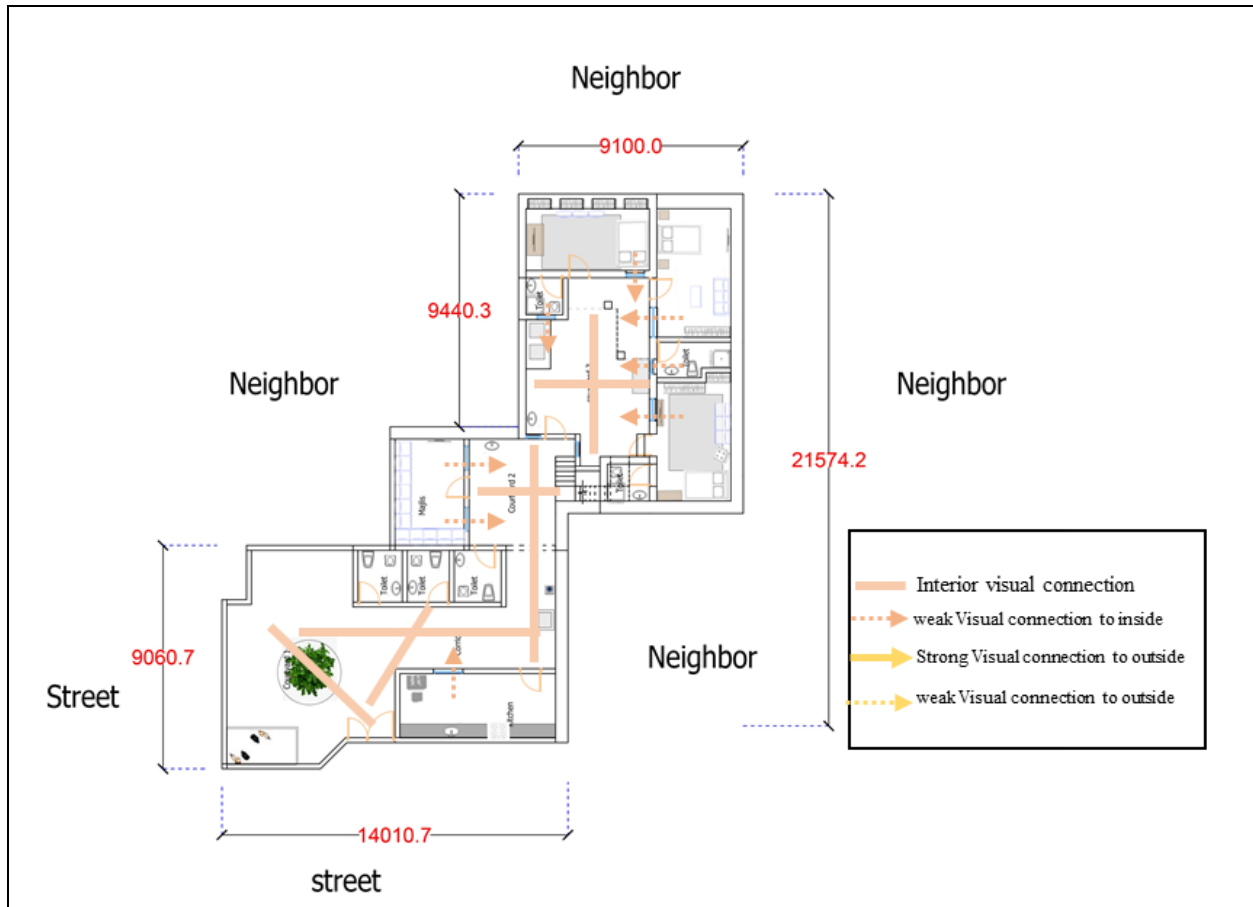


Fig 4.6 Visual connection map (Source: Author)

Percentage of area	Ground floor	First floor
interior visual connection	35%	10% (view to courtyard)
No interior visual connection (closed rooms)	65%	90%
High Exterior visual connection	0%	0%
Low exterior visual connection	0%	0%

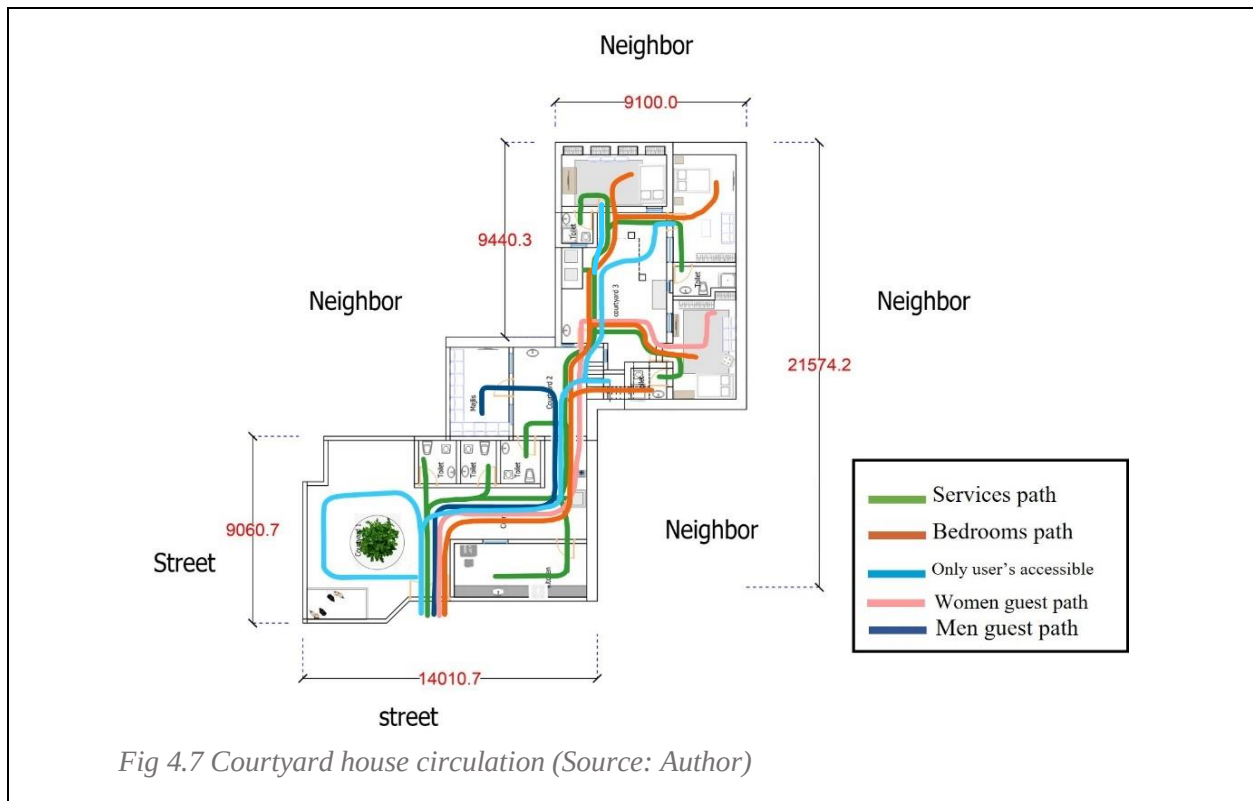
Table 4.3 percentage of visual connection (Source: Author)

Gender and culture

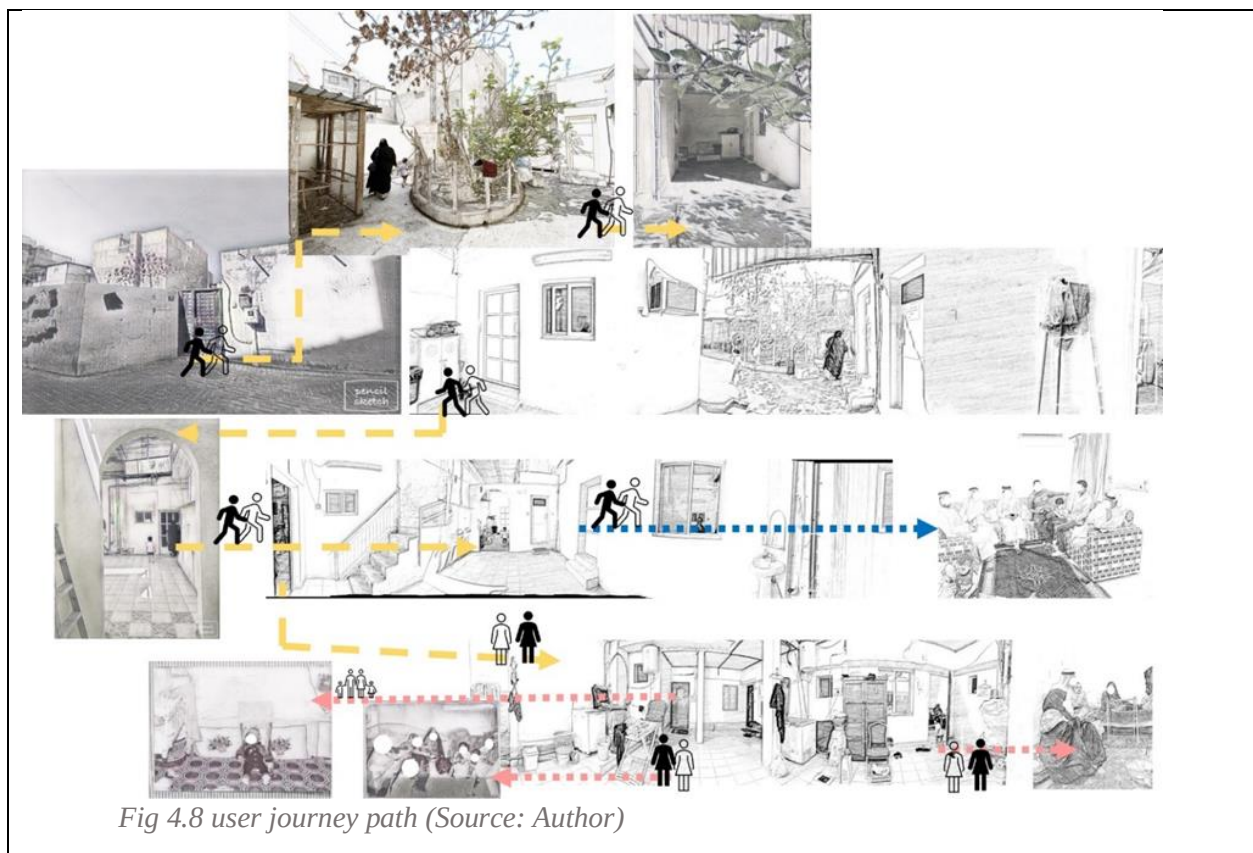
The idea of gender separation was not highly applied in the architecture itself. Thus, it was highly respected in performing activities. As mentioned previously, men used to work for long hours to provide for their families, and the main courtyard is kept for women. Besides, interviewee CX1 stated that men used to meet outdoors and at the mosque on prayer times daily. While in occasions, men meet in the community center for funerals and celebrations such as weddings. Thus, only men who have friends or relatives from other countries do create a Majlis room in their homes back then as argued by CX2. Women on the other hand, would get their whole courtyards or roofs for the bigger occasions and with high privacy as all men are elsewhere celebrating. This is the culture on that location, as each area in Bahrain has a slightly different culture (Salman, 2016).

The Majlis has been newly added when the extended families have left this house, and the members' number has grown bigger. Interviewee CX2 said the house owner's sons that were born in this house have got grandsons now. Therefore, when the whole family meets, the bedrooms are not adequate to accommodate all the extended family. Also, rooms accommodation have been shifted from a whole family room to be a single-person room. Consequently, when the extended family members come to visit weekly, they sit in the grandmother's room as they are visiting her. While the females stay with her, the sons or grandsons might come to sit for a short period of time and leave to the Majlis or the community center if there's a special occasion.

Fig 4.7 shows the plan circulation. The first animal's courtyard is accessible to all yet it is considered as private ownership, and guests do not walk through. Due to multiple connected courtyards, the men guests have a shorter path than women guests. Nevertheless both genders guests path intersects in the main entrance till the second courtyard where men stop, and women continue to the grandmother room. The female visitors currently are mostly grandmothers' guests, and they visit at various times throughout the day. So, her room is enough to accommodate the number, minding she stays in bed most time. In parallel, the other bedrooms in the house rather than the grandmother room are all private and are accessible for its users only. However, when the whole extended family visits on occasions, the main currently closed courtyard is furnished with a large rug for women's just like the old times.



- Narrative



To visualize the home experience, a walk-through story has been created using collected case pictures. Fig 4.8 shows the path yellow for all users, blue for men guests, and pink for women. As the user enter, the only space shown from main-entrance is the animal courtyard. Due to multiple courtyards the path is not explicitly straight, which gives more privacy to the user's inside. And are said to be transitional spaces (Soares Saraiva & Serra, 2017), clearly enclosed for certain spaces. To continue after the animals' courtyard, to the right there's the services courtyard which include the kitchen and guests' toilets. After going through it, comes the majlis courtyard defined by an arch and includes staircase for extended family. While the main family courtyard is next enclosed by a door. That indicates welcoming and privacy boundaries. The pictures chosen are mixture of old and new. The lower left pictures show the women guests gathered in the main open-courtyard back then, while a child is laying in his family room with a floor seating area. The blue arrow shows the men Majlis, and under its picture is the grandmother room with both gender's visiting (son and his wife). However, when there are multiple families visiting the sons will just greet and leave.



Fig 4.9 Narrative of home experience (Source: Author)

To clarify more, a sectional narrative is also created to explore cultural norms of the old house structure illustrated in Fig 4.9. Presented as how it was built and lived through it's peak. As mentioned earlier the structure is almost the same now but the courtyards have been covered. Allowing air conditions to work efficiently, and users to move comfortably during summer. Along with alteration of finishing materials.

To begin with, from the left side of Fig 4.9, the main entrance to the house opens to the first courtyard that comprises the family animals. Showing surrounded by "Areesh" as it was not built. The animals used to move freely with no cage, while users pass through. The narrative shows the mother rocks the fresh cow's milk in a wooden tool to transform it to "laban". The children might be playing around the place as the mother work or helping her collect the eggs as well. As stated earlier, there are no openings from the neighbors' houses that exposes this place. However, those activities are performed during early morning to ensure no visitors passing.

After the services passage, the men Majlis courtyard is shown. As mentioned, it was occupied by the step-son family having 2 rooms built vertically. Therefore, the ground-floor room was tidied up from mattresses daily to gather the family or allow men guests anytime needed. The main last courtyard used to serve women living in the house with freedom. While it contained all the brother's family rooms. Hence, while the men are at work, women use the space for their activities as shown Fig 4.9. The open-sky has made it easier to cook their traditional dishes which mostly include onion, garlic, or fish without any disturb prior to developing a kitchen. Along with the ability to have a private outdoor space, to enjoy the fresh air and the sound of birds with no barriers. Additionally, in the afternoon their neighbors would visit daily staying in the courtyard, to chat while their kids play. Previously, the entrance this courtyard was closed by a cloth curtain and substituted to a door later. Thus, that curtain divider gave them enough privacy away from the men inside the majlis of the other courtyard. When the brothers want to enter, they would call-out to let them know they are passing to reach their family room.

To sum up, the openness in a courtyard house has given high privacy to females. However, as the house got old and started occupying extended family it caused slight disruption. That has been solved by agreements between members upon work timings and notifying arrivals for in-laws to cover-up. Then again, as extended families moved out, the female users still enjoyed their courtyard home and moved freely in an open-air space.

4.1.2 Case Study 2: The son's house

The son's house was planned by the architect Riyadh Al-Arrayedh in 1995 and has completed execution in 1996. It was a transitional phase in home architecture in Bahrain. The project was discussed between the architect and the clients multiple times to study their needs until the final proposed plan. Fig 4.10 shows the front façade of the house drawn by hand. The Villa consists of a ground floor and first floor along with outer extensions including a car park. The plot size is around 1,014 sqm, as shown in Fig 4.11, consisting of 4 separate structures: the main proposed villa, two extensions, and car garage. The occupants started as the son's family; a father, mother, 2 sons, 2 daughters, and a housemaid.

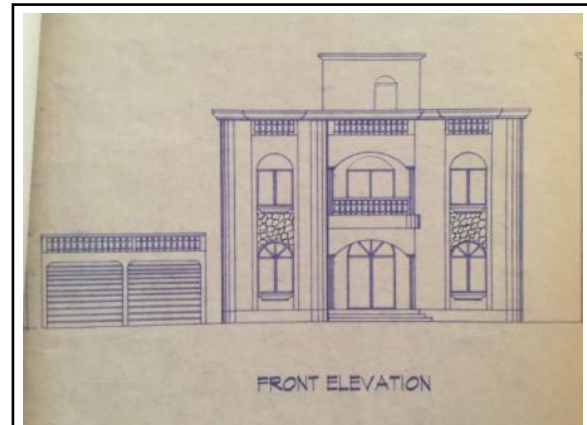


Fig 4.10 Son's house façade (Source: Author)

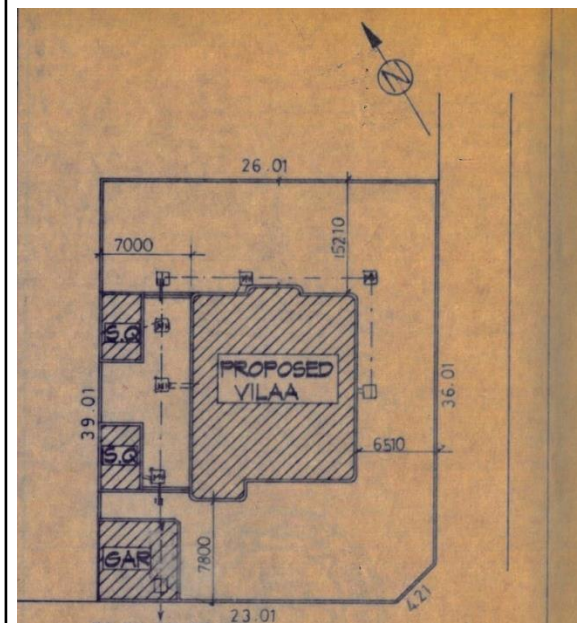


Fig 4.11 son's house plan (Source: Author)

-The building transformation:

Fig 4.12 shows the interior structure of the project. The main door opens to the guests' area which take 15% of land. Composed of a closed majlis, main hall, and open dining room along with transitional area. The majlis is accessible from an outer door near the main door, and another door adjacent to the main hall. Making it accessible to guests with no distribution. The ground floor also includes a bathroom, laundry, staircase, family room, and kitchen.

The outer extensions incorporate a maid room and its toilet, an outer kitchen attached to storage, and car garage. While the open-air space is divided into a front garden near the main entrance, a courtyard between the two extensions, and a spacious back garden taking 50% of land size. They are all heavily planted with palm trees and other floral trees. The setback on the left side of the building is wide and

covered with plants as well. The first floor contains a master bedroom and two other rooms, an office, and an open transitional area between rooms.

According to interviewee CX3: the building structure and interior walls have not changed at all; it is still as-built since 1996. However, the activities inside some spaces have changed over time to accommodate the users’ needs. Hence, the transformation of activities in space will be detailed.



Fig 4.12 son’s house plan zoning (Source: Author)

Percentage of area	Ground floor	First floor
Open area -accessible for guests	15%	-
Services (kitchen-stairs- car park-toilets..etc)	20%	25%
Outdoor spaces	50%	5%
Private spaces (bedrooms- fully enclosed space..etc)	15%	70%

Table 4.4 son’s house zones percentage

-User activities in place:

The activities in place have changed along with the change of furniture inside each area. As following traditional furnishing, interviewee CX4 said that the Majlis was designed as floor seating to accommodate more guests. It was used only for guests and kept un-used in other days. And so does the dining room; as there is another dining-table in the kitchen for the family daily use. Additionally, when their kids were younger, the family room was designed as a study room with desks and chairs for school students. Meanwhile, the main hall had a tv, and it was used as a family room.

According to interviewee CX4, the family has changed the activities in the space when their kids grew up and an extended family has formed. The Majlis has been changed to sofas and the floor seating cushions has moved to the family room. The Majlis got to be used daily for the father to watch TV. While the family room is kept for the grandchildren for more safety. The main hall is still used daily for the family to chat in away from grandkids noise, while it is also used for the weekly family gatherings. The dining room has been used more as well, to accommodate all the extended family members. While the upper floor rooms function has not changed, yet the occupants number has changed through time. The transition open-place in the first floor used to be empty as the ground floor was enough for the family need. However, they have added a kids reading corner and table for their grandsons to enjoy.

Furthermore, the outer gardens contains a large bird cage, various types of plant, and spacious paved area. The children used to enjoy walking and playing outside, and the grandchildren followed the habit now as stated by interviewee CX3. The family enjoys eating or grilling in the garden hiding under a tree for their privacy. Further thoughts of minding cultural values are detailed in the next section.

- Minding cultural values in architecture:

As shown in Fig 4.14, the main house building and the extensions has given an enclosed space in between them. This gave privacy for the family members to move through those spaces comfortably, inspiring from the old courtyard design. Adding, even though the exterior is open; the tall trees gave them the required privacy.

Fig 4.15, shows the visual connection map between spaces. The interior visual connection is mostly blocked because of the formed close rooms, 65% has no interior visual connection. However, the rooms are placed around one open transition space giving 35% connection as shown in Table 4.5. The main entrance is open to the staircase in the rear side of the house and it gives strong visual connection. Yet, as guests enter; they directly go to the enclosed seating areas, hence it is a matter of few seconds. Therefore the family movement is not affected as it's needs are not nearby the guests area. What's more, the open dining area is enclosed with 3 walls and it only gives a weak view to the main hall and staircase, as it's from a short angle. But holds a strong view to the transition space adjacent, that's serving guests accessibility to toilets.

Meanwhile, as the Majlis has 2 doors, it strongly serves the value of hospitality while maintaining users' privacy. The door from inside is used to bring food and serve the guests as it is easier to carry it from the indoor kitchen. As said by interviewee CX4, the housewife prepares the snacks, fruits, and refreshments and leave it in the dining table for the sons to take it in for the men guests. In parallel, the housewife and other family members has full freedom for the whole house. While in case the men guests needed toilet, females will be given a sign that men will need to pass through the open area. Yet it rarely occurs, as they usually choose to be seated inside the kitchen or the family room until the guest leaves.

Correspondingly, when they have a gathering of both genders, the men will be staying in the Majlis while women are in the main hall if it's a short visit. Adding, as stated by interviewee CX3; if they have more guests, the Majlis and the main hall will be serving men. And the family living room will serve women; as it is designed as floor seating area to allow more users, and giving more privacy as it is far from the men guests. Alongside, the women guest are told to enter from the side kitchen entrance so they'll not pass through the men area. However, in some cases of larger occasions if the weather is good, the men will be served dinner in the garden while the whole house is left for women.

On the other hand, the high exterior visual connection is acknowledged by the users. It has been cured with reflective glass windows and curtains. That maintained the interior privacy.

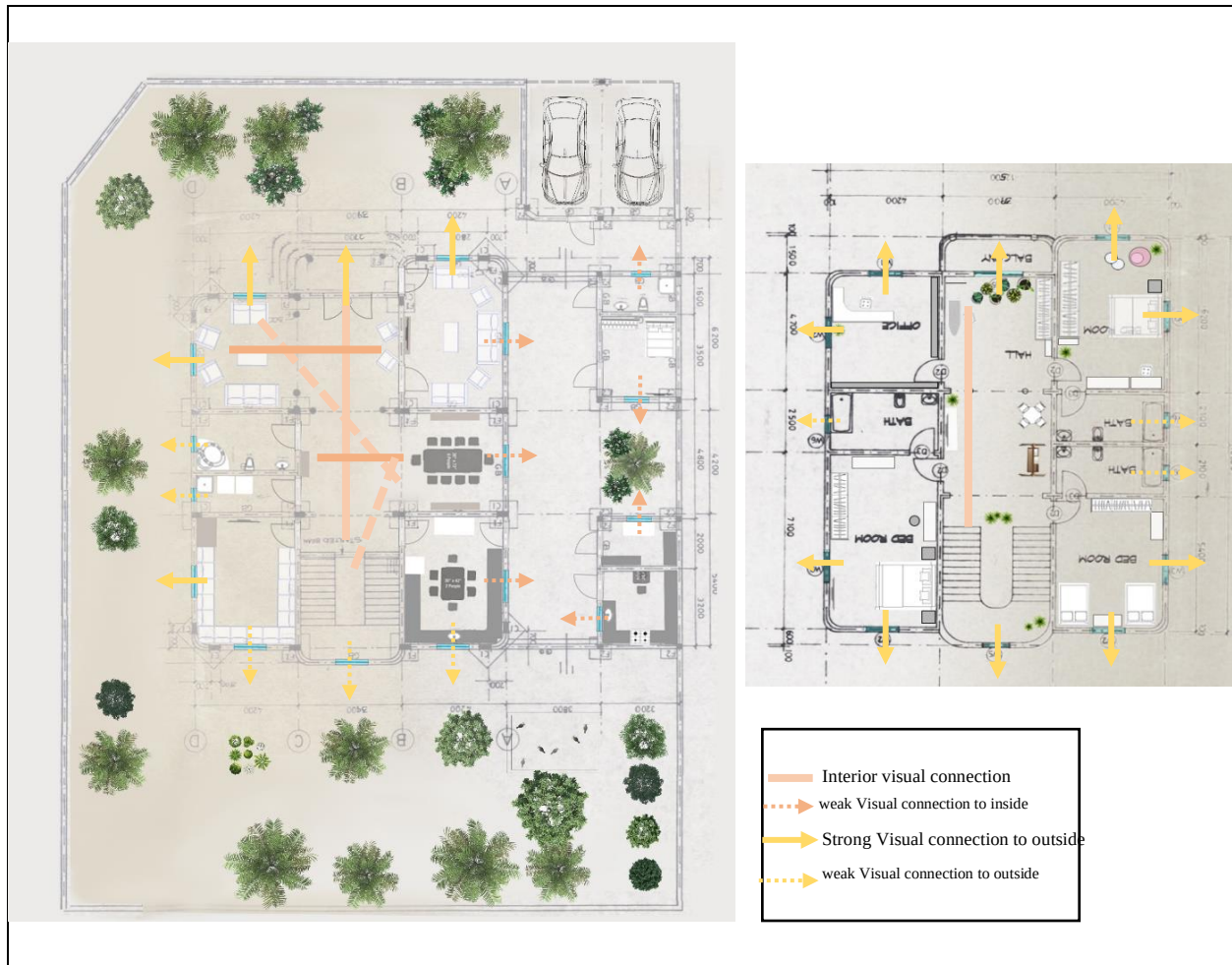


Fig 4.15 visual connection map (Source: Author)

Percentage of area	Ground floor	First floor
interior visual connection	35%	20%
No interior visual connection	65%	80%
High Exterior visual connection	60%	75%
Low exterior visual connection	40%	25%

Table 4.5 visual connection map percentage (Source: Author)

Additionally, Fig 4.14 marks the built enclosures in the house. Indicating 50% enclosed to 50% open. The enclosed does include outdoor space for the females' activities. However, the trees cover the exposed area to a certain extent.



Fig 4.14 enclosed and exposed zones (Source: Author)

Percentage of area	Ground floor	First floor
Enclosed zone	50%	100%
Exposed zone	50%	-

Table 4.6 enclosed and exposed percentage (Source: Author)

Additionally, Fig 4.16 shows the circulation paths. The intersection between guests' path and private users' space is minimum. The family area is far from guests' area. The only intersection occurs when female guests are invited to the family room as discussed earlier, in rare occasions. The inner laundry room sometimes gets mistaken by the guests thinking that it is an extra toilet, which is thought as inappropriate location after accommodation. The rest services are mainly used by the house-maid or any other servant's visiting. As said by interviewee CX3, it is really nice having those services away from the visitors' eyes and are really serving them. In parallel, the users path gives access to those outer services as private space. Alongside, all the bedrooms placed only in the upper floor gave high privacy. It also includes the office, considering it as a private quiet-zone need away from the guests and gatherings.

Meanwhile, the staircase placed near the family kitchen-dining area gives the user's ability to move through the space to outside with minimum to no visual contact from the guests. On the outside, the front garden is kept smaller for visual beautification for guest's entrance. While the back garden is bigger and used by the family alone.

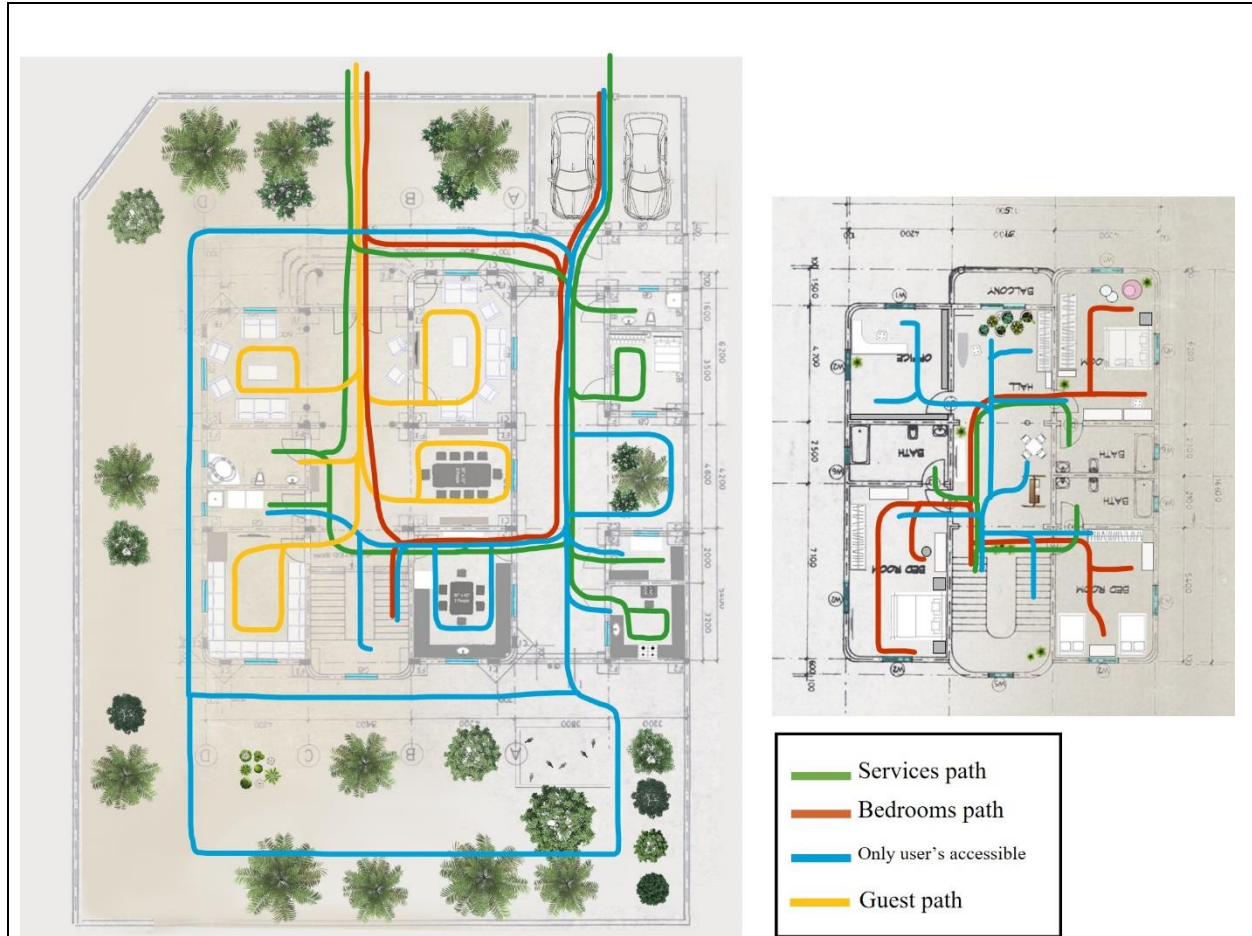


Fig 4.16 son's house circulation map (source: Author)

All those factors contributed to create home that considered the family cultural values. Privacy, gender separation, and women needs in place. Which resulted in maintaining the house structure as it is with no modifications but change in activities in space. The family also expressed their gratitude and love to their home as the transitional open-space created vastness yet maintained their values.

The surrounding community:

The urban structure around the house is fairly simple. The area consists of residential houses only, and are mostly similar in land size varying in structure size.

The only non-residential is a small mosque directly adjacent to the case-house, it conveys the call of prayers during the day, certainly creating a pleasant spirit.

Nevertheless, there are no services places (shops/schools, etc.) that can be reached by walking. The nearest cold store is 5 minutes away by the car. Which might be the reason that made the neighbors relationship formal; there are no community space that has gathered them regularly. Also, the neighbors are not relatives as it's a new town. Besides, interviewee CX3 explained: the lands are big, the doors are not side-by-side, and neighborhood is not fully inhabited. So it was difficult to reach neighbors, it is not as easy as before. Therefore, each house has turned to be full by itself, with the existence of a Majlis for meetings.

Narrative

A sectional narrative in Fig 4.17 reflected the house design and users-experience in the space, to display occupant's lifestyle.



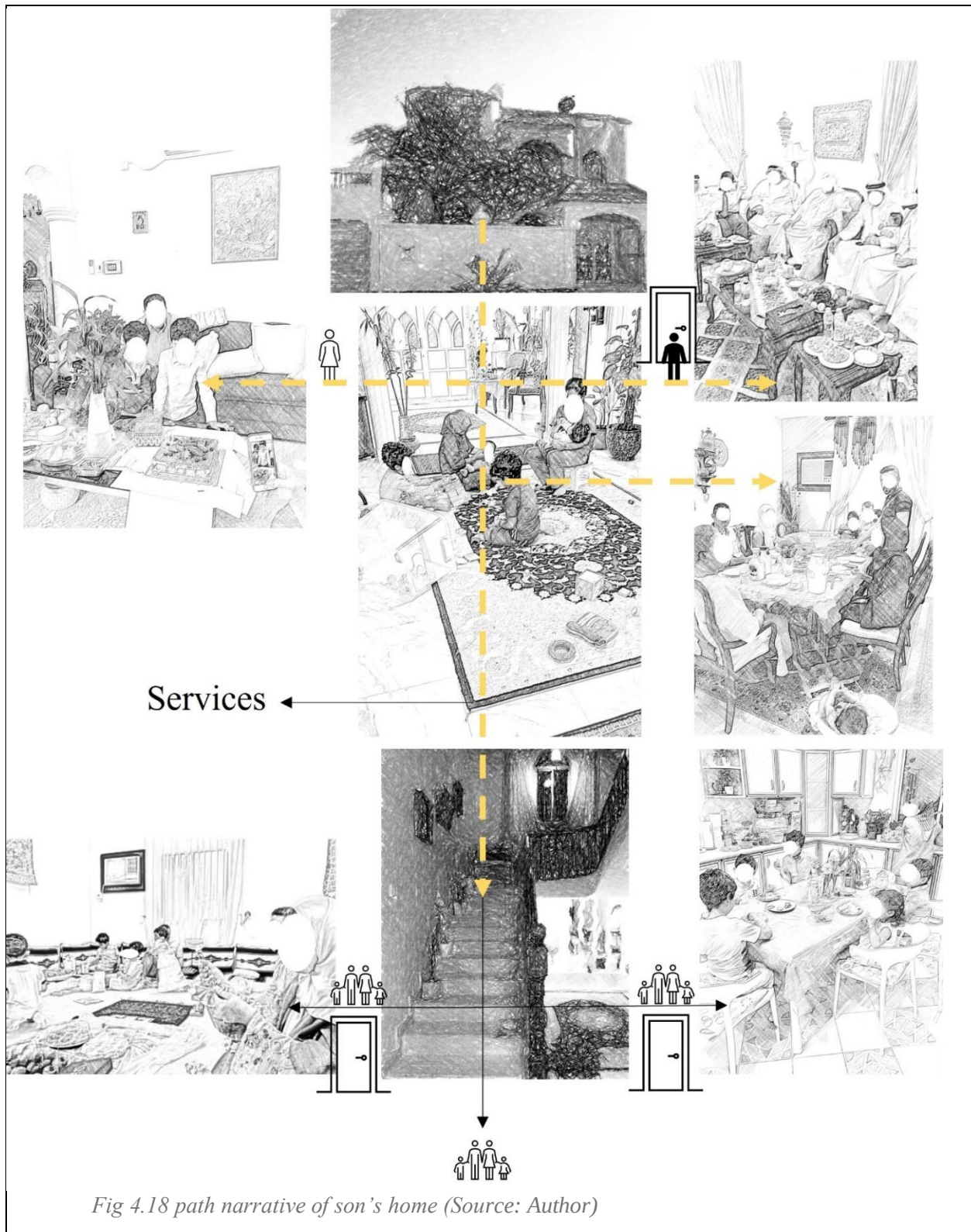
Entering the house, it is surrounded with a big garden from all sides as mentioned earlier. Many afternoon-activities that the members enjoy performing, occurs in the gardens. For example, as shown in the Fig 4.17, the father watering plants, while kids are playing basketball. The kids take pleasure in walking through the garden, to see all the owned birds and animals, and enjoy running in open-space securely. In a barbeque day, the family would be in the garden eating, cooking, and playing. The trees have provided shade, and together with the urban structure; allowed privacy to users. Interviewee CX4 stated that they enjoy gardening and especially harvest season to giveaway fresh dates from their garden.

Moving to inside, the main house entrance is in parallel with the boundary wall entrance. Creating direct welcoming path for the guests, while the family stated they only use the kitchen entrance on daily basis. Fig 4.17 shows only one section of the building from inside, while Fig 4.18 shows the path taken to all spaces in ground-floor. The main entrance gives continues view to the end wall which has the staircase, yet it doesn't expose all areas in the house as the zones are enclosed within walls.

Fig 4.18 explains the openness of the journey around the transitional area, yet with enclosure of spaces. The selected imaged shows the zones as occupied by both family and guests. The majlis is shown as the first room on the left side of Fig 4.17 and Fig 4.18 occupied by men. While the family room is far by the end section of the house occupied by the family and kids. Which clarifies the rooms enclosures and locations serving privacy in all conditions. The open-hall adjacent to men Majlis; as enclosed within 3 walls can also be occupied by men or women guests, keeping females' comfort and without exposing the family section. The dining room is also designed in the same way by the middle section of the house. It gives feeling of openness, yet it does not give full sight to all the house components. Where gender separation was easily attained in this house, the family doesn't apply it for the extended family gatherings.

The rear side of the house has a kitchen-dining family area near the staircase and adjacent to the family room. This kitchen is used for family daily meals, the breakfast and dinner are prepared and served there. Nonetheless, even though it is a closed room, the house-wife prefers to cook lunch in the outer kitchen; to avoid spreading the smell. Additionally, the family living room, is all-day used since the house was built. The furnishing on this room has changed repeatedly, to serve the family needs. Alternatively, the kids have freedom to play anywhere, while they

choose the open-transitional space more often; to run and play motor activities.



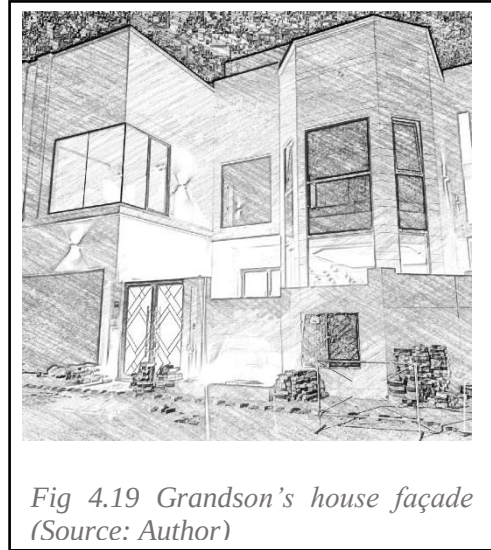
To summarize, the whole ground floor revolves around the open-transitional area. But the separation of zones upon public/ semi-private was a successful choice for the family needs.

Moving to the first floor, reaching from the rear positioned staircase, it is kept as 'only users' space giving higher privacy. It is also designed around a middle transitional area, four-meter wide with the length of the full floor. It was kept empty for a long time but is recently occupied by kids for reading. While the rooms used to be occupied by the sons and daughters. It changed to serve one extended family, and later for the grandsons. As there were only one extended family, the son's wife was not disturbed with privacy since the other son moved-out. Therefore, she had the freedom to use the space freely during the day.

All in all, the family has expressed gratitude to their home. As it gave the comfort, spaciousness, served their values and needs for 26 years and continues. Overall, the design was a simple classic, which won't look old in recent years. The house has been planned to serve both the family and their guests, even with the openness of some spaces, privacy was taken into accountability. The welcoming feeling of the open house was there, to give guests wider look to the house, yet didn't affect the family comfort. While the closed rooms have played well in serving different purposes during different timings. All spaces are used and taken advantage of, even the closed men Majlis is used for the father daily tv time. The house is full by itself, there is all types of entertainment and needs for adults and kids through the day.

4.1.3 Case study 3: The grandson's house

The third case study (Fig 4.19) is for the grandson's family, consisting of father, mother, and 3 kids below 7 years old, along with their housemaid. The house planning has started by 2016, but the family has settled in by early 2021 due to delay on construction phases and the pandemic situation. Thus, the case is considered a modern house that symbolizes a vast majority of the recent residential projects in Bahrain.



The house consists of two stories and a services area in 3rd floor. (Fig 4.20) shows the house plan. The ground floor is all open to one another, including two living halls along with a kitchenette and dining area. The hall on left side of the entrance is labeled as Majlis even though it is open. There is also an external kitchen, a small garden, and car park. On the first floor, there are three bedrooms, and a playroom, all includes a dressing area and bathroom within each room. The rooms are linked with a corridor and has a family living area wedged in between.

Table 4.7 presents the distribution percentage of each floor, clearly 40% of the ground floor is designed wide open for guests' occupancy. While the rest is kept for services, and outdoors. Thus, the main kitchen is also considered a private family space and is kept away from the open area.

Percentage of area	Ground floor	First floor
Open area -accessible for guests	40%	-
Services (kitchen-stairs- car park-toilets..etc)	35%	35%
Outdoor spaces	25%	5%
Private spaces(bedrooms- fully enclosed space..etc)	-	60%

Table 4.7 percentage of zones (Source: Author)



Fig 4.20 grandson's house zoning (Source: Author)

-User activities in place

As shown in Fig 4.20 and justified in Table 4.7, Interviewee CX5 explains; due to the ground floor being a formal guests place they don't use the open space as a family seating area. She added, the guests area is not designed as child-friendly and because of their young kids it is not practical to stay on a very wide space with lots of souvenirs, planters. Besides, the over-use of guest's furniture on daily basis will

cause the furniture to look worn-out and loss its appeal. Thus, the family stays on the first floor living area, while the kids spend most of their time in the play-room.

Interviewee CX6 added, the kids might spend time in the small garden as well, playing together or in the artificial waterfall. For meals preparation, Meals are cooked and served for the family in the outer kitchen. When asked about the indoor kitchenette, she clarifies; they do not cook inside, it is used as a coffee station, or a buffet area when they have guests. Otherwise, they spend most of their time as a family in the kitchen or the family living area upstairs. Which made the experience a bit difficult especially with an infant and toddlers, going upstairs to stay and downstairs for meals or snacks. Yet, interviewee CX5 states that it is the most convenient way for them to adapt to the open-plan as a family with kids.

As for guests, they mostly welcome their visitors to the bigger hall on the right side, as it accommodates more users. Interviewee CX5 says the spirit is delightful due to the sun entry and view on the garden. Which is considered a welcoming gesture for Bahrainis to allow their guests to a superior experience. However, in mixed larger gatherings they offer men to set on the open-Majlis, because it has a bit of zoning privacy. It is confined within three walls and not directly overlooking the whole house as the open-hall does. Also, the guests are usually common friends or family. Thus, women can feel a bit more comfort; even though they are veiled and acting in modesty.

Interviewee CX5 declares, when they have a single gender gathering the ground floor of the house will be customized for their visitors only. Consequently, if it is men gathering, the housewife will not move on the ground floor. The opposite also applies for women gathering, the father would usually leave. That is to give freedom and comfort for their guests to enjoy their visit. In addition, interviewee CX6 stated that they allow their visitors' kids to reach the play-room if their kids are still awake, to play together mentored by their nannies. However, it did not happen that the guests reach the upper floor. Moreover, they sometimes invite their guests to BBQ-night if the weather is pleasant, and they would only stay in the outer garden.

- Building transformation

The building has been occupied for around one year only, thus the owners didn't have the privilege to modify anything. However, they have spotted some difficulties in performing their daily activities. Interviewee CX6 highlighted the outer kitchen issue. As main space for family dining, it is not convenient to open two doors that are close to one another to reach the kitchen. Not to mention having to pass in the

direct sunlight or any weather condition. While the inner kitchen cannot be used due to smell spreading around the house. Additionally, when they have one gender gathering, it is not convenient for the opposing gender to reach the kitchen if needed as they'll need to pass by the guests. However, the owners have not considered establishing an architectural solution. Also, as the kids grow and needs change; the suitability of open-plan will be evident.

- Minding cultural values

As reported, this open-plan home has served the welcoming and generosity traits of the Bahraini culture. Nevertheless, privacy of the guests or inhabitants is not highly implemented. Fig 4.21 clarifies the visual connection zoning in the house, and Table 4.8 report the estimated visual connection in the built area.

Percentage of area	Ground floor	First floor
interior visual connection	80%	30%
No interior visual connection	20%	70%
High Exterior visual connection	60%	70%
Low exterior visual connection	40%	30%

Table 4.8 visual connection percentage (Source:Author)

The ground floor has high interior visual connection of 80% between spaces as there are minimum to no partitioning walls. Compared with the first floor, having mostly bedrooms; there's only 30% visual connection, as it lays only in the corridor and living space. This explains the lack of privacy value when there are guests. Similarly, the large windows and the house position attached to two streets has given strong visual connection to the outside. However, the owner has treated this issue by using reflective glass, giving high privacy during daylight. While they cannot enjoy the view to their garden at night, as the curtains should remain closed to conceal the interior. In parallel, having an open-plan house, an open window gives exposure to the whole open-zones.

In addition, Fig 4.22 and Table 4.9, shows the exposed and enclosed areas. Explaining, only the built area is enclosed within the walls. Having no private exterior space for fresh air. Especially, the house is facing a four stories residential building.

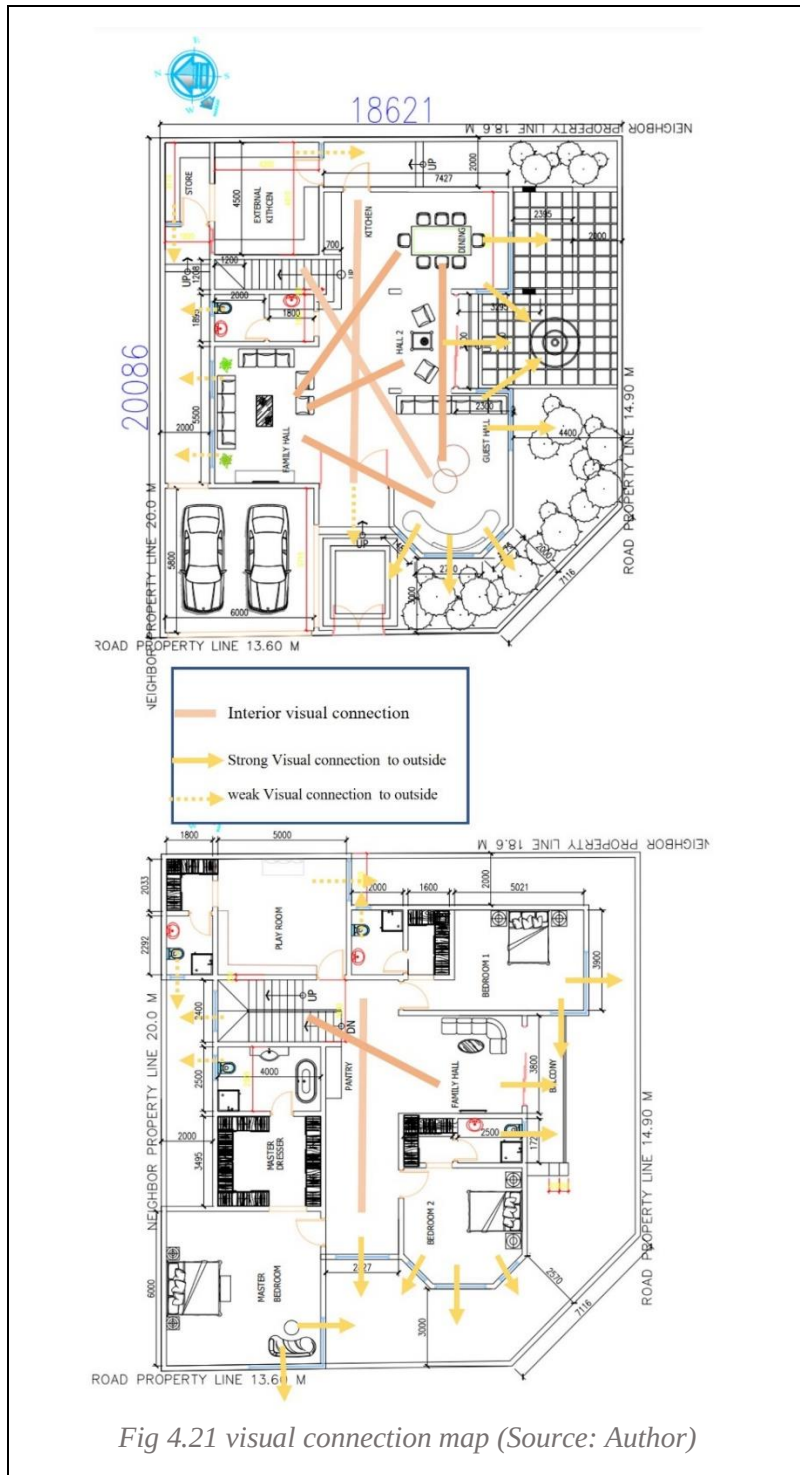


Fig 4.21 visual connection map (Source: Author)

In the same manner, Fig 4.23 shows the circulation paths inside the house. On the ground-floor, the only pathway with strong privacy is from the car park to the outer kitchen, and is only accessible by the residents. However, there is no living area, or a family space reached by the same privacy measure. The living-room and bedrooms are only accessible by the staircase, which is open to the main hall.

Nevertheless, it is possible to reach the stairs from the kitchen if the guests are seated in the open-majlis as it is confined in a corner. Yet, as stated earlier, the owners prefer having their guests in the main hall. Furthermore, the first-floor plan clarifies that the bedrooms are only accessible by house owners as they're away from guests area.

Percentage of area	Ground floor	First floor
Enclosed zone	70%	100%
Exposed zone	30%	-

Table 4.9 exposed and enclosed area percentage (Source: Author)

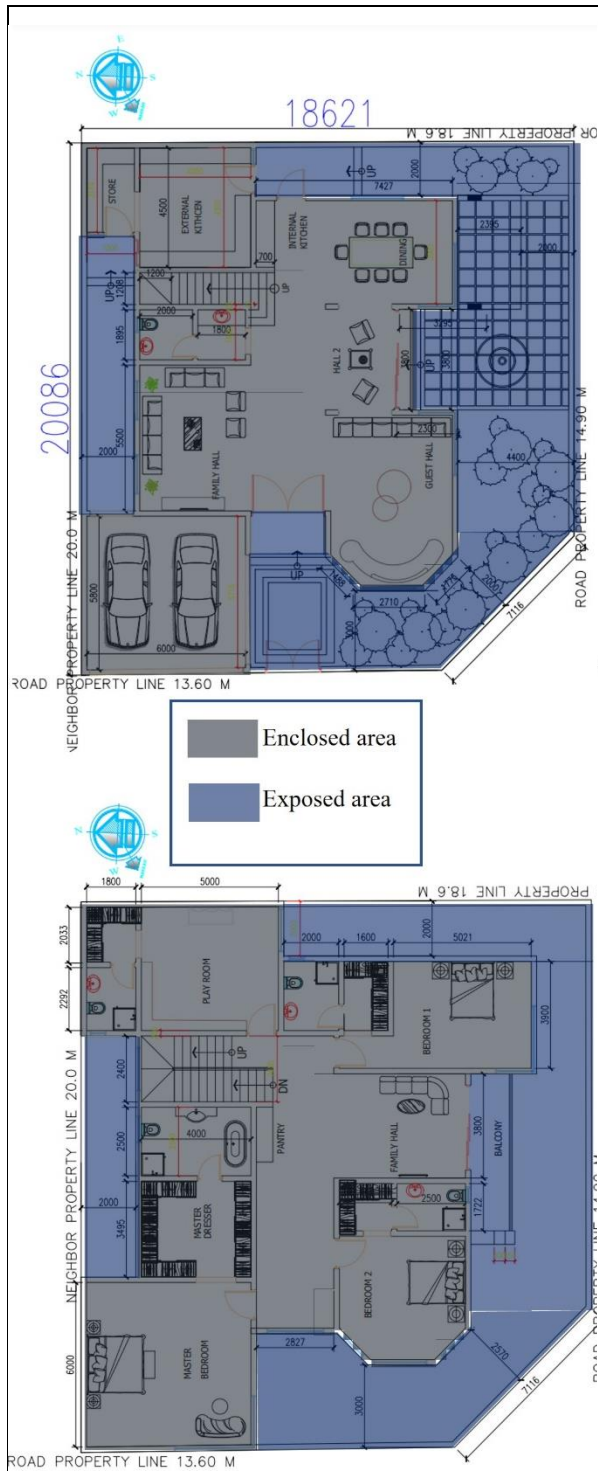


Fig 4.22 enclosed and exposed spaces

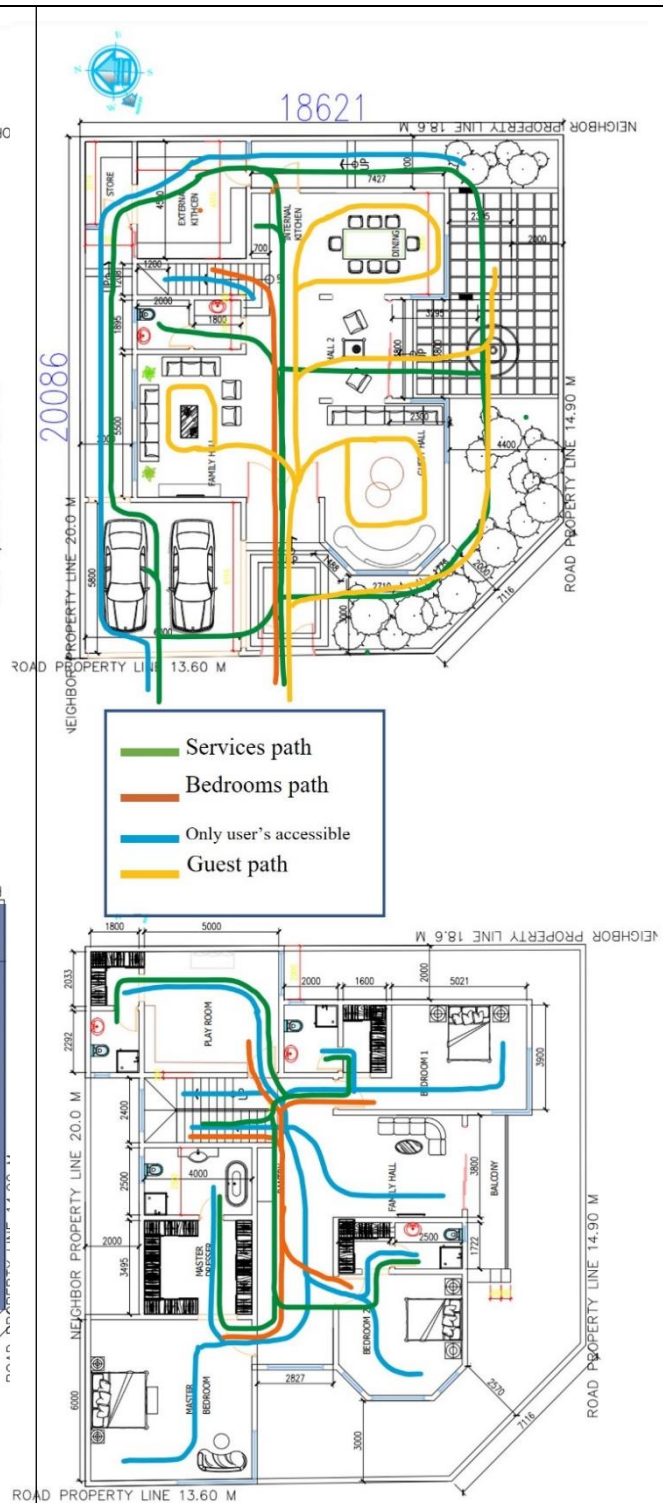


Fig 4.23 circulation map (Source: Author)

- Surrounding community

The urban structure in the nearby area is consisted of residential houses of different land sizes. The neighborhood is new and most houses are recently built. The adjacent house is 4-stories which makes it hard to maintain privacy in the exposed garden. Nevertheless, there are no close services (school, mosque, cold store, etc..) and they can only be reached by the car.

- **Narrative**

Fig 4.24 shows a sectional narrative similar in design and size to the actual grandson house. Apparently, the land size is smaller than the father's house, the outer garden is limited to a small setback surrounding the house. Starting by the main boundary wall entrance, it is parallel to the main house entrance, where four meters distance is in between both.

To show the users' experience, entering from the main entrance, the house is fully open to one-another where the end of the house is seen and so does the other zones. Fig 4.25 shows real images collected from the case. All zones are open to one-another and revolving around a central open transitional space giving effortless accessibility and visual connection. Fig 4.25 symbolizes females gathering, where it's assisting a big gathering; to feel togetherness rather than scattered in multiple rooms.

The family has considered the hospitality trait designing the ground floor as a full formal space. Along with the furniture distribution to allow more guests. As seated in the main hall, shown in right side of Fig 4.25 it gives a full view to all parts of the house including: the open majlis, the staircase, the dining area, the kitchenette and the semi-courtyard garden. In the same manner, the occupation of ground floor depends on who is visiting, number of guests, and social bond.

On regular gatherings with the husband family (i.e. siblings, their partners, their kids, the grand mother and father) they'd stay in the main hall together men and women. They'd enjoy the spirit of the space, the sun, the modernity, the wide view to all other parts of the house, the sound of music, birds, and waterfall. Similarly with the housewife family visits, they're all considered close family and no boundaries are set to separate genders. Yet, women are in full modesty, wearing their hijab. Which limits the ladies' comfort as being visible to men. Meanwhile, if there is a larger gathering, men are asked to stay in the open-Majlis, and women in the main hall. That is to respect their guests and maintain distance between men seats and women.

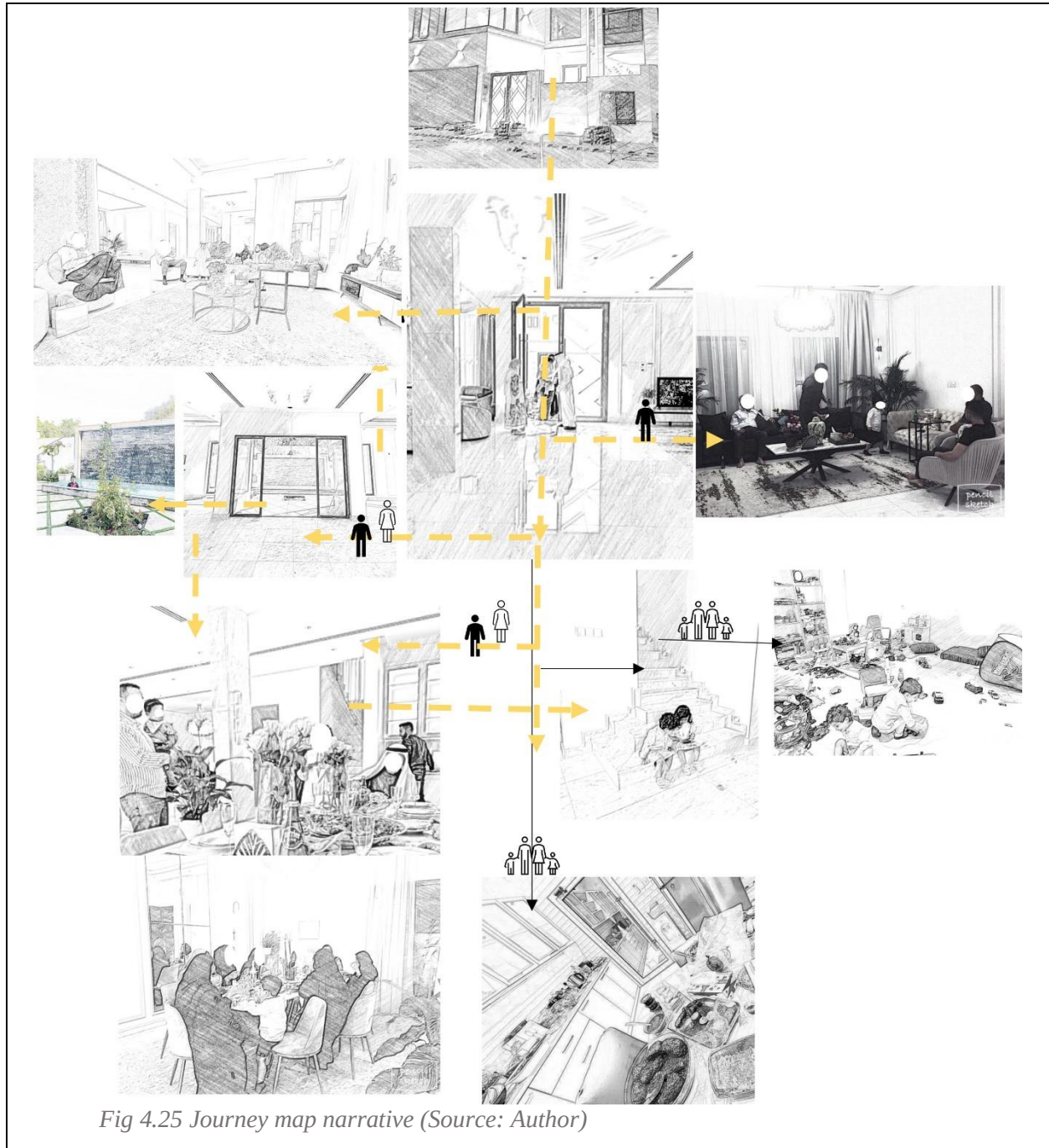
Then again, if the visitors are only the wife's friends, the husband would leave the house for them to feel more relaxed or might stay in the bedroom. For men gatherings, it is supposed to be held in the open-Majlis, as the space is distributed to give a sort of privacy, for the housewife to move freely without exposure. Thus, as hospitable trait, the owner wants them to enjoy the full spirit of place that cannot be felt on the majlis. Therefore, they're greeted to the main hall, and the housewife wouldn't move downstairs.

Additionally, the guests get invited to meals on the open-dining area. The dining has 10 seats, thus if there are more guest it is used as a serving buffet table to accommodate more dished. Then the guests would serve themselves and get back to the main hall or majlis to eat there. The garden on the other hand is not used daily; because it's exposed to neighbors tall building and has direct sun most of the time.



Fig 4.24 sectional narrative of home experience (Source: Author)

To conclude, all the ground floor is a formal space, and due to their young kids it is not comfortable or practical to be staying on the ground floor. Also, the family meals are consumed in the outer kitchen which is squeezed in one corner with no windows. Therefore, the fancy open-plan wasn't utilized for the family pleasure, the view to the semi-courtyard garden and artificial waterfall is kept for visitors most of the time. While it doesn't serve female guests comfort in mixed gatherings. Thus, more accurate experience with more years of occupancy.

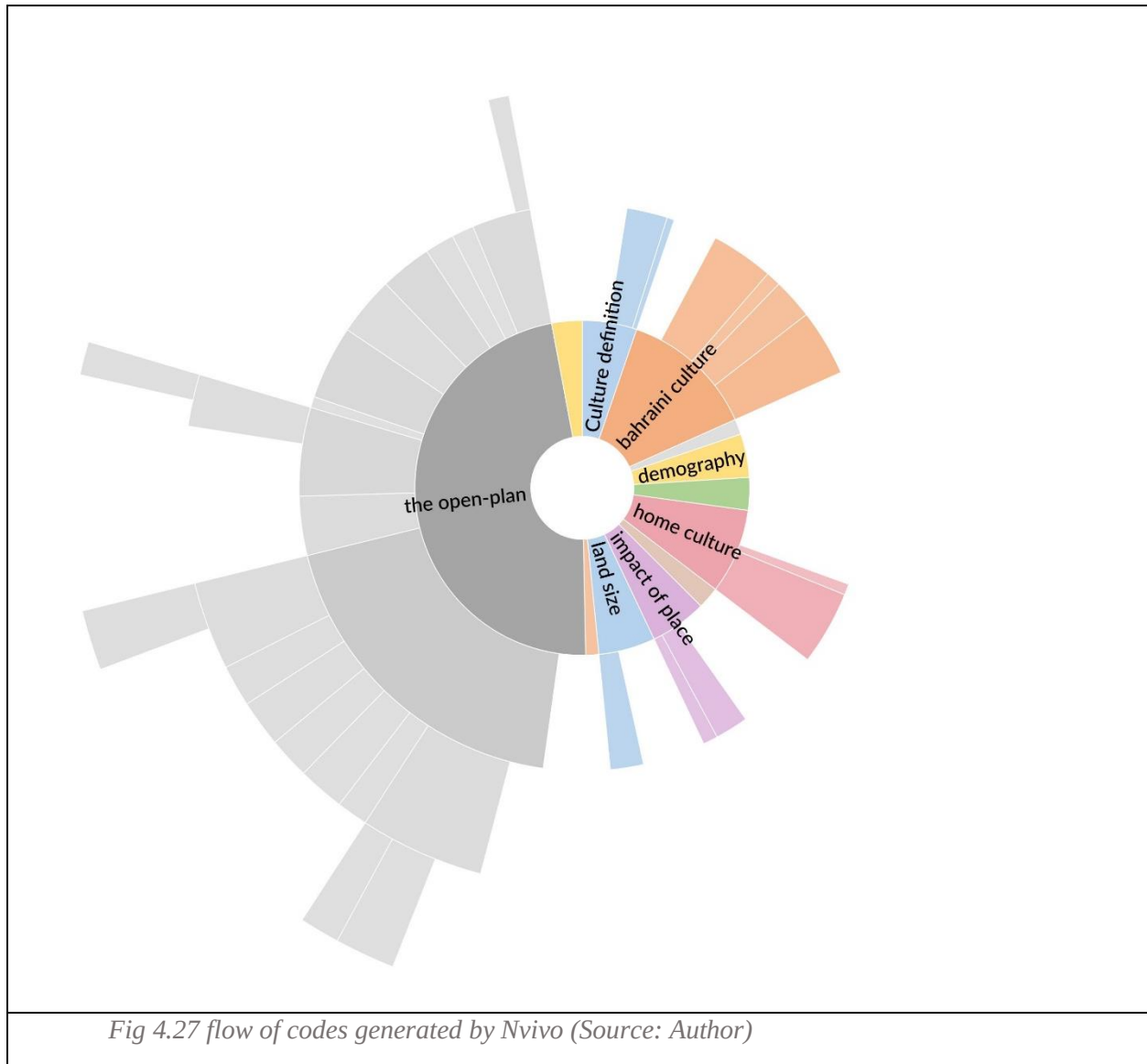


4.2 Interviews Analysis

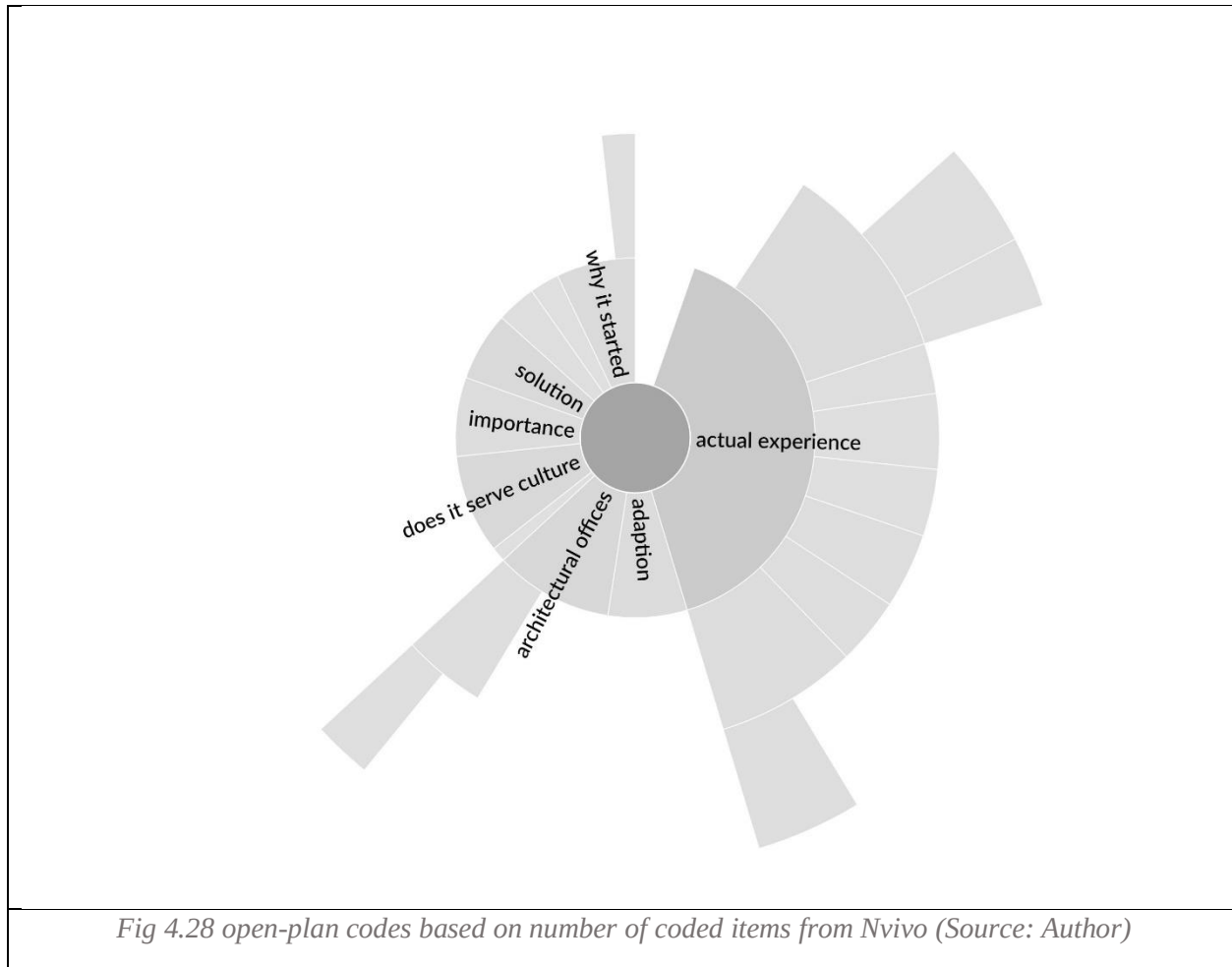
The research aims to explore the possible impacts of the openness approach on residential space. Therefore, the analysis will go through four main topics that respond to the research objectives and shape the themes as presented in Table 4.9 and introduced in chapter 3. In this analysis, interviewees are marked as *Arch* for architects, *User* for residents of open-plan houses, and *Acad* for researcher academics. Each interviewee is coded with a unique number beside the title. Furthermore, all the labeled codes have been grouped according to the research aim and objectives to resolve the research question. Fig 4.26, created by the author, shows the distribution of codes to create themes in analyzing the data. Some codes are repeated in different themes yet, it's to reach connection in findings while it's analyzed once only.

- Research case	- Theme	- Definition
- Bahraini home culture	- Culture definition	- Highlighting the Bahraini culture and its transformation along with architectural buildings.
	- Bahraini culture	
	- Transformation of culture	
- Open plan	- When & why started	- History of open-plan residential in Bahrain
	- Influence	- Architectural offices, globalization impacts on home experience
	- Importance	- Is open plan design an essential choice in Bahrain?
	- Users experience	- Current and future concerns about Bahraini's life
- Homeness	- Home Definition	- As collected information on design errors, user-centered designs are proposed
	- Home Culture	
	- Referring to the openness impact	
- Impact/ Sustainable solutions	- Architectural solutions	- Concluding the research.

Table 4.9 Analysis themes based on objectives (Source: Author)



Then again, the open plan code has been distributed to other main codes as shown in Fig 4.28. The main code has been the actual experience referring to user experience on an open plan home. “Architectural offices” code has taken a substantial portion of codes unexpectedly as well. It refers to the role of architects in a home experience, thus it will be clarified afterwards in the analysis. The remaining coded items have been distributed upon why the open-plan trend started, its importance, user- adaptation, does it serve culture, and proposed solutions.



Analyzed data

Interviewees Demographics

Starting with the demography of research, identifying the researcher's population. A total number of six architects, all of them holds Bachelor's degree in architecture, yet two has proceeded to complete Masters' degree in a related specialization. All interviewees have a minimum of 19 years of experience and residential projects background. On the other hand, the researcher's population are a total number of five academics. The years of work experience was not addressed, yet they are mostly PhD degree holders and are all teaching assistants with high knowledge to share. Subsequently, to take a comprehensive overview of both genders' actual user experience, 4 males to 5 females has been interviewed within the age of 30 to 45.

Consequently, considering the research data sources and setting the constant variables of interviewees groups creates more credible results for specified population. Additionally, the constant variable of demographics provides related information, to be analyzed and create a specific conclusion.

Indeed, this section will provide the analyzed data according to the interviewees' statements as coded. The analysis will include data derived from Nvivo along with discussing view points from both professionals and users. Thus, divided into four sections as discussed earlier in Table 4.9. Starting with Bahraini home culture, including defining culture, the Bahraini culture, and the transformation of culture.

4.2.1 Exploring Bahraini home culture

Definition of Culture

In order to address the objectives outlined earlier, the definition of culture to the Bahraini community is arguably an important question. The replies from interviewees have varied. Thus, [Acad interviewee 1] has stated that culture is *“The nature of the society that we are living in that is shaped by our religion, our level of education, how we are living”* While [Acad 3 and 4] have confirmed the statement with similar replies. On the other hand, [Acad 2 and 5] related culture to identity! As [Acad 2] said *“culture is what will distinguish us, culture is our identity”* and [Acad 5] addressed

“Culture is important because this is how you understand yourself and the world”. In addition, all academics have linked it to practices and behavior in place. Correspondingly, [Arch 3] defined culture as *“ideas that a community is familiar with”*. And [Arch 1] has clarified that it is *“a mixture between materialistic and sensible things that cannot be measured”*. Also, he agreed on its connection to the past together with [Arch 2]. However, [Arch 5] has stated ‘culture changed from the past’. While identified culture currently as *“the mentality that the people are adapting themselves to”*. Also, [Arch 4] has agreed by stating *“it is our lifestyle which is made by us and by our needs”*. Fig 4.29 shows the word cloud for the culture definition shaped by interviewees' responses. It emphasizes the words by their frequency in the statements. While culture is in the middle, act, religion, need, people, and things are apparently the most repeated words which point out the concept behind culture. Therefore, culture can be identified as how people live in a space with respect to their religion and in relation to their surroundings.



Changing culture

Consequently, as interviewees have linked culture to the past, culture is proven to be changing as discussed by Architects interviewees. Thus, a second question emerges: what is the aspect that allows change to occur if cultures do change? Then again, what can be called a positive cultural change? [Arch 1] has stated on culture *“it is always changing with the time changes and developments in life overall (...) it cannot be fixed (..)”* similarly, [Arch 3] agreed by stating *“It is surely changing, it is impossible that there is something that can remain stable as is, everything can change”* Besides, [Arch 4,5,6] had stated similar opinions as well. Meanwhile, [Arch 2] has an opposing opinion, leaving 83% of architects’ interviewees to agree that culture does and should change. The left opposed opinion states, *“In some communities culture is very strong that cannot be changed easily”* Yet she also argued, *“But, nowadays I think that people are more flexible and they are adapting to a new lifestyle, and they get rid of some of the cultural backgrounds they grew on.”*

Additionally, interviewed architects have explained the attributes that create cultural changes worldwide. [Arch 1] said, *“the openness to the outside and social media, all of these have contributed to change the culture”* and [Arch 2] added in the same manner, *“One of the main important reasons of change is the openness to the world or other cultures and civilizations in the world”* Moreover, [Arch 6] clarified *“it depends on what are the people exposed to. And based on that, I think culture evolves itself from one era to another”* While [Arch 4] had a unique opinion as he reflected on his definition of culture and stated, *“As I said before, the culture is the translation of our needs, and our needs are not fixed, it changes from time to time, it depends on many inputs.”* Therefore, from an architect’s point of view, culture does change, and it changes by time, changes in needs, and exposure to other cultures. That is how it has been translated based on their experience designing homes.

Conversely, researchers had a different way of justifying their answers. [Acad 1] said

“Previously, the culture was mainly fixed. It was as I said, shaped by religion (..) However, we started with globalization, and like the whole world become a very small village, we started to notice that there is a slight change in our culture. (...) Maybe the current changes are not that fast”

Therefore, it can be summarized that religion was the main influencer in Bahraini culture, yet traditions were the second to influence design until globalization occurred. Similarly, [Acad 2] stated, *“What makes culture change is the other factors that interfere with human beings’ daily life,”* and so does [Acad 4, 5] agree. Nevertheless, [Acad 3] has stated opposingly, *“Culture is a fixed thing (..)I will never leave my culture in the airport, I have to take my culture with me, so it affects my life”* indicating that culture exists within the human being and cannot be left out. Overall, most interviewees have stated that culture is changing due to globalization, which is discussed upon Bahrain case in next section.

The Bahraini culture

This section will highlight the different points of view about Bahraini culture as known by Architects and Researchers interviewees.

The first interviewee who is [Arch 1] stated, *“the most distinctive thing in our culture (..) that we value a lot is privacy”*. While [Arch 5] added, *“there is a*

percentage of privacy conservativeness that you would like to have and appreciate having in the living space, and then the surroundings.” and [Acad 5] supported. Also, [Arch 4] said, “our culture is from Islam, and we have been affected by Islam for the last 1400 years. So everything in our culture is related to privacy”. Which in parallel, [Acad 1] agreed by stating, “culture is shaped by religion as we said, so it is different than other countries, here in Bahrain”. Moreover, [Acad 2] has elaborated on the same topic “Bahraini people do consider Islamic values, so the culture physically respects the principles of Islam in social issues as well, and cooperation and dealing they have their Islamic rules.”

Furthermore, there are other specified Bahraini cultural values acting as Islamic values besides privacy. [Arch 1] indicated, *“kindness, generosity and welcoming spirits have always been there, they love having a majlis so they would invite many guests and serve them,”* which is an Islamic value to honor the guest. While [Arch 6] confirmed *“in Bahrain, people like to invite so many guests to their homes”*, and [Arch 5] elaborated, *“the Bahrainis would always have their own highness, friendship, gesture, and the welcoming traits and habits, that will not change from the Bahrainis ”*. Thus [Acad 1] answered

“...we are people who like gathering, staying in groups, having a weekly gathering with our family. Socializing is something vital. We are not having a culture of being closed on oneself, (...) not that we only gather with our parents on weekends we can go there every day.”

While [Arch 2] specified *“from the old days, there are still regular family gatherings, men gathering every weekend mostly, And in Eid families are celebrating in their houses, the whole days of Eid! They are visiting each other.”* And about the number of guests on every visit [User 9] added upon other events *“if you are moving to a new house, we have a new baby, you have these social events, people want to come and greet you to share the joy with you. So that is the main reason for having these many numbers of guests.”*

Therefore, as occasions and events of gatherings are presented, several interviewees have spoken about gender separation within these gatherings. Where [Arch 3] mentioned *“Families used to prefer having a separated majlis for men and a main hall to host women for gatherings and visits; this was the way of living and separating genders in a particular time earlier.”*

Similarly, [Arch 2] said, *“Majlis was an essential space on the houses. Some Big houses also have separate men Majlis and women Majlis, family halls were not that important,”* And [Arch 6] spoke about special occasions gatherings such as weddings, *“As a Bahraini culture we don’t do celebrations for mixed genders in one time, it is always for men only or women only.”* [Arch 4] has agreed by stating the same answer that occasions are not meant to be as mixed genders gatherings for the women to enjoy with no boundaries, While [Acad 1] clarified

“As a conservative community, Muslim and hijab is part of the women identity; you can see that we have to be very careful (..) In our culture, the women’s voice should not be exposed to men if it’s high or when she will laugh or make jokes; when there are men, it’s not good, and it’s not preferable.”

Nevertheless, she stated, *“and at the end, it depends on the family occupying the space, some don’t have any problem if the women weren’t wearing Hijab, she does not have any issue with this, so it’s OK.”* Thus, most other interviewees emphasized this brief case of Bahraini culture as well, describing it as multicultural. As [Acad 2] acknowledged

“The Bahraini culture is always multicultural, always, not only now! (...) There was a country exchange of goods, and when there is an exchange of goods, you are exchanging ideas, behaviors, and thoughts, so that’s what has made our culture multicultural, (...) Nowadays, it’s changed by globalization, the big impose of the media, how people think that whatever is in the West is modern!”

And ended with an example of how each spot in Bahrain has a different unique accent, even though Bahrain is a relatively small country. Stating *“sociocultural values in Manama differ from sociocultural values in Muharraq! Every spot is honored by its culture, identity, and originality (...) that’s why we have this diversity since ever.”* Besides, [Acad 5] said speaking about Bahraini home culture: *“depend really on what type of family profile you are having, (...) and what type of lifestyle are you looking for?”* Which indicates the multiculturalism between different families in Bahrain, in such home cultures might be slightly distinct.

Equally important, many interviewees have included the women’s role when speaking about Bahraini culture, [Arch 4] reported: *“everything in our culture is related to the privacy, related to protecting the women, related to protecting the house”*. Clearly, women are the main character in establishing the concept of privacy

That concludes the overall Bahraini culture circulates around multiculturalism, women's roles, and the issue of privacy. This aspect is also affected by family profiles and their influence on other cultural beliefs and behaviors.

Transformation of culture

Certain themes were anticipated, but new themes emerged while talking to the interviewees where some added their own articulation and questions. Explaining the current culture as “different than the old days”, yet still holding some values. The new theme can correlate to some controversial questions; for example, did the open-plan residential design change the culture, or was the open-plan a choice after the cultural change? However, as it is a complex case of human interactions, it cannot really be identified who started the change first, as stated by researchers. Nevertheless, this data can clarify attributes of change and support further research on Bahraini cultural change.

To begin with, [Arch 4] claims in a solid statement as he argued earlier, that culture is related to needs *“Our needs in this world time is different from years of abundance, different than our needs in drought years, our needs are changing, so that means our culture will be changed based on this change.”* While 100% of architects' interviewees has agreed that Bahraini culture has changed by the current globalized time. Hence to start relating to [Arch 4] statement, what are the needs or changes that made the housing design change? Architects, researchers, and users of open-plan have all stated different statements regarding cultural change and needs, in mostly agreeing statements. Therefore, this section will discuss attributes of change, primarily globalization as an influencer of cultural change on multiple cultural values. Along with the change of housing designs towards aesthetics rather than needs. And last is the family structure transformation, which are all emerging themes by the interviewee's thoughts. Response are presented in parallel, as each theme is discussed by the three interviewees groups at once.

Globalization

Researchers confirmed that globalization was the reason behind cultural change. Starting with an academic researcher's point of view, [Acad 1] has stated

“We started with the globalization, and the whole world became a very small village, we started to notice that there is a slight change in our culture. However, we are trying our best in our community to

preserve the main traditions, cultural values, and customs as much as we can. But we cannot say that the culture is not changing; it is changing. Maybe the current changes are not that fast.”

Criticizing globalization as the main influence of cultural change. Thus, defending the community attempts to protect their culture. Highlighting that such change is not acceptable due to her earlier argument that most of the Bahraini culture is Islamic. Hence, Islam is a highly respected religion that is not appropriate to be altered, as stated by [Arch 4]. Likewise, [Arch 5] made an observation about the global influence stating *“with the development and changes, smart phones and social media, that has become the new culture, (...) it depends on what are the people exposed to, and based on that I think culture evolves itself from one era to another”* Explaining, that a cultural change is not necessary meant but it happens with the exposure and then acceptance of what is being shared. And he added *“your communication is not just to your country, the communication is global, you are in contact with everyone around the world, that exposure has made the culture adapt itself”* such statement can clarify a rapid change, as prior to social media the communication was limited within the country and is no longer the same. Further, [Acad 5] elucidates *“we’re living in a weird time where culture is not really a direct outcome of the place you are living in”* emphasizing the influence of globalization upon cultures around the world, creating new adapted cultures influenced and mixed by other cultures seen on media. Similarly, this was the point of view of [Arch 2,4,5].

Furthermore, [Acad 2] stated, *“in Bahrain, we don’t migrate; we don’t go to other countries to settle, we go for a period and come back, so when we come, we are certainly coming with an enlightenment mixed with the outer culture, and even if it was minimum, it is still a new merge”*. Which clarify the difference of change happening now and then. Then again, she has argued on Bahraini culture *“it changed by globalization, the big impose of the media, how people are thinking that whatever is in the West is modern! is progress, is something that we all require, and we all need”* such strong statement says much on further rapid changes on culture. Similarly, a user of open-plan [User 9] has stated *“the cultural things and these restrictions are fading away everywhere! in the work, and in studying places, not even just in houses, so this is like a global thingy or like a global era.”* Indeed, settling an argument that researchers, architects, and users has all thought about globalization when it comes to cultural change in Bahrain and agreed on it as its widely recognizable. Therefore, globalization influence on Bahraini culture

expressed as an emerging theme without a direct question intended to the interviewees.

As a result of globalization, this section indicates the arguments on the change of hospitality trait and home design in parallel. On housing requirements, [Arch 1] has stated *“I would say that the whole life has changed, some clients told me that they use the majlis once a year, (...) One also said that they would use it only in special occasions”*. Where Majlis was an important space related to culture in housing designs, its value has changed due to globalization. Likewise, 100% of the architect’s interviewees has asserted on the society shift away from enclosed Majlis as [Arch 2] has also stated *“if you compare, spaces and residential houses nowadays you can see that closed Majlis is no longer a main requirement”*. Yet to recall, when the Majlis first existed on Bahraini homes, it was mainly for male guests enclosed away from family area. Thus, it is a representative of residents and especially females’ privacy.

Moreover, [Arch 4] has elaborated on globalization influences on the new generation expressing hospitality trait in other spaces, such as restaurants rather than homes, adding *“Small families are neglecting to invite guests anymore in Bahrain, maybe twice a year, or once a year only”*. While speaking for herself [Arch 1] said *“I rarely have guests, and I’m also busy until early evening, So I designed my house like it’s only for me.”* Which can explain the Majlis being left as an old idea, as women went to work and doesn’t host guests as much as before. Women role at home has changed and so does the need of privacy from guests decreased. Similarly, [Acad 2] has stated *“women started to go out for work, so she’s not 24 hours at home, the doors are closed, and also a culture of fear has appeared to a certain extent, I don’t have to know my neighbor!”*. Therefore, the need of Majlis and women privacy at home is not a daily requirement anymore due to the decreasing number of visits.

Hence, globalization has also affected the time and nature of gathering. [Arch 2] argued on family gatherings *“I think committing to weekly gathering or even holidays in houses are no longer the only solution. Now there are a lot of people who like to spend the Eid outside, having dinner, lunch in a restaurant, visiting malls, and other things.”* Which can be an argument to normalize leaving Majlis concept! Practicing hospitality away from home as agreed by [Arch 4] earlier. In addition [Arch 3] said *“if we separate the Majlis we’re isolating it apart from home, not to be used most of the time as the way of living has changed (...) So why would*

I lose this whole space for people who would come for a short time” Consequently, several users interviewees has expressed the same argument as well. This elucidates reasoning of shift away from Majlis designs and supporting statements of diverse point of views about the current change of gathering nature and frequency due to globalization and.

Aesthetics

Another part of architectural change linked to a community culture, is the move towards aesthetics. [Arch 2] has stated *“we feel like there is more direction to having nice views while sitting in your villa no matter how big it is, you want to enjoy the surroundings”* indeed with the world developments functionality and users’ needs has been linked to aesthetics rather than achieved alone. Hence, [Arch 4] has argued upon open kitchens *“the kitchen now has turned to be one of the decorative elements in the house. Because there’s a lot of very nice designs and ideas popping, (..) so it has become part of the decorative movements inside any villas”* nevertheless [Acad 1] has argued upon this aesthetical movement

“people now looks into something they like , and then they do it to discover that it’s not fulfilling their needs afterwards (...) So the people are going behind the aesthetic part, beauties, doing something different, similar to other things that they already seen on social media, or even on the Internet. So, it is definitely affecting their needs”

This argument clarifies that the community has been affected by globalization, for which they would demand what looks beautiful yet forget to focus on its functional need. In the same manner [Arch 2,3,4,5,and 6] has all agreed that the first priority for owners when designing their homes is the visual aesthetics and appearance! Indeed 83% of architect interviewees agreed that users’ needs has been shifted as a second priority. Which eventually cause a conflict after living there as stated by [Acad 5] as well *“I think we’re at a very conflicting stage and we are still not clear of what we want yet, or how to provide what we want”* that is due to users thinking that they want aesthetics as the main requirement.

Certainly, when users were asked about their priorities designing their homes, responds came a bit similar to architect’s statement. Table 4.10 shows the classifications of priorities on the open-plan users group, blue for men respondents and pink for women. The question mainly was to classify from (1) highest priority to (4) lowest between (user need, aesthetics, maximum use of plot, and cultural values) Nevertheless, interviewees added new headings according to their priorities.

	1	2	3	4
User 1	comfort / maintenance	User need	Use of plot	culture and visual beauty
User 2	Use of plot	visual beauty	user need/ experience	cultural values
User 3	location and needs	visual beauty	Use of plot	cultural values
User 4	visual beauty	User need	-	-
User 5	user need	visual beauty	-	-
User 6	visual beauty	User need	Use of plot	cultural values
User 7	Use of plot	visual beauty	User need	cultural values
User 8	user need /cultural values	visual beauty		
User 9	visual beauty	Use of plot	User need	cultural values

Table 4.10 users priorities based on gender (Source: Author)

Certainly, the priorities vary between users due personal differences. However, as discussed by architects and researchers the visual beauty or aesthetical need is indeed alternating between the first to the second highest priority to users while cultural needs are neglected to all. Affirming [Acad 5] statement as there is still misunderstanding of home requirements. Thus, as a concluding statement of residents changing priorities [Acad 2] relates it to fashion change “*we are treating architectures as fashion*” An important statement that goes to highlight the research issue, indeed as change is a certain phenomenon yet, it must not cause concerns to the identity.

Community structure and values

This theme explores families as a founding unit of the community. Moreover, the shift of place design and needs of these families relates to cultural change. [Arch 4] has linked the change to the community structure as well, stating “*Previously families and houses used to be occupied by 15 to 20 or even 30 persons, I would say each family has 15 sons and daughters so they need bigger spaces. Today this is not the case, families are smaller, and individual life has been emphasized more*” which highlights that previous design used to be thought of based on the overall family and their culture needs all in one place. Yet now, every person has his own needs translated to the space design. As [Arch 1] stated “*the kids bedrooms are already separated, each one has his own room*” Thus as this shift toward separated rooms has occurred, the family bonds in a home environment has decreased; because every child feels contented and abundant being alone in his own space! Yet back to [Arch

4] statement, [Acad 5] has a related point of view speaking about home occupants and its design in extended family homes. Stating

“extended family were gathered horizontally I would say, so we needed that open space in the middle. While now we are extending in a way vertically, so we have all the family members, you’re building these flats for your kids in first floor second floor third floor. So, we are kind of changing that courtyard with the staircase for the elevator right now”

Clarifying, on horizontal expansion the courtyard was the main private meeting point. But the extension vertically due to lack of lands, has left the women with no enclosed private space to gather in outdoor. That shift on architecture, has made the staircase the board meeting/movement point at a home.

Another intake of the family structure relies in the social bonds within a family. Social bonds and Islamic culture values as well as gender separation were investigated next. Gender separation as seen by [User 2] who asserted this change stated:

“before 20 years, most of the gatherings here in Bahrain would be with male and female separated, but now people are accepting to set in one area. After all we are going to universities together, (...)going to work together as males and female! so there is no issue in meeting in the houses as males with females”

Indeed, he is informing that a women would be there in a formal state, veiled, and confined just like if she’s outside. Yet as argued earlier, a home must be a place of extra comfort even to the visitor to express warmth of hospitality. While all other users have stated clearly that there is a shift away from gender separation at many gatherings. Equally, when [Acad 4] was asked to describe the Bahraini culture as she knows it, she said *“...it differs from the past 20 years! (..) it became more open right now, men and women sitting in the same table, eating together.”* As a solid state of change between past and recent culture, expressed spontaneously with change of the gender separation value! While [User 8] added

“people get used to change. We might dislike it at the first time, but after few times we get used to it. (...) At the beginning, everyone used to separate men and women visitors in their houses. Then people started to make exception like for the aunt’s husband, for the sister’s

husband. Next, people started accepting it and having all visitor together.”

Indeed, all interviewees has asserted that gender separation is no longer restricted in normal gatherings as before. In addition, [Arch 4] stated *“it’s not as before where ladies covered their faces passing through men, the Hijab is a bit less than before, and they will be relaxed together more than before”* clearly, all three groups of interviewees has proposed that gender separation is no longer valid through regular gatherings. While, [Arch 2] has expressed; women visitors do not feel like themselves siting in a place where there are men or they can be exposed. Because it makes them tied to maintain their modesty which’s against the purpose of gatherings at homes. Yet on Islam [Arch 2] said *“it is not preferable for men to hear women voices, their talks and their laughs, but nowadays I believe most of the families accept this!”*. Also [Arch 6] clarified, on special occasions such as marriage ceremonies or funerals and other similar events, they still separate genders to give more comfort and privacy for females.

Concludingly, [User 9] anticipated that within the coming years and due to globalization, the changing nature of family structure and lifestyle as well as gender segregation might change due to open plan designs.

4.2.2 The open-plan residential projects in Bahrain

The open plan age

To begin with the open-plan theme, it has been addressed to the interviewees to acknowledge the research topic. Yet the most important question to be asked is when it first started in Bahrain? The question has been asked to the architects in practice group as they are experts on the market trends and shifts in Bahrain.

[Arch 1] has stated on the open-plan concept *“when I first started 20 years ago it was there”* and added *“I would say it started trending 10 years ago.”* Besides, 85% of the architects has stated the same number of years for the trending phase, while [Arch 5] argued *“from my experience as a student I could see that there was a lot in Bahrain in the early 90s and it had continued all the way, and it’s even evolving more and word more”* thus, he’s informing that it has started on the 90’s yet by the time pass it evolved with the acceptance of the community. But has no reference of when it has started to really be a trend. On addition of statics, [Arch 2] has stated on the open-plan trend *“Lets say 10 years back, everyone would*

recommend the open plan concept. Even the 10% who are still requesting closed plan, but most of them over 90% would come for open plan concepts.”. Summarizing, most architects has referenced the open-plan trend to a period around 2010.

Influence

Consequently, a question has been raised to architects regarding the community attitudes towards the concept when it first occurred back then. That is to understand the reasons toward the recent rapid demand for the open-plan concept. About 50% of architects has replied that it was not successful back then, as people were mostly into the closed Majlis concept. [Arch 3] has stated *“Previously no, the acceptance was limited to a very small group, those who has their way of living more open as a family”*. Thus, the other 50% of architect interviewees has replied that it was the base beginning to the recent rapid shift.

Yet again, the next question came as why it started to get more ambiance to the house owners? Many reasons have been stated by the three groups of interviewees. Architects has indicated mainly because of the change of needs, the small plot size, globalization, openness/ change of culture, the need of aesthetics, the new building codes, and budget altogether. Remarkably, all of the architects have focused on the globalization and lack of lands issue as the main reason to implement open-plan housing in Bahrain. Upon lack of lands, or the smaller plot sizes, architects have argued that the plot size were bigger in the 90s comparing to the recent plots. [Arch 2] stated *“The size of the plots has changed dramatically in Bahrain”*, while [Arch 1] said, *“the lands became smaller and the prices has elevated enormously”*.

Hence, to clarify the connection between open-plan and land sizes, [Arch 4] stated *“...they are putting the solution of open-plan in this land to give a feeling of openness and wideness, borrowing the distance wall”* Thus, the idea of open-plan was implemented more as it gives the space a wider look. Indeed, all architects has stated the need of wideness feeling. Thus, [Arch 5] stated *“basically the cluster phobia I would say, people have become more outgoing, (...) they like to go out and so on. So they want to feel that openness in their residence as well”* bringing the same feeling to home.

Nonetheless, [Arch 2] stated *“I believe globalization was the first spark, or the start of adapting this concept. But then because of having these small plots, this was more useful”* and [Arch 3,4,5,6] has agreed with similar statements. Certainly, [Arch 4] has also spoke about globalization in a different position, stating *“the new generation are amazed by the global movement. So, the need of having this kind of*

privacy has diminished” Thus, globalization has influenced the need of aesthetic over privacy. Adding on the aesthetic value [Arch 2] said *“this is like the main reason (..) or let’s say the kitchen show rooms are now creating a beautifulness with a nice finishing, very expensive utilities, and those appliances, it looks really pleasant”*. And [Arch 1, 4, 5] has agreed.

Additionally, architects have added that the new building codes combined with the lack of lands was also an influence on the open-plan trend. [Arch 2] stated *“they have that 200 to 220 square meters plots, and you need to apply all the setbacks in front sides and that other sides as via the building regulations in Bahrain”* certainly, the setback occupied the space of courtyard and created an exposed area rather than a private family area. [Arch 3] confirmed *“instead of the courtyard it turned to setbacks around the house, the house unit is in the middle while the open space is surrounding”* and [Arch 1, 4, 6] has agreed by similar statements. Adding, the open-plan was a thought to bring the family bonds back in an open space to perform their activities like the previous courtyard space, as [Arch 4] stated. However, its effectiveness to family is argued in the next section.

Moreover, there are other factors such as [Arch 3] statement *“the change of lifestyle in the country itself, and also the designs itself gives flexibility for decoration”* which [Arch 2, 5] agreed on. Besides [Arch 4] said *“the implementation is cheap, and the outcome is high quality”* Thus it’s more convenient to the clients to implement. Therefore it’s a mixture of multiple reasons joined to create this trend to home-experience.

To the researchers’ point of view, they had agreed to the architects by stating similar responses. [Acad 1] has summarized and said

“There are many reasons, including imitation of the west, this is one of the reasons (...) The second point is that the land sizes have been limited for people who buy lands and start building for themselves. So, they start to be aware that if I start to avoid having walls it will give me more space, to sit and socialize and so on (...) Also it looks like and give feeling that we are modern, we are having our design houses look like what we can see in the TV for example.”

Indeed, [Acad 2, 4, 5] has agreed to the small plot sizes along with the need to have wider space, besides the influence of social media and modernization as a globalization idea.

However, to clarify from user's point of view, they have been asked if they participated in the design choosing the open-plan, and why did they choose open-plan house. [User 2,3,4] has stated that their homes are already built, so it wasn't a direct choice to have open-plan, yet it is also based on budget, location, and needs in space along with wideness. While User 1, is living in his parent's house and has stated it's his father's choice since the 90s and is based on functionality and ease of maintenance due to his background on electrical engineering. Thus for female users, [User 5] has stated that they participated in the design and asserted *"our plan was to make the majlis closed, but the engineering office didn't do it as requested, and they didn't make the hall on one corner like the modern houses, so we let the majlis open to make it look modern"* hence, it was a need for modernization and a misguidance of the architectural office. Similarly, [User 6] said upon the open-plan choice

"when I went to the interior design office, we needed to separate one hall from the other at least we will use it in future like a majlis, she said if you will separate them by decorations like stylish partitions it will cost you too much. There's no balance between cost and number of visits"

Therefore, both user 5 and 6 was influenced by engineering offices opinions while they knew their needs prior to visiting. Nevertheless, [user 7, 8, and 9] had another opinion, while all three has participated in the design process, it is their choice from the beginning to have an open-plan design. [User 7] stated *"It was our choice to try the modern way of living and it is nice."* While [User 8] stated *"I chose the open-plan because I wanted to have an open area since I like spacious places. In the initial floor plans of our house, we had the Majlis as an enclosed room with a sliding door, but I didn't like it"* Whereas [User 9] said *"me and my husband agreed on the designing an open-plan, we faced some resistance from our parents because that is not something we are used to in the housing designs"*.

Therefore, it can be summed that 22% of users were influenced by engineering offices. While 33% didn't choose open-plan yet have bought ready houses and ended up having open-plans due to what's available in the market and matching their other needs. Additionally, 33% have chosen open-plan due to the need of spaciousness and modernization. Yet the last 11% has chosen it for ease of maintenance. Indeed, non has choose it to match any actual need of space.

On the other hand, previous experiences might influence the new choices therefore the users were asked about their past homes. User 2,3 said they were

staying in their parent's houses with closed Majlis and separate living halls, similarly are User 1,8 yet in rented houses. While user 5,6,7,9 were staying in small flats, and user 4 used to live in a courtyard house and then moved to an apartment. Therefore, the common ground is the small apartments to 55% of interviewees, and the closed majlis homes to 44% of the selected participants indicating an open-plan is a choice of transformation away of enclosed small spaces. Thus, with all those arguments upon the reason behind the open-plan trend, the importance of its implementation in Bahrain must be underlined.

Importance

The importance of applying open-plan can explain other needs linked and solved by this concept. Architects has argued that it's highly important to implement open-plan concept, [Arch 1] stateted *"recently in my opinion it is a must, we are forced to do it. We need it to make the maximum use of the plot size."* Architect 2, 3,5, and 6 has all agreed with similar statements. However, [Arch 4] said *"...I'm sure it's not a must, it depends again on the needs, it depends on the circumstances around the project itself (...) I would say on importance scale it's 3/5, maybe after one or two years it will be 5 "* Thus clarifying that the plot size's might get smaller and less affordable by time. Besides, [Arch 5] said

"If you have the opportunity to convert that small house into something bigger, livable space, maintaining the same area that's when you go with an open style house, because again you can have a bit of relief when you enter that house"

which indicates the importance of open-concept to families building recently, and so [Arch 2,3,4] have agreed.

To the Academics, they have a similar importance scale due to the shortage of lands. All [Acad 2,3,4,5] has agreed upon this statement. [Acad 5] said *"it's an environmental necessity, it's a political necessity, because you know we don't have enough spaces! we have to have smaller houses, we have to make those smaller houses look bigger"*. Therefore, it's a need to maintain a comfortable space in relation to plot size rather than enclosed clustered houses. While [Acad 3] argued *"with our limited area to live in we have to adapt our way of dealing, we should not get stuck with traditional way"* Nevertheless, the users of open-plan were asked to understand their opinion as occupant's. In brief, most users have expressed the relief of having an open-space that gives a feeling of wideness in relation to their plot's sizes and stated similar responds to architects. Indeed, that sums up the high demand

of having open-plan houses. Thus, the concept is tested upon users experience to highlight its efficiency and propose solutions if needed.

Evaluating open-plan

On evaluation of open-plan it starts with the user-experience; evaluating hospitality, gender separation, women guests' comfort, family comfort, and the cooking/dining experience. followed by professionals' remarks section.

User experience

The lived experience of open-plan has been addressed in relation to the Bahraini cultural values that were discussed in the literature, along with comfort and homeness. The home cultures that are analyzed include hospitality, privacy, gender separation, enhancing family relationships, as well as serving the cooking/dining experience. Indeed, some values are interlinked, therefore it will be discussed in parallel by user's thoughts. Theme privacy couldn't be presented as standalone topic, as it links to other values, hence has been merged with the related themes. In addition, homeness is tested through user's comfort, circulation, and place access as argued on home meaning section earlier.

Hospitality

Starting by hospitality, users has been asked if the open-plan has served them in terms of hospitality to their guests. On the men group, [User 1] has stated *"We rarely have visitors actually. This is something that we did not plan for, but it happened, so even when we have visitors it is kind of difficult to host them while managing the freedom of movement"* that's statement has linked hospitality, family comfort/circulation, and privacy all in one. Indeed, the open-plan was not serving those values to user 1 due to overlap. Similarly [User 3] argued

"the girls will sit wearing hijab, and they will not have full privacy, actually they don't have any privacy at all. So that's why I just stopped inviting both gender guests to large gatherings, (...) So yes, especially that my family culture does not accept it"

Indeed, having the same issue as [User 1] of not serving enough privacy to women guests which end up creating an impact on hospitality value as connected to their cultural values of privacy. Yet he added, as a solution they started inviting one gender at once only, and the open-plan has served in hosting more guests at a time.

Moreover [User 2, 4] have asserted that the open-plan does help them host more guests with no issues.

Also, for women interviewees [User 5, 7, 8,9] said they have started to have more gatherings in the open-plan house. However, [User 7] has argued *“it depends on the person himself. If I’m a social type of person, the space wouldn’t limit me”*. While [User 6] stated *“We transferred to our home during COVID-19 crisis”* therefore she cannot measure the difference in their gatherings. [User 9] also stated the pandemic has limited their gatherings. Nevertheless, all users have asserted that the openness provided welcoming spirits to their guests.

Gender separation

For the gender segregation value, users had multiple point of view, indeed depending on their cultural background. [User 1] has addressed, they do implement gender separation but only women will be in the (open-plan) ground floor stating *“while I go upstairs in a room that we call it computer room, (...) so this is for men gathering, while the women will feel free moving in the ground floor”* which tackles the point of family privacy as the second floor is considered only for family, as well as the point of hospitality as he stated *“women will feel free downstairs but for the men it would be difficult so how can we put a lot of men in this computer room? The space does not allow us.”*. Opposing [User 2] asserted *“We don’t separate genders, rarely I would say (...) until now I have not had this occasion where there are too many people, and we have to separate them.”* Therefore, he is linking gender separation to large gatherings only. While [User 3] said

“For the first relatives, so my father, mother, sisters, their husbands. And also for the other side, (...) we don’t separate it. But on the second level of family let’s say, we separate. Because not all of them accept it. So we just do it for them more than for us. And also, if my friends came with their wives we will sit together, but she will not sit for only men coming.”

clarifying the gender separation is done in terms of the linking relationship between them and their guest, and upon the guest’s cultural need. However, women are prohibited from sitting in only men gathering which has not changed. Besides, [User 4] argued *“if my family are coming they’ll be sitting together, but if I have a friend and my wife had a friend coming then we cannot sit together, because there is no relationship between them they cannot sit together, (...) I can’t be sitting with a woman that I don’t know or doesn’t relate to me!”* Therefore, it also depends on the

linking relationship, however, they don't separate genders in larger family gatherings. Yet he added in the same manner *"Maybe some will agree to sit with their distant relatives of other gender, but some will not. Some are not familiar to stay with women, so we have to separate the days where males will come in a day and females in another"* Hence as a matter of guests respect, they would choose different days for either men or women if they know it bothers their guests or causes discomfort.

Besides, women interviewees have stated similar statements to men indeed depends on their own culture as well as their plan type. [User 5,6,7,8] who have open hall and open Majlis stated that they do separate genders in larger gatherings, even close family for ease of managing and extra comfort to their guests. Yet, they have access and sight to the other gender. Evidently [User 7] asserted on segregating genders

"Most of the time yes, it's because of culture and traditions. Some visitors are strict in relation to cultural values, but others are okay with combining genders. And also, how close the person is to us has an impact on whether to separate or not, the closer they are, the less restrictions."

While [User 8] added it depends on both the number of guests and the relationship in parallel. Stating *"if it was only my cousin with his wife, we would sit in one place. However, if the group was larger, we would sit in separate rooms"* Nonetheless, [User 9] had a different opinion *"about gender separation we don't actually practice these things because me and my husband always host family members and common friends"* therefore their way of performing culture is different and the open-plan was not a problem. Yet she added *"if it's not common friends or not common family and they want it or assisted on separation, we would go for it"* Thus, similar to User 4 argument, they'd perform gender separation as a respect of their guests who need it. It can be concluded that practicing gender segregation links to either relationship with the guests, or the number of hosted visitors. While some would implement it only to respect their guests' values.

However, on the reasons why gender separation is not restricted as before nor planned for in the spatial design, [User 2] said *"because people are not meeting each other as they used to back in the day, usually nowadays we are minimizing these gatherings. Very few occasions that you have people visiting anyhow"* which 55% of interviewees has agreed to. Also, some has linked it to globalization, while [User

3] linked it to life rush and cultural change saying “*Actually let’s say we became closer to each other compared to past, and also the culture has changed little bit. (...) and they have less time to meet each other separately*”. Nonetheless, in mixed gender gatherings or exposed separated gatherings women guests’ comfort is addressed next.

Women guests comfort /Hijab/women voice

[User 4] argued “*naturally privacy is for woman not men*” which refer to women need of modesty near men in Islamic culture. Therefore, for guests’ comfort, it has been addressed as a new code during the interviews, if the open-plan serves the guests in these terms. The men group has asserted their opinion of what they see in their environment. Yet women replies are more accurate as it’s related to them.

[User 4] argued “*you can wear your hijab and dress well and sit it’s okay, take your privacy, they will not interfere to your privacy*” which are all distinct beliefs. While [User 3] said they once faced issues as men did not like the idea of women voice reaching them. In addition, [User 2] stated “*I think until now we did not go through this situation*”.

While for women, [User 5] said when there is mixed gathering at her home “*I prefer to wear hijab if there are men. They might open the curtain at any time, so I wear my hijab and abaya*” Though [User 7] said “*they keep their hijab on them because of modesty in our culture. the type of discussions are also totally different near men, women at the end need their privacy and also men does*” Which all other women has agreed on, except for [User 6] who said upon women voice near men “*depends on the person his self, the habits of how she grew up on, and how the culture of her family is*” Which does not discard the other users statements as it’s a different position, not related to the space itself. Additionally, about [User 5] guests on only women gathering “*Some of them keep their hijab and the others remove it. They will ask first if my husband is at home or not.*” Which similarly [User 6,7,8,9] has agreed on. Prompting, the open-plan does not give the guests full privacy unless the husband is out of the house. While some would still feel stressed that he might pass-by anytime so they should cover-up to let him pass. However, not all Bahrainis wear hijab, therefore those findings cannot be generalized. All in all, as the open-plan require the husband to leave the house to provide comfort for the women guest, family comfort might be affected. Thus, next family comfort is measured.

Family comfort

The family comfort is measured through both the cooking experience and the movement through the space during different occasions and the daily space allowance. Starting by the circulation.

Circulation

As the movement through spaces might cause an impact on users' privacy, the interviewees have been asked upon the spaces that are accessible at their homes that wouldn't disturb other users. Tested on different occasions, it is divided in three schedules, mixed gender gatherings, women gatherings, and men gatherings. Including the accessible places for the husband, housewife, and the guests in those three types of gatherings.

Access/movement	father(owner)	Housewife	guests
User 1	First floor only	Ground floor only	Women: open-spaces only Men: computer room
User 2	All house	All house	Open-spaces only
User 3	All house	All house	space we're inviting them in
User 4	All house-reduce movement near women space	All house-reduce movement near men space	Only spaces invited to
User 5	Open Majlis only	All spaces- not the majlis	Only spaces invited to
User 6	All open spaces	All open spaces	All open spaces
User 7	All house	All house	Ground floor
User 8	All house – not women space	All house – not men space	All open spaces
User 9	All house	All house	All open-space

Table 4.11 accessible places in mixed gender gatherings (Source: Author)

Access/movement	father(owner)	Housewife	guests
User 1	First floor	All house	open-spaces only
User 2	Try to reduce his movement		open-spaces only
User 3	Leave		space we're inviting them in
User 4	Leave		Only spaces invited to
User 5	Leave- could enter from the other door with full privacy to go up		All open spaces
User 6	Leave		All open spaces
User 7	Leave		Ground floor
User 8	Leave- or stay in first floor		All open spaces
User 9	Leave		All open spaces

Table 4.12 Accessible places in Females gatherings (Source: Author)

Access/movement	father(owner)	Housewife	guests
User 1	All house	First floor only	Open-spaces only
User 2		Master room only	Open-spaces only
User 3		First floor only- there's access to leave/enter home with partial view	space we're inviting them in
User 4		First floor only- or leave	Only spaces invited to
User 5		All house but not the exposed spaces	Only spaces invited to
User 6		All house- not near men space -wearing hijab in ground floor	Only spaces invited to
User 7		Depends - Usually all house except the Majlis	Semi enclosed Majlis
User 8		All house when men are in the majlis- when in dining she's restricted	space we're inviting them in (The Majlis-dining room)
User 9		First floor only	All open spaces

Table 4.13 Accessible places in male gatherings (Source: Author)

According to the interviewee's responses, the family movement inside their home during guests' existence is limited depending on the gender. To clarify, during men gathering the husband has full access to the whole house. While in women gathering the housewife has full access as well. But in opposing circumstance where the guests are of the other gender, the housewife will have access to less spaces at home depending on their plan circulation. And the husband wouldn't be allowed home as stated by 77% percent of responses. However, on mixed gathering 55% of replies said: the husband and housewife would have access to all house, the other 22% said they would have access to all house but will reduce movement near spaces occupied by the other gender. While the rest are still concerned on gender separation, so they kept enclosed spaces for men away from the open-plan. Then again, on all types of gatherings guests are only allowed to the open-spaces or spaces they're invited to enter. In addition, users have been asked about the advantages and disadvantages of their home experience.

Women and men had different topics to discuss on the disadvantages, yet they all agreed on the wideness and beauty along with the natural light entry as Advantages of the open-plan. In addition, in terms of hospitality some interviewees asserted that it's more pleasant as it allows more guests along with visual connection. While others said it's restricting on some occasions, and they'd rather have closed Majlis. However, a side that came-up by the open replies from users is the suitability for kids. On contradicting replies, some has stated it's an advantage to allow kids to play freely in an indoor open space. While others said it's not safe for kids to be left alone in open-plan nor useful as they'll make a mess all around the house therefore, the open-plan is kept only for guests. On the other hand, the usage of air-conditioning was a repeated point as well. Some has argued that it's nice to have the ACs cooling up the open space rather than room by room, but others said it's not cost effective especially in the hot summer. Thus, to analyze, the replies in advantages were mostly about beauty while the disadvantages were about functionality and sustainability. Which can explain a huge gap. Besides, most interviewees have asserted their desire to do some modifications in the house design due to realization of some flaws after occupancy.

Furthermore, users were asked on their overall experience if they're adapting or not, along with any influence the open-plan made on their home culture. [User 1] stated "*we are trying to adapt to it, but we face difficulty*" While [User 2, 6, 8]

asserted that people get used to change and will eventually get there to full adaption by time pass. Additionally, some other's [User 4, 7, 9] said they're adapting just fine.

Cooking / dining experience

The cooking experience is tested as a home culture for user's comfort as well. User's had different opinions regarding their experience depending on their spatial solutions. [User 1] stated upon the dining room and kitchen *"the two areas are partially separated, and not attached to living room"* as they have a sliding door to separate the kitchen therefore it's comfortable for them. Also, [User 4] said *"that cooking-hood takes the smell out, and the cooker is very far from the living area it's a very nice type of life that show live-cooking experience."* depending on his plan zoning combined with another solution they're enjoying the experience as a family. On contrast, he added *"But I have a friend in Ashbilya, they have a kitchen and open dining together it's a beautiful place, but I'm sorry they're not cooking like us those traditional meals (..) that's a different type of culture"* therefore that family didn't have the planning serving the Bahraini way of cooking, yet they're not bothered as they don't usually cook. Additionally, [User 2] also stated

"We have plenty of difficulties especially on that regard, because when we are sitting in the open-plan the smell spreads around the house, even though that we have a cooker-hood. We open the windows sometimes, butt the whole house would smell like food, especially with our ingredients in the food, spices, and these things."

Therefore, for Bahraini dishes the open kitchen has not served [User 2] because of the smell. Likewise, [User 3] stated *"you can cook everything except fish, so it is limiting"* however, he mentioned using 'Bakhour' as a solution for the smell of other foods, which [User 2] said their consumption has increased to it in the open-plan.

While for women user, [User 5] has asserted *"There is a problem if we cook the smell will stick in all the house, but we solved this problem by adding an outside kitchen"* In parallel [User 7,8,9] had similar statements. Additionally, [User 6] said *"I have small outside kitchen but still it is not closed, (...) the smell stays for long time"* hence, the women population has all implemented outside kitchen because the open kitchen does not serve their way of cooking. [User 5,6,7,8] had the outside kitchen exceptionally small yet it's the main cooking kitchen. Thus [User 7] said *"Because I use it only for cooking so it's enough for me just to cook and leave"*. Nevertheless, when asked about the internal kitchen uses, they all answered in

similar statements, as [User 8] said *“it’s only for decoration, and as a storage.”*. While [User 9] said *“it’s just for the serving of the main open dining area for the guests”*, and [User 7] added *“We use it for very light modest cooking, for example preparing tea or reheating.”* Therefore, the space left for internal kitchen is actually abandoned and kept for show-off of beautiful kitchen yet is not used to serve the family. Leaving the mother away and trapped in a small outer kitchen.

On the other hand, all users have asserted that the open-plan did not affect their way of dining, it has been the same depending on the family itself. As some said they like to eat both ways, as from culture on the floor or in a dining table and are still doing both. While others are accustomed to eating on dining table only and it has continued the same. To sum up, the open-kitchen idea contradicts the user’s thoughts of making use of plot size by creating open-spaces. As the open-kitchen area is kept unused, while a miniature outside kitchen is trapping the housewife.

Professionals perspective and remarks

Besides the actual user’s experience in the open plan, the professionals’ remarks on the open-plan were addressed in parallel as they’re either creating places or evaluating them in depth. Stating conflicts of the open-plan in terms of user’s needs.

On the topic of adaption, all architects stated the users are actually adapting to the open-plan, nevertheless they had multiple opinions. [Arch 3,4,5] argued that the open-plan adaption might change the user’s mentality in order to feel comfortable living in that space. Also, [Arch 3] said *“maybe the users are not feeling comfortable at home like before, but the lifestyle has forced itself, or let’s say the modern design are taking control and forcing clients to go for it.”* However, [Arch 6] argued *“the original idea is coming from foreign people, but at the end we try to use some of the idea, not following their traditions as well, we try to manage it with our culture.”* opposing the other architects that adaption will occur but will not affect the user’s culture overall. While [Arch 4] stated that the open-plan will impact the culture slowly as time pass, saying *“not in this generation or the next generation but the third generation after them, will be affected for sure. Because the result on the experiments says that just like how the west has changed, we will change also.”* Which indeed a strong statement.

For researchers, [Acad 1] argued that people will adapt but will not sacrifice their cultural values. Stating *“I don’t think that I will change my cultural values and traditions because I am living in an open plan. But I will utilize this space according*

to my needs, and I may adjust the space in a way that suits my culture” Which [Acad 3,4] agreed with, as Bahraini culture is from Islam, and it is the spine to all life actions. While other researchers opposed the statement, [Acad 2] said *“I would say it might change their culture and cultural attributes, because they will be forced to facilitate their life activities in certain way, because they are governed by certain space.”* And added eventually, place would impact the users, yet the aspects of impact cannot be measured now.

While in parallel on the conflicts of open-plan, [Acad 5] has explained the issue of open-plan with reserved families

“for people who want their privacy they’re still having open floor plans with large windows (...) so we created these spaces, they don’t the suits our lifestyle or our beliefs or our norms yet, and there are two options (...) we force ourselves to live in a way that doesn’t really suit this space! so I will keep the lifestyle I used to have, and have a space that really doesn’t support that, or I would have to change just to fit the beautiful house I had”

Which highlighted an important part of the research. Is either to live the full experience of open-plan and adapt in comfort leaving some boundaries behind, or they’d suffer the difficulties of open-plan because they cannot lose their culture. Nonetheless it surely depends on the plan type and circulation they’re having, and the spaces occupied for the family. Further, [Arch 3] stated *“some families lifestyle doesn’t match this open-plan idea but because they are seeing this is trending, they are forced to go for it. But as soon as they dwell, they will realize it doesn’t match their needs.”* Underlining the confuse of what they want and what they need in a space. Equally, [Arch 5] argued that users realize the conflict of what called wants/needs with actual needs of their lifestyle only after dwelling. Stating *“then they realize that OK there is a bit of a conflict with whatever aesthetically had intended from the design they had attended for the house, and their own living style.”* Which features an actual issue of confusing needs with aesthetics desires at home. Additionally, [Acad 1] said

“The mistake that we are doing here in our country or in even our region that we are copying and pasting everything we saw it in the West because we like it. But we didn’t think a little bit about how we can little bit modify it in order to come up with a bast solution that can fulfill our needs, our desire, our cultural and religion aspects”

Emphasizing the base line of the problem that showed up in the open-plan case as it has become a trend. While all architects simply said that the open-plan can be adjusted easily rather than other types of planning, if they get back to the architect. Yet [Arch 5] said *“if they’re paying an amount to get this package, then they cannot afford to spend another further amount to do a lot of modifications to make it similar to their living experiences”* which is arguably a realistic statement.

In parallel, other professionals highlighted that it’s the responsibility of a designer/architect to educate the users to differentiate between what they want and need in order to create better lived experience. Yet [Arch 1] argued *“When the architect is designing correctly, the beauty is already studied in parallel from the beginning”* However, the actual need must be understood from the user first to be conveyed and designed correctly. [Acad 4] said on the same issue *“it lays in the users not knowing what they want, and designers promoting designs as they are the optimal designs! Also not educating the users in the right way, of how the user is going to use this space?”* which indeed an actual phenomenon happening and causing other issues. Equally [Arch 2] declared *“As an architect I think by the end of the day you need to please your clients, and you need to give him what’s in his mind. But I think the good architect must advice his clients of wrong concepts that he have in mind”* as the architect should guide his clients, not just provide him what he asks for at an immediate idea but to think deeper in current and future circumstances.

Additionally, 80% of architects said that client budget is a challenging issue in designs that affects the planning. [Arch 3] said *“The rules and regulations, and the client budget as well, restricts the creativity for the architect. This what makes houses here all looking similar in designs”*. While on the other hand, [Arch 4] stated *“The architect can be a good family relationship builder or no he can be weak”* certainly explaining that the space planning will influence family relationships and is a position that should be taken seriously.

Then again, [Acad 4] said *“I think this kind of approach is not the fault of engineering office only, it’s about the users not knowing what they want, and the users getting behind the social media”* as she said that social media has influenced clients to ask for the open-plan as an optimal solution. While [Acad 5] said *“I mean we kind of go with it to extremes, either everything is very open and it doesn’t suit our kind of conservative culture, or everything is very enclosed, and it doesn’t suit the way we’re kind of opening up to the changing lifestyle”* Which clarifies the shift

The word cloud shows culture, home, house, living, design, family, and open, as the most frequent words in the query. Combined can explain the importance of designing houses to suit a family culture as a way of living at home. The second most repeated words include guests, privacy, life, style, want, different, need, people, space. Clearly, privacy and guests' hospitality are examples of home cultures implemented to house designs in Bahrain. The other words are clarified upon interviewee's statements.

The responses have varied on the theme, a group has explained it upon Bahraini culture while others has explained it as a general concept and some architects has asserted relating to their role. For the architects' group, [Arch 4] has replied expressing his opinion on home culture with a story

“One of the lectures that I attended before, most of the attendees were architects and designers from the young generation, and they attack our design, (...) saying that we are designing our house to serve the guests. (...) our Islam has asked us to honor the guests! None of the religions will give you these values, So first thing we are bringing to our design is our Islamic culture”

As explaining that hospitality is one of the main home cultures that are implemented in designs mainly in the gulf region. Identifying this cultural value as a respected need, that must be taken in consideration while designing a home rather than neglected to follow new designers' mindsets. Similarly, [Arch 6] stated *“actually if we talk about home it is more related to your social values”* as those values are performed in openness at home, can be related to family relationship and also hospitality trait. On the other hand, [Arch 3] combined the most granted point of view and stated

“Home design itself is actually a lifestyle. The way of living in that particular family is the starting point for us to design the house. Every family has different needs, but sometimes there is similarity between families. But the way of living or lifestyle is what determines the designs”

Explaining as related to her role, affirming the responsibility of architects to design according to home culture or as she stated the family way of living at home. While she started an argument upon designing according to home culture *“they think if they*

change the place, they can adapt; but when they move to the house, they don't feel comfortable or homeness" emphasizing that not any house can be called a home, if it does not meet the users cultural needs in the design, it will not give a feeling of home.

Thus, the homeness of an open-plan has been analyzed earlier as culture is part of homeness. Thus far, interviewees have been asked if it has affected their feeling of home directly and if they feel comfortable having open-plan. All interviewees has stated that the open-plan was comfortable for daily uses of family members. While some complained on the issue of cooking smell in an open kitchen, and families of toddler kids has doubted it's safety. Thus, most of them also said the discomfort come's when there are guests that might interrupt their movement depending who's visiting. Upon the suitability of open-plan to Bahraini home cultures, [User 3] argued *"Different people experience it differently and that's based on their family culture. The application of culture is different between each Bahraini family."* While [User 8] likewise said *"It depends on the family's nature and traditions. I would say if they had a Majlis outside the house, it would suit all Bahraini families."* Which can sum up that some family do accept open-plan as it is, while other's still need a separated majlis to serve the family comfort and ease of hosting guests of different genders. Yet, to reply [User 9] said of any discomfort in the open-plan *"for me actually I don't, but I don't know if my guests have these feelings"*

In addition, some interviewee's were pleased understanding their home experience through the interview. [User 3] said *"actually it's the first time I think about it. I hope listened to this interview or I answered these questions before buying the house. It just opened my eyes to lots of things."* And added *"you just enlightened me to lots of things, that maybe will help me on the future, for redesigning the house based on our needs"* which indeed is the demand of the whole study.

Impact of open-plan to home

As a home place, results of a trend might not show directly, architects has argued future impacts of open-plan on user's comfort. [Arch 1] has argued *"the plan is how we will live in it, not how it looks from top view"* and added *"as the client live in their homes at that time they will feel what requirements are missing"* as the daily experience is what's valid not the plan lines. On the other hand, [Arch 2] said *"when their kids grow up, if there are young boys later on they will be young men, they need an enclosed space for their gathering, I think then they will realize that the open space will not fulfill their needs."* Which in parallel is part of the living

experience, the suitably along with the change of needs and requirements, that cannot be measured now as it's still not there. Consequently, [Arch 5] said *"it all depends on the overall layout and how the architects looked at multiple scenarios, or how the living environment is done."* As the future stories can be studied and envisioned to create a 'home' for the longest period.

On the same argument of place comfort [Arch 4] said *"with the new generation of architects, they all want open-plan modern houses copied from hotels, and you can see that many things added in homes are not logical"* Which is a strong argument that beauty should align with comfort. As it is not a choice of homeness to bring only beauty as seen on commercial places, hence it won't serve the family. While in the same manner, [Acad 5] argued on the open-plan homeness

"I guess when privacy disappeared at home we kind of tried to go away from each other, by hiding behind our phones, (...) So I think with the walls going down we kind of looked away from our social bonds in family, which I think we didn't expect, we expected that once the whole space is open then we would be more connected more bonded, but that didn't happen! everyone turned out to his room, the one who uses ugly indoor living space"

Highlighting what social media has brought along with the open-plan trend. Promoting that it is to gather the family in one space to perform their activities, yet it has not served the purpose as it has led them to hide behind phone and doors for shallow privacy and undesigned spaces.

4.2.4 Sustainability and solutions

As a result of arguments made, both architects and researchers has proposed solutions to serve the Bahraini culture in an open-plan after the insights during interviews. [Acad 1] said as concluding comment on her interview *"in the Bahraini culture I don't have a problem having an open plan house, but I need to have lots of points, for example I need to have detach kitchen for the smelly food, then I need to have a place that can serve men gathering or lady gathering"* Therefore, for the case of family and guest privacy, all architects has emphasized the idea of semi-privacy, as well as to manipulate the zoning and circulation to serve user's needs. [Arch 1] said *"we can make a semi-private place for the guest's area. So I divide the house in a particular way that I still have privacy for the house owners if there is guests"*

coming” and added for circulation and privacy in parallel *“the husband have access to the house from outside to the kitchen and directly to the stairs, not passing at the open guests area at all”* Which [Arch 2,3,4,5 and Acad 1,2,4,5] has proposed similarly. Thus [Arch 2] proposed 3 zones solution, stating *“that kind of zoning just to divide the house into let’s say three parts: front, middle, and back, the center will be maybe the circulation, and wash toilets that would serve the front majlis, and the back is the family hall”* and [Arch 4, 5] agreed in similar statements. Attached in Appendix F sample drawings of proposed planning as stated by architects and drawn by the researcher.

Another solution was proposed by [Arch 3] *“they can add decorative partitions to separate the areas or even changing the furniture layout, it is impossible that there are no solutions for a particular problem.”* As adding separation elements to define spaces to feel enclosed yet still open, some other architects has proposed similar solutions as well. Hence, this solution is not functional to serve complete privacy, especially for veiled women guests. Additionally, [Arch 6] has stated solutions that he implements as a project developer *“if I’m designing a majlis I always keep a sliding door or folded door to give the choice for the family to open it when needed for any reason specially parties”* which has been agreed by [Arch 2,3,4,5 and Acad 5] to give visual spaciousness or bigger space for more guests while can be closed for two genders gathering. Moreover, [Acad 5] has stated *“you can put more money in a glass wall for example that separates two spaces, yes that door might be more expensive but it’s less expensive than a hall in a plot of larger land if you are going to buy a larger plot size”* as she explained, it can be turned to frosted when privacy is needed, or all opened for one gender guests. Similarly, [Arch 4] has agreed *“we need to teach people that you need a smart solution, with minimum cost, with very high quality, and the outcome will be something that you will like a lot, it will affect your life, it’ll affect your relationship with the family”* aligning in parallel with [Acad 5] statement, a minimum cost is for the solution and serving the value need in the same time as a long term solution, but not necessary the minimum cost for execution.

Also [Arch 6] added, *“we always keep one room in the ground floor calling it guest bedroom and a lot of people are looking to have a room like this in their homes.”* Which as he stated is a multipurpose room, based on the family need, as [Arch 1 and 2] said sometimes it’s used as playroom, family room, or to host the elder parents to sleep in.

Whereas for the open kitchen issue of smell, [Arch 5] argued *“there’s always a cooking kitchen that was outside, and an internal kitchen in the house is always open (...) which we call the show kitchen, used for breakfast and so on”* Thus created an argument that the outer kitchen is always small and neglected as a design while it’s used more. Hence, [Arch 2] said

“My advice for my clients is not to design a very small kitchen just for the sake of a frying. Because I know maybe like young families the wife will not cook in her first ten years let’s say frankly, but later on (...) that little kitchen will not serve her.”

Proposing a sustainable solution to serve the current and future needs, as the show kitchen requires high-cost while isn’t used as much as the outer kitchen. Thus, it’s also a balance between needs and cost efficiency. [Arch 1,3, 4 and Acad 5] has asserted similarly. While [Acad 2] added *“I’ve seen that the kitchen was open so some people has covered it with glass! Just to keep visual connection but the smell will be controlled.”* Which similarly can better serve the family rather than designing two kitchens and wasting space.

To conclude, some has proposed passive sustainable solutions as well. [Acad 5] has stated *“we do need that openness as a solution, but we need to do it with paying attention to two things. Creating space that is nice for us as family members, and also having that layer of privacy for when you have people over”* While [Acad 1] has agreed by stating *“let’s hold the stick from the middle. So I’m still having a very contemporary way of living, on the other hand I am also fulfilling my needs and requirements”* Which can analyze that needs and culture cannot be neglected to the modernization, both should be taken into consideration in parallel. On the other hand, [Acad 4] said *“I would create the go back plan (...) this could be something that the engineering office needs to provide later on if you did not like this for example just to close this, we have provided you with a Plan B”* an interesting solution for open-plan users who wouldn’t feel comfortable after accommodation to provide them with another solution in hand with minimum waste/cost.

While [Arch 4] has argued that due to the globalization our glorious designs have been neglected and stated *“we have a good design movement in Bahrain, we have to relate to it. So I think this what should happen now, that we have to link the new and old generation with a strong bond”* Proposing to connect the senior architects with the new generation of architects to inspire them by the old way of needs evaluation, and translation to solutions. Likewise, [Acad 5] asserted *“we have*

to have education that creates better channels of communication, to create that link between the university as a place to teach students and probably the industry! connecting them better to offices where you see real clients and so on” to prepare the coming generation of architects, by meeting actual clients and real-life needs. That is to be familiar with the way of analyzing users’ lifestyles and translate it to a built environment. Besides, she added

“we should move towards asking clients about their lifestyle, their expected outcome from the space the way we want to feel in a space, the way you want to use the space as opposed to “please tell me what style do you like, what size of room do you want?” and you know how many floors?”

To guide architects as life-influencers, to understand user’s needs in a space, rather than the visual outcomes of the space. To better achieve a home rather than a space to live in and show off to the guests.

Consequently, while speaking on the traditional architecture [Arch 2] proposed *“I think we need to bring back the concept of the open courtyard in our houses, but we need to modernize this concept in a way just so serve us more than just an idea to bring back”* Clarified that the old courtyard isn’t functional anymore due to heat and weather. But it can be brought back to serve more privacy separating family area from guests area while still having the view to garden, which all other architects agreed on. Additionally, [Arch 5] stated *“We are trying to achieve that in a lot of designs that we have created, (...) Despite the house being in a very modern architecture or a contemporary design, the spirit of the courtyard is adapted or implemented in such way”* While [Arch 4] also argued

“in the present-day we don’t have big lands to provide the Majlis to the guests and then the halls for the family and then extra rooms for other guests, so we can design our houses by combining two functions in one place and keep the concept of serving our guests as Islam told us. So I think we have to respect our culture, our previous designers, and take from them the good ideas/good values, and implement those values but with our present template.”

Indeed, as the past has served the culture therefore it can inspire better solutions with the recent constraints, acknowledging the culture and it’s past home designer. While merging functions in one space has been agreed on by [Arch 5 and Acad 5]. He also suggested vertical solution as the land becoming smaller, proposing an open-plan in

ground floor for the guests along with an open place for the family in the upper floor while connected with an elevator that's far from the guests area.

Hence, the architects' populations seem to be directed to create solutions as that is their role and daily-life mindset. Even though they weren't asked about the practicality of courtyard house in the current period, architects started to question its validity now and proposed solutions to implement it. Alternatively, researchers had different way of addressing the question. As all interviewees has agreed on its success in term of culture implementation back then as well, yet they had supported their response with evidence stated earlier, without connection to current solutions.

Nonetheless, the chapter findings are presented summarized next. Including both case-studies and interviews insuring data triangulation.

4.3 Findings

To summarize, the case studies findings can be found in Table 4.14. Divided into two sections: grey as general information, and blue as experienced by users.

	Case 1	Case 2	Case 3
Owner	Grandfather	Father	Son
Project year	1950s	1996	2016
Hired Architect?	No	Yes	Yes
Building concept	Introverted	Extroverted	Extroverted
Location type	Capital old city	New city	New proposed area near agricultural
Land size	270 m ²	1014 m ²	400 m ²
On land built area	190 m ²	325 m ²	295 m ²
Built percentage to land	70%	35%	75%
No. of floors	2	2	2
outdoor area	80 m ²	690 m ²	105 m ²
Building permits	No building codes, yet owners design their houses not to overlook neighbors	There must be 2 meters at last between the built house and neighbors property/ services can be attached	There must be 2 meters at last between the built house and neighbors property/ services can be attached
Parking?	No	Yes	Yes
Transformation of built area	Additions made building extra services and an extended family area	No additions/ renovation done	Needs minimal adjustments/ not done
No. of occupants	Then 21 members: including 3 extended families /now 3 members	Then 7 members / now 9 members: including one extended family	6 members
Age of occupants	Then: 1 to 50 years old / now 40 to 90 years old	Then: 1 to 40 years / now: 2 to 65 years	1 to 35 years old
Elapsed time living	Around 62 years	26 years	2 years
Ground floor use	Bedrooms/ guest courtyard/ animals courtyard/ services	Guests area/ family area/ services/ substantial garden/ maid room	Guests area/ small garden/ services
First floor use	Bedrooms/ services	Bedrooms/ services/ office	Bedrooms/ services/ play room/ family area

Area dedicated for guests	25% of ground floor	40% of ground floor	70% of ground floor
Is the guest area used by family?	Yes the courtyard is daily used/ the majlis is used 3-4 times per week	Yes daily	No, rarely
Private garden?	Yes	Yes	No
Users opinion: kids/family friendly?	Yes	Yes	No
User Comfort?	To a certain extent	Comfortable	To a certain extent
Women comfort	Depends on users present, during day is easier for the sons wives as men are at work/ later men inform if they're passing by women area so they cover up/ recently is easier as there are no extended family members/ for guests the majlis is far from family area	Easily, family area/ bedrooms are separated, easy movement when there're men guests, women guests can sit privately, extended family use the enclosed family room thus it's easy to walk through the house	The house wife cannot move freely when there are only men guests, when mixed gathering women must stay formal, when only women gathering they ask if the husband isn't home so they can stay comfortably
Guest accessibility to family area	Accessible for women	Not accessible	Not accessible
Cooking experience	convenient no issues, was outdoor in the courtyard then a kitchen was built in a courtyard away from rooms	There is an outer kitchen for daily cooking and an open outdoor cooking area near it, the inside kitchen is only used for family dining or preparing breakfast	The main kitchen is accessed outside the house to prevent smell, the family dining is also there. The inside is only a small kitchenette used as a coffee corner
Eating experience	The users are used to eat on floor, now mostly in the grandmother room. The guests as extended family also eat on the floor to accommodate their number	The family daily meals are in the indoor kitchen, the extended family and other guests are welcomed to a semi-open formal dining room	The family daily meals are in the main kitchen, sometimes concerned on the smell as it's the same place of cooking. There's a formal dining in the open space for guests
POV advantages	-More privacy	-well studied movement	-visually appealing

	-the rooms overlook private courtyards -private garden	-family/women guests privacy respected -users' needs are considered -welcoming wide entrance	-can accommodate more guests formally -feels wide
POV disadvantages	-The need to walk in heat to reach places inside -cannot be fully implemented with the new building codes	-land area not much utilized	-women/ guest privacy needs prior discussions -kitchen accessed outside the house

Table 4.14 findings of case-studies (Source: Author)

Additionally, on interviews there are multiple key finding presented in brief:

1. The Bahraini culture has changed by now due to diverse reasons as discussed, to include globalization, world developments and change of needs
2. Bahrain has multi-cultural culture, depending on the family and their past experiences.
3. The open-plan was influenced by globalization and has evolved more in Bahrain due to shortage of lands
4. The open-plan design does serve the Bahraini culture in one side, yet it doesn't serve many other values
5. Home comfort in open-plan depends on the planning solutions and circulation
6. Indeed, the open-plan will cause cultural change as users are still not fully satisfied, thus adaption as a solution is an influencer of change
7. The application of open-plan is a need due to lands size, however, passive and active solutions were proposed by architects and researchers

Chapter 5: Discussion

“The Islamic law, traditions, and culture of the society defined, to a certain extent, the borders of women’s presence and activity” El-shorbagy (2020)

The previous chapter has analyzed and presented the main research findings as planned on the research objectives. Presenting the Bahraini culture and the efficiency of open-plan to the community values. An evaluation of the home-experience on an open-plan house by users of space, architects who design spaces, and researchers who understand future impacts. It has highlighted the globalization impact to shaping the home environment and experience to users and guests. This chapter connects back the arguments of literature along with finding from the interviewees and supported by evidence from case studies. The aim was to explore the open-plan trend and its relation to Bahraini community from different perspectives.

The discussion section will start by the cultural change and its influence in Bahrain. Going through the open-plan, its influence, importance, and efficiency to Bahraini cultural values. Then the current and future impacts to gutest, values, users, and home feelings. To end by solutions to better serve the community either enhancing the open-plan experience or improving future home planning.

Discussion

The discussion section will compare what's found in the literature with the current findings from chapter 4. To begin with the culture theme as the start to discuss the open-plan validity.

Evidences of cultural change

To recall, the first research objective was to study the Bahraini home culture in depth and emphasize on the role of architecture and culture in influencing one another. That is because as recorded from literature, Bahraini culture is an Islamic culture (Almahmoud, 2015), and the influence on altering religious values is not desired (Salman, 2016). Which has been approved and emphasized by recorded interviews with academics. Stating; Islam is the core spine to all life activities in parallel with the community culture. While the Islamic values set recommendations and rules, the community culture depends on location and traditions. Referring to multi-cultural culture as said by interviewees. Similar to what is stated by (Abu-Gaueh, 1995) that each home has its own values, but those Islamic value can serve all.

The documented Bahraini culture on the literature review section has included values of gender separation, hospitality, privacy, social bond, and other values.

Many on them opposed the culture addressed by interviewees on the research period that occurred during 2021-2022, which demonstrated a cultural change.

It is stated that Bahraini culture is a culture of hospitality, gatherings, and strong social-bonds (Al Aali, 2006; Alenazy, 2007; Alkhateeb et al., 2014; Belk & Sobh, 2011). Thus all interviewees has stated that the gatherings are not as much frequent as before. Which is due to the change of lifestyle, women going to work, and some globalization thoughts, aligned to Salman (2016) statement. While gatherings used to be daily by family and neighbors (Al Khalifa, 2018), it evolved to be on weekend for the extended family, and occasional for other guests as found in interviews and case studies. Indeed, adjusting the need of privacy at home movement between now and then.

Additionally, gender separation was a vital value to maintain privacy of females and family (Abu-Gaueh, 1995; Belk & Sobh, 2011; Khozaei, 2009). Most interviewees argued that it has diminished; as gatherings occurred as mixed-gender, while women kept their veils and modesty. This can demonstrate that privacy to women near men has changed well. Moreover, some have stated that gender separation is applicable depending on the visitor relationship or number of guests hosted. Interviewees also linked this change to factors such as; mixed-gender work environment, studying together in schools and universities. Agreeing with Alenazy (2007) as stated that modernization has reached homes.

Consequently, this cultural change and globalization can be seen in housing designs in Bahrain as noted by a number of scholars (Alenazy, 2007; Almerbati, 2016; Kazerooni, 2002). Which is a clear outcome of cultural change as well; due to their robust connections (Rapoport, 1969a). It can be seen on the case-studies transformation of homes upon the same cultural background yet through three generations.

The open-plan

Moreover, the second objective is to investigate how the openness approach has affected the daily life for users, which are both residents of open-plan home or their guests. Nevertheless, the phase of open-plan trend and it's causes must be noted first.

As stated in the literature, the open-plan has started trending in the 90s, in western homes (Attfield, 1999; Elliot, 2002; Wallender, 2021). While in Bahrain, the Architects group has said that it was there by the same time, yet it had not much

of acceptance to house owners. That is because of the cultural restrictions. However, they all agreed that it has started evolving by 2010. On reasoning behind implementation, researchers has agreed its due to small lands and a need of wideness, easy circulation, and family socializing space (Dowling, 2008; Mobley, 1975; Taylor, 2022). Which is similar to open-plan owners thoughts of open-plan decision in Bahrain. And is 100% agreed by architects, linking it to the community acceptance.

On influence, western home owners were influenced by leading architects, marketing open-plan as the modern luxury living (Elliot, 2002). Equally, globalization and social media were the main accused reasons to the rapid shift in Bahrain homes, then comes the cultural change and users needs as stated in interviewes. Thus, the trend is tested upon it's vitality to the Bahraini culture.

Open-plan in corresponding to Bahraini cultural values

As argued by (Alkhateeb et al., 2015a; Khozaei, 2009; Webster, 1984), home spatial experience in Muslim countries are designed to serve residents and guests, therefore the cultural values and homeness are tested for both.

To owners

To home owners, feeling home is the most important value overall. Multiple researchers (Coward, 2018; Obrador, 1995; Sixsmith, 1986) has stated that home is a place of comfort, shelter, communication, intimacy and safety. While on the interviews responds, home meaning to all three groups of interviewees has not changed from what's cited. Thus, homeness is measured by suitability to family needs and culture on the same time.

While users has stated that they're happy with their open-plan homes, they also argued on some disadvantages that affected the feeling of home. A number of mothers said that they don't feel safe letting their kids use the open-plan area without supervision of an adult. As similarly found by Dowling (2008). Which in parallel, opposes home as a place of safety as said by Steuteville (2014), and restricts kids identity making (Tuedio, 2014). Also, those users added that due to this reason they are forced to stay in a semi-enclosed family living room away from the open-space. As stated by multiple researchers and architects that it is actually a case of globalization as owners design in what has been promoted as ideal home while it doesn't meet their actual needs. Which is also evident by Dowling (2008), as the open-plan wasn't used by families as intended. However, other men users with older

kids has said that they enjoy having open-plan house as it allows them to play with their kids in an indoor safe space away from the harsh weather. Thus, in this manner it must be noted that it depends on the family and their viewpoint of space uses.

Additionally, upon cooking and dining experience users has stated that it has been the same in the open-plan home and the previous home. Nevertheless, architects interviewees have highlighted that with the open-plan trend open-kitchen were also trending for it's beauty as opposed to it's function. While most user's confirmed! As it doesn't serve the Bahraini way of cooking thus an outer miniature kitchen is used for cook. Which is similar to what's argued by (Al Aali, 2006; Salman, 2016). Contrasting the value of home in serving daily activities as stated by (Roy, 2017), and opposing cost efficiency that was suggested by Taylor (2022). Which has been stated by multiple academics that owners has confused their spatial needs with visual beauty as a need. And has been confirmed on the users replies as ranking their priorities most of them has listed visual beauty as the main need.

On the other hand, as culture is linked to location and climate Zhang (2016). A number of users and architects has argued upon the open-plan disadvantage. Due to the harsh weather in hot summer, the open space consumes a lot of electricity to maintain a comfortable environment. Thus, creating a hustle and opposing functionality and sustainability. Analogous with Clarke (2011) statement of open-plan issue with ventilation sustainability.

Adding, as home must be hospitable and accessible, family privacy should be met upon hosting guests (Abu-Gaueh, 1995). Just as privacy were a main value in the Bahraini culture , as linked to the open-plan and homes it's not compulsory alone. That is because a family can have full privacy doing their daily activities in open-plan, yet guests are what makes impact on the experience. Therefore, users spatial experience has been tested upon same gender gathering, mixed gender, and opposing gender. Thus the results showed comfort in having same gender gathering, some restrictions to women for having modesty in mixed gatherings, and strong accessibility-limitations on opposite gender gatherings. Yet similar to Salman (2016) as stated gatherings are not as before. The open-plan users argues that visits are not much frequent and they are not bothered to be limited in some days while having that openness and wideness the other days. Thus, it is an act of adaption which leads to cultural change eventually as stated by Keesing (1974). And opposes the role of home making to architects, as home must align with cultural needs (Seamon, 2000).

To guests

Furthermore, hospitality is a main value as stated by (Alkhateeb et al., 2015a). Guests comfort aligns with home cultural needs as well. Users stated that the open plan has served them to hospital more number of guests. Nonetheless, it didn't serve women full privacy. Webster (1984) argued that Muslim women Hijab creates restriction near men. And in parallel with (Alenazy, 2007; Alkhateeb et al., 2014) research outcomes, modern architecture has not served women need on home designs. Clarifying, a number of architects and users said that open-plan design restricts women comfort even when it's only women gathering as they feel exposed and should ask if the husband is home or not. Yet also, if he's not there all women interviewees said that not all of their guests would feel comfortable taking off hijab nor enjoying without minding their modesty. As (Belk & Sobh, 2011) agreed "*Just as privacy is an important commodity, so is the conflicting norm of hospitality for which Arabs are famous*".

Thus, 3 out of 4 men has stated that a number of their guests are still not convinced upon mixed gatherings. Therefore, 2/4 has reduced the number of their gatherings while all 3 has separated days for men and women considering who's visiting and their relationship, to maintain their guest's comfort. Which is an adaption movement as well for the house owners to keep up with the modernization aspect.

All in all, this can summarize the current impacts of open-plan which aligns with a number of (Bakri, 2021) research outcomes on the influence of open-plan upon Islamic communities. In addition, it has filled the gap of literature on the case of open-plan impacts and validity to Arabian gulf culture and most specially the case of Bahrain. Evidently, the open-plan doesn't match all cultural aspects of the Bahraini community. While current impact on performing activities are treated by adapting and proposing finite solutions, the future impacts might not be benign as suggested by Salman (2016).

Future impact

Frasconi (2011) argued that architecture's built environment drives users behaviors and regulated their movement. Which was evident in accessibility and restriction of cooking in open-kitchens. Besides, many scholars has emphasized the impact of a place on multiple aspects (Unwin, 2003; Seamon, 2002). In parallel,

most of the researchers and architects has agreed that the openness has not directly changed the Bahraini culture yet, but all signs point out certain future impact. As (Rapoport, 1969a) argued both space and culture influence one another.

Moreover, researcher interviewees have highlighted the impact of globalization that is currently shown on the culture being less strict than before. While all architects and researchers have pointed that the open-plan is a result of globalization as well. Supported by Obrador (2016) as stated that globalization has influenced recent dwelling and has altered intimacy. Which gets back to space not matching cultural needs, as argued by Academics to either adapt and lose some cultural values or continue living in a house uncomfortably, not attaining the feeling of home. While Coward (2018) stated that home is the first inspiration to building a child identity through exploring the space and performing culture as seen from their parents. Most academics argued that house owners built those beautiful homes yet they're not using it to its all purpose. And it appeared evident by users' replies and architects explaining the disadvantages of open-plan homes. While presented the change of culture implementation in open-plan case study 3.

Solutions

Thereafter, as all cultural values have been discussed upon open-plan houses to architects and researchers the argument has been made clear. The role of architect comes as the first influencer as open-plan owners argued. Therefore, Architects have suggested number of solutions to maintain the open-plan yet respond to the cultural needs as well. The solutions have been collected to answer the last research objective, to employ the research outcomes by creating evidence-based designs that will serve most of the Bahraini community demands at home. Bae et al. (2019) stated evidence based design does construct a better living experience. In parallel, the second case study has showed better users experience and supported different spatial needs. While the courtyard and open-plan case studies have both shown many contradictions in implementing cultural values upon different scenarios.

Hence, all architects and academics have noted those conflicts. And have highlighted that the courtyard design cannot be implemented due to municipalities codes of applying set-backs which takes a large portion of the land, identical to Al-aali (2006) statement. Besides it being smaller than the lands 10 years ago. In addition to the importance of implementing open-plan to feel wideness of space. Therefore, they all have emphasized the need to inspire the spatial transitions from the courtyard houses. As (Al-Naim, 1998) stated that it's divided to the zones, guests

area, family area and services area. All interviewees has suggested the zoning transition, besides adding a sliding doors, to give privacy on some occasions creating a Majlis while allowing opening to have spacious guest area. Moreover, a number of architects has suggested offering multiple purposes to a place to use it more efficiently. For example allowing the private family living space to be used for women guests to serve them the same needs.

Most importantly, circulation and accessibility are the most influencers to home comfort as argued by (Frascari, 2011). Therefore, some architects has suggested planning the space in a way that can allow vertical circulation and access while maintaining privacy for guests. In addition, users differences must be noted in designing homes as each family must present and live their story in the way they desire away from influences of globalization. Thus, the need of visual beauty must be applied in parallel with actual spatial needs. As stated “*Islamic architecture aims to support, and not to obstruct, Muslims in fulfilling duties.*” (Almahmoud, 2015).

To summarize, the research has covered the desired objectives. Highlighted the need to design in parallel to culture. Even though the Bahraini culture has changed, the open-plan doesn't fully fit to cultural needs. Home designs shouldn't influence religion/cultural lose. Therefore, evidence-based design is considered.

Chapter 6: Conclusion, and Implications

“The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.”

Albert Einstein – as cited from (Almerbati, 2016)

This chapter will conclude all previous chapters by presenting its contribution to knowledge. Followed by a proposed action plan as to follow the collected evidence into actionable solutions. While final conclusion of the research is stated with a list of recommendation for future research.

6.1 Contribution to knowledge

The research topic is timely in the field, as the open-plan is a recent trend and has not been analyzed in relation to Bahraini culture. Also, the research methodology has indicated research originality by triangulation of data upon professionals interviews, case studies, and lived experience. Additionally, it has filled the gap in knowledge by documenting data. It has documented the transformation of a Bahraini home on the case studies and recognized the open-plan trend acceleration and influence. Cultural change and cultural diversity in Bahraini was also addressed.

Upon the 2030 vision for sustainable development, fairness was a main value to serve the community. Thus, the research comes in parallel bringing evidences to create better lived home experience with the minimized land sizes. Serving the authorities in creating fair housing projects, and architects to design better homes. Adding on sustainability, Bahrain is under strong pressure to preserve the Kingdom's heritage and culture. The research can influence creating cultural sustainability by creating homes that match the community cultures.

6.2 Proposed action plan

As found on analysis, every family has a different opinion on open-plan home. Yet they all discussed a number of disadvantages in their experience. Thus, a strong point would be to implement design solutions proposed earlier depending on each family need. Which in parallel is an application to evidence-based design. In addition, as users start to accommodate a house, the connection to the architect is lost. Therefore, the spatial experience and homeness is not conveyed to the architect. As a result, users start adapting in a house that might not meet their needs and causes discomfort unconsciously. Thus, as architects proposed that there are simple solutions to every problem there must be a connection after accommodation to get back to solve certain problems. Which in parallel leads to architects serving homes rather than houses as suggested in the literature.

In addition, the gap between architects in practice and theory must be filled and connected thoroughly. Proposing a number of conferences or periodic meetings particularly for creating connection between architects and researchers. That is to discuss design challenges and to communicate messages serving users. While the future generation of architects must be knowledgeable of the Bahraini architectural history. Also, the education system can offer students with real project in the firm discussed with senior architects/ interior designers along with clients. While spreading the culture of evidence-based designs, to start were people left not to repeat facing challenges with non-effective solutions.

Moreover, the same place of user's influence to globalization, must be used to educate them of their needs rather than aesthetics. Social media and advertisements can be used as educational source. Additionally, Architects can also participate by presenting the clients plans as a story and moving experience above the aesthetic part. Furthermore, the research can be gifted to designers and architects to spread the word.

6.3 Conclusion

In conclusion to sum up what has been discussed, the research questions must be answered briefly. As the research aim was to investigate the open-plan influence on culture and Bahraini users. On the level of family comfort when there are no guests, the open-plan is successful solution to small plot size. However, some families find it difficult with kids around, also the open-kitchen causes discomfort because of smell spreading. Impacting the feeling of hominess, in comfort, and ease of performing activities. Persuasively, adopting a trend that has been used worldwide and in an intimate place such as a home would undoubtedly impact it enormously. On the level of guests comfort, female guests find it difficult to have full privacy when men are around which makes them act with full modesty.

Additionally, on the level of culture it can be analyzed that Bahraini culture has changed in parallel with open-plan trend. Consequently, although not all cultural values can be implemented in open-plan yet adaptability was there. Thereafter, a number of researchers and architects has argued the adaptability with open-plan will also cause further cultural change. Hence, as Bahraini culture is an Islamic culture it is recommended to solve the current issues by sustainable solutions. That is to

maintain religion values, and serve culture on different occasions occurring at home. The set of solutions has been listed by architects earlier in analysis section. The research also contributes to serve other Gulf countries due to similarities in culture.

Then again, it can be concluded that the open-plan does impact the user's activities in space. However, as the Bahraini culture is multi-cultural, every family would have a different experience in regard to-plan homes. Hence, home and culture cannot be separated.

6.4 Limitations

Despite the strengths of this research, limitations must be noted for future implementations and recommendations. Thus, even with such constraints faced prior and during data collection and analysis, it's strength is strongly shown in its conclusion.

To begin, the research results might be affected by the current situation of covid pandemic when it came to the hospitality and guests welcoming values. As some users of open-plan houses moved just prior to the pandemic or during. Therefore, the gatherings are limited due to the health restrictions to contain the virus spread. Consequently, effectuating the users experience in parallel at home. Thus, next is a list of limitations faced during the research as well.

- The interviewees were reached by snowball method as having an open-plan house. However, the types of open-plans were different as some had an outer majlis, or a small family room or a different type of zoning and circulation. Which might create different experiences, nonetheless they all have felt a certain impact on their cultural values. Further research can study different types of open-plans individually.
- The study was limited to a certain age group of open-plan users, thus other age groups might have different presepectives.
- The limited time of research has affected the research final paper, and did not allow the researcher to evaluate the final framework with experts and specialists, which will be completed in future research.
- The chosen research methods are more than requested for a master thesis. Ended with numerous data, and long interviews. Thus the analysis of data toke a lot more than expected. The visualization of case studies data, long procedure for purchasing Nvivo, and coding were all time consumers as well.

- As some interviewees felt more comfortable speaking in Arabic, translation of interviews questions to clarify in Arabic, and then translating the interviews back to English was a key constrain. That is because some words does not exist with same meaning in both English and Arabic.
- There was a lack in literature about the current Bahraini culture as in home experience, thus it toke as much portion from the main research case, to be tested in parallel.
- All the data collection and analysis is done by the researcher which was a heavy duty considering time limit and the selected methodologies, thus it was a strength point at the same time as the researcher identified the main points during interviews.
- In the case studies section, no historical map of the Bahraini house transformation has been identified in the literature. Therefore, the selected projects do not represent all Bahraini houses at the indicated timeframe. However, they represent the most applied design ideas of many Bahraini residential plans

6.5 Recommendation for further studies

Further research plans are recommended to investigate the housing experience on multiple open-plan types used in Bahrain, focusing on each design experience individually. That is to highlight all differences and clarify by multiple users. Additionally, lower or higher income housing might have different impact due to lands abilities as suggested by architects. Therefore, further research can be done in relation to housing experience/design along with income level to investigate if homeness feelings is impacted by affordability. Also, research interviewees can be done upon different age levels. That is to gain more validity on the research outcomes and increase the confidence level, as the current study focused on one age group mainly 30-40 years old. Such research can be achieved in depth on a Phd proposal considering all aspects mentioned. While other architectural approaches can be investigated as well, and so does the validity of proposed solutions on users experience.

References

- Abu-Gaueh, T. (1995). Privacy as the Basis of Architectural Planning in the Islamic Culture of Saudi Arabia. *Arch. & Comport. / Arch. & Behav*, 11(3), 269–288.
- Abushariah, H. (2018). Cultural Globalization and Arab Culture. *British Journal of Humanities and Social Sciences*, 20(1). <https://www.researchgate.net/publication/338453224>
- Al-Hashimi, K. (1996). *A Bioclimatic Study on Housing Patterns in Bahrain* [University of Arizona]. <http://hdl.handle.net/10150/555212>
- Al-Naim, M. (1998). *Potentiality of the traditional house: a case study of Hofuf, Alhasa*. The G.C.C folklore center.
- Al-Wafi, A. A. (2006). *The Development of the Domestic Interior in Makkah, Saudi Arabia: From The Traditional to the Modern Way of Living*. University of Newcastle.
- Al Aali, M. (2006). *A House In Bahrain*. Virginia Polytechnic Institute and State University.
- Al Balani, B. (2019). جوانب من التاريخ الثقافي في منطقة الخليج العربي البحرين - عمان - البصرة. المؤتمر العلمي الدولي الحادي عشر.
- Al Khalifa, F. (2015). *Urban Sustainability and Transforming Culture in the Arabian Gulf: The Case of Bahrain*.
- Al Khalifa, N. (2018). التغير الثقافي بقرى شمال البحرين دراسة استكشافية. مجلة بحوث الشرق الاوسط , 24, 113-140.
- Alenazy, T. H. (2007). *The Privacy and Social Needs of Women in Contemporary Kuwaiti Homes*.
- Alfirevic, D., & Simonovic-Alfirevic, S. (2016). Open-plan in housing architecture: Origin, development and design approaches for spatial integration. *Arhitektura i Urbanizam*, 43, 45–60. <https://doi.org/10.5937/a-u0-11551>
- Alkhateeb, M. (2015). *An Investigation into the concept of Privacy in Contemporary Saudi houses from a Female Perspective: A Design Tool*.
- Alkhateeb, M., Humphries-Smith, T., & Eves, B. (2014). *Space Design and Privacy in a Saudi House*. <https://www.researchgate.net/publication/270278739>
- Alkhateeb, M., Humphries-Smith, T., & Eves, B. (2015a). *The influence of hospitality on the users' spatial patterns inside Saudi houses with reference to the concept of privacy The aesthetics of Arabic calligraphy View project Design aesthetics and semiotics View project*. <https://www.researchgate.net/publication/286775010>

- Alkhateeb, M., Humphries-Smith, T., & Eves, B. (2015b). *The visual representation of the concept of privacy in the eastern region of Saudi Arabia's houses design: a comparative study of the traditional and contemporary*.
<https://www.researchgate.net/publication/286775077>
- Almahmoud, S. (2015). *THE MAJLIS METAMORPHOSIS: Virtues of Local Traditional Environmental Design in a Contemporary Context*.
<https://scholarscompass.vcu.edu/etd/3880>
- Almerbati, N. (2016). *HYBRID HERITAGE: AN INVESTIGATION INTO THE VIABILITY OF 3D-PRINTED MASHRABIYA WINDOW SCREENS FOR BAHRAINI DWELLINGS*.
- Alsaawi, A. (2016). A Critical Review of Qualitative Interviews. *SSRN Electronic Journal*.
<https://doi.org/10.2139/ssrn.2819536>
- Amer, A. (2007). *COMPARISON STUDY OF TRADITIONAL AND CONTEMPORARY HOUSING DESIGN WITH REFERENCE TO TRIPOLI, LIBYA*.
- Andreas, P. (2022). General rights Architectural Research Paradigms an overview and a research example. In *Downloaded from orbit.dtu.dk on*.
http://www.manifoldmagazine.com/Manifold_01.pdf
- Attfield, J. (1999). Bringing modernity home: open plan in the British domestic interior. In I. Cieraad (Ed.), *At home: an anthropology of domestic space* (first). Syracuse University Press.
- Bae, S., Bhalodia, A., & Runyan, R. C. (2019). Theoretical Frameworks in Interior Design Literature between 2006 and 2016 and the Implication for Evidence-Based Design. *Design Journal*, 22(5). <https://doi.org/10.1080/14606925.2019.1625177>
- Bakri, M. (2021). THE IMPLEMENTATION OF THE OPEN-PLAN CONCEPT IN THE MUSLIM RESIDENTIAL. *Journal of Islamic Science and Technology*, 7(1).
<https://doi.org/10.22373/ekw.v7.i1.7733>
- Beckett, D., & Alexandrou, A. (2000). Residential Open Building. In *OPEN BUILDING SERIES*.
- Beecher, M. A., & Pile, J. (2002). A History of Interior Design. *APT Bulletin*, 33(1).
<https://doi.org/10.2307/1504797>
- Belk, R., & Sobh, R. (2011). *Gender and privacy in Arab Gulf states: Implications for consumption and marketing*. <https://www.researchgate.net/publication/283250750>
- Bennett, T. (2007). Making culture, changing society. *Cultural Studies*, 21(4–5), 610–629.
<https://doi.org/10.1080/09502380701278988>
- Breeders, B., 2021. The Role of Architecture in Shaping Communities. [online] Architecturecompetitions.com. Available at: <<https://architecturecompetitions.com/the-role-of-architecture-in-shaping-communities/>> [Accessed 1 April 2021].
- Carter, N., Bryant-Lukosius, D., Dicenso, A., Blythe, J., & Neville, A. J. (2014). The use of

- triangulation in qualitative research. In *Oncology Nursing Forum* (Vol. 41, Issue 5, pp. 545–547). Oncology Nursing Society. <https://doi.org/10.1188/14.ONF.545-547>
- Cheung, P. K., Jim, C. Y., & Siu, C. T. (2019). Air quality impacts of open-plan cooking in tiny substandard homes in Hong Kong. *Air Quality, Atmosphere and Health*, 12(7), 865–878. <https://doi.org/10.1007/s11869-019-00705-9>
- Clarke, D. (2011). Open Plan Gone Mad? *Sanctuary: Modern Green Homes*, 16, 86–87. <https://www.jstor.org/stable/sanctuary.16.86>
- Coward, S. E. (2018). *Home life: the meaning of home for people who have experienced homelessness*.
- Cresswell, T. (2008). Place: encountering geography as philosophy. In *Geography* (Vol. 93).
- Coolen, H. and Meesters, J., 2011. Editorial special issue: house, home and dwelling. *Journal of Housing and the Built Environment*, 27.
- Cooper, R., Spilling, J. and Nevins, D., 2020. *cultures of the world- Bahrain*. 3rd ed. New York: cavendish square publishing.
- Dowling, R. (2008). Accommodating open plan: Children, clutter, and containment in suburban houses in Sydney, Australia. *Environment and Planning A*, 40(3), 536–549. <https://doi.org/10.1068/a39320>
- Duvernoy, S. (2012). Marco Frascari, *Eleven Exercises in the Art of Architectural Drawing: Slow Food for the Architect's Imagination*. *Nexus Network Journal*, 14(1), 191–193. <https://doi.org/10.1007/s00004-011-0105-1>
- El-Shorbagy, A. M. (2020). Women in Islamic architecture: towards acknowledging their role in the development of Islamic civilization. In *Cogent Arts and Humanities* (Vol. 7, Issue 1). Cogent OA. <https://doi.org/10.1080/23311983.2020.1741984>
- Elliot, L. (2002). Evolution of the Open Floor Plan. *Old House Journal* . <https://www.oldhouseonline.com/interiors-and-decor/evolution-of-the-open-floor-plan/>
- Ellsworth-Krebs, K., Reid, L. and Hunter, C., 2015. Home -ing in on domestic energy research: “House,” “home,” and the importance of ontology. *Energy Research & Social Science*, 6.
- Fairs, M. (2020). Homebuyers “moving away from open-plan spaces” says Albert Hill of The Modern House. *Dezeen*. <https://www.dezeen.com/2020/12/09/homes-open-plan-spaces-albert-hill-modern-house/>
- Flick, U. (2018). *Triangulation in ethnography*. SAGE Publications Ltd. <https://doi.org/10.4135/9781529716634>
- Frascari, M., 2011. *Eleven Exercises in the Art of Architectural Drawing*. Hoboken: Taylor & Francis
- Freshwater, D. (2005). The poetics of space: Researching the concept of spatiality through

- relationality. *Psychodynamic Practice*, 11(2), 177–187.
<https://doi.org/10.1080/14753630500108349>
- Fujihira, K. (2019). Comprehensive Strategy for Sustainable Housing Design. In *Different Strategies of Housing Design*. <https://doi.org/10.5772/intechopen.86278>
- Genzuck, M., & Bast, F. (2003). *A SYNTHESIS OF ETHNOGRAPHIC RESEARCH*.
- Golkowska, K. (2017). Qatari women navigating gendered space. *Social Sciences*, 6(4).
<https://doi.org/10.3390/socsci6040123>
- Grant, J., & Fox, F. (1992). Understanding the Role of the Designer in Society. *Art & Design Education*, 11(1).
- Groat, L. n., & Wang, D. (2013). *Architectural research methods* (second). John Wiley & Sons, Inc., Hoboken.
- Hamilton, D. K., & H. Watkins, D. (2009). *Evidence-Based Design for multiple building types*. John Wiley & Sons.
- Harwati, L. N. (2019). Ethnographic and Case Study Approaches: Philosophical and Methodological Analysis. *International Journal of Education and Literacy Studies*, 7(2), 150. <https://doi.org/10.7575/aiac.ijels.v.7n.2p.150>
- Hasell, M. J., & Scot, S. C. (1996). Interior Design Visionaries' Explorations of Emerging Trends. In *Interior Design* (Vol. 22, Issue 2).
- Harrouk, C., 2020. Psychology of Space: How Interiors Impact our Behavior?. [online] ArchDaily. Available at: <<https://www.archdaily.com/936027/psychology-of-space-how-interiors-impact-our-behavior>> [Accessed 1 April 2021].
- Heidegger, M., 1971. *Building, Dwelling, Thinking*
- Hekmat Ismail, R. (2015). *Adaptation of Housing Design to Culture Change in Syria: Concepts and Practices in the City of Lattakia*.
- Hessam, G. K., & Sotoe, E. D. (2016). Evaluation of the relationship between culture and traditional architecture and its effects on design quality improvement. *International Journal of Applied Engineering Research*, 11(3).
- Hoover, R. S., & Koerber, A. L. (2011). Using NVivo to answer the challenges of qualitative research in professional communication: Benefits and best practices: Tutorial. *IEEE Transactions on Professional Communication*, 54(1), 68–82.
<https://doi.org/10.1109/TPC.2009.2036896>
- Jalil, N., Yunus, R. and Said, N., 2012. Environmental Colour Impact upon Human Behaviour: A Review. *Procedia - Social and Behavioral Sciences*, 35.
- Karolak, M., & Veljanova, I. C. (2010). *Preserving Arab Culture in the Kingdom of Bahrain*.

- Kavalir, M., 2015. House and Home across Cultures. ELOPE: English Language Overseas Perspectives and Enquiries,.
- Kazerooni, F. (2002). *Gulf Islamic Architecture* . Farry Kazerooni.
- Keesing, R. M. (1974). *THEORIES OF CULTURE*.
- Khalaf, R. W. (2012). Traditional vs modern Arabian morphologies. In *Journal of Cultural Heritage Management and Sustainable Development* (Vol. 2, Issue 1, pp. 27–43). <https://doi.org/10.1108/20441261211223252>
- Khozaei, F. (2009). STUDY OF PRIVACY IN TRADITIONAL RESIDENTIAL ARCHITECTURE OF ISLAMIC REGION. *3rd ICBEDC*.
- Kivunja, C., & Kuyini, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, 6(5), 26. <https://doi.org/10.5430/ijhe.v6n5p26>
- Kofman, E., & Youngs, G. (2008). *Globalization theory and practice* (3rd edition). Bloomsbury Publishing.
- Lasswell, T., & Deasy, C. M. (1990). *Designing Places for People: A Handbook on Human Behavior for Architects, Designers, and Facility Managers*. Whitney Library of Design.
- LeCompte, M. D., & Goetz, J. P. (1982). Problems of Reliability and Validity in Ethnographic Research. *Review of Educational Research*, 52(1), 31. <https://doi.org/10.2307/1170272>
- Macgregor Wise, J. (2000). Home: Territory and identity. *Cultural Studies*, 14(2), 295–310. <https://doi.org/10.1080/095023800334896>
- Mahgoub, Y. (2007). Architecture and the expression of cultural identity in Kuwait. In *Journal of Architecture* (Vol. 12, Issue 2, pp. 165–182). <https://doi.org/10.1080/13602360701363486>
- Makhlina, S., 2020. Traditional Residential Interior As The Basis For Forming Cultural Identity. *Central Asian Journal of Art Studies*, [online] Available at: <<https://cajas.kz/journal/article/view/261/234>> [Accessed 1 April 2021].
- Marcoux, steele. (2020). *Will The Pandemic Be The Death Of The Open Floor Plan?* <https://www.veranda.com/home-decorators/a32356068/how-the-quarantine-will-change-home-design/>
- McCusker, K., & Gunaydin, S. (2015). Research using qualitative, quantitative or mixed methods and choice based on the research. *Perfusion (United Kingdom)*, 30(7), 537–542. <https://doi.org/10.1177/0267659114559116>
- Mobley, P. H. (1975). *The Designation of Family Living Activities in Two Open-Plan House Designs for the Five Stages of the Family Life Cycle*.
- Mokhtar, A. (2010). Integrating aspects of cultural and environmental sensitivities into affordable housing in the Arab Gulf region. *WIT Transactions on Ecology and the*

- Environment*, 128, 197–207. <https://doi.org/10.2495/ARC100171>
- Mull, A. (2020). *The end of open-plan everything*. The Atlantic.
<https://www.theatlantic.com/technology/archive/2020/07/walls-pandemic-open-plan/614590/>
- Novotni, A., & Tóth, Z. (2020). *IKEA and global marketing trends*.
<https://www.researchgate.net/publication/346395053>
- Obrador, P. (1995). Dwelling. *Companion Encyclopaedia of Geography: From Local to Global*, 957–968.
- Opoku, A. (2015). *The Role of Culture in a Sustainable Built Environment* (pp. 37–52).
https://doi.org/10.1007/978-3-319-14002-5_3
- Pallasmaa, J. (1992). *IDENTITY, INTIMACY AND DOMICILE Notes on the phenomenology of home*.
- Parker, C., Geddes, A., & Scott, S. (2020). Snowball Sampling. In *SAGE Publications*.
<https://doi.org/http://dx.doi.org/10.4135>
- Pettigrew, S. F. (2000). ETHNOGRAPHY AND GROUNDED THEORY: A HAPPY MARRIAGE? *Advances in Consumer Research*, 27, 256–260.
<https://www.acrwebsite.org/volumes/8400/volumes/v27/na-27>
- Pontikis, K., & Rofè, Y. (2016). In *Pursuit of a Living Architecture: Continuing Christopher Alexander's Quest for a Humane and Sustainable Building Culture*.
- Rapoport, A. (1969a). house form and culture. In P. L. Wanger (Ed.), *Foundation of Cultural Geography Series*. Prentice-Hall.
- Rapoport, A. (1969b). House form and culture. *Foundations of Cultural Geography Series*.
- Rapoport, A. (1998). Using “Culture” in Housing Design. *Housing and Society*, 25(1–2), 1–20.
<https://doi.org/10.1080/08882746.1998.11430282>
- Razali, N. H. M., & Talib, A. (2013). The Concept of Privacy and the Malay Dwelling Interior Space Planning. *Procedia - Social and Behavioral Sciences*, 101, 404–414.
<https://doi.org/10.1016/j.sbspro.2013.07.214>
- reza Karimi azeri, A., & Kari, G. (2014). *The Role of Culture in Promoting Architectural Identity*. www.european-science.com
- Rollings, K. A. (2011). *RESIDENTIAL KITCHEN FLOOR PLAN OPENNESS, SOCIAL FAMILIARITY, AND EATING BEHAVIORS*. Cornell University.
- Roy, S., 2017. Wandering to Dwell: Heidegger and the Phenomenology of Dwelling in Sebald's The Rings of Saturn. *MFS Modern Fiction Studies*, 63(1), pp.29-49.
- Saleh, A. A. (1991). *A Step Towards The Modern Arabian House*.
- Salman, H. J. (2016). *IMMATERIALITY IN ARCHITECTURE: THE USERS' SPATIAL*

EXPERIENCE IN THE CONTEXT OF BAHRAIN.

- Seamon, D. (2008). Phenomenology, Place, Environment, and Architecture: A Review. *Environmental & Architectural Phenomenology Newsletter*.
- Serrant-Green, L. (2007). Ethnographic research. *Nurse Researcher*, 14(3), 4–6. <https://doi.org/10.7748/nr2007.04.14.3.4.c6027>
- Setien, I. N. (2015). DEVELOPMENTS IN RESIDENTIAL OPEN BUILDING. *PERKINS+WILL*, 07.01.
- Sixsmith, J. (1986). The meaning of home: An exploratory study of environmental experience. *Journal of Environmental Psychology*, 6(4), 281–298. [https://doi.org/10.1016/S0272-4944\(86\)80002-0](https://doi.org/10.1016/S0272-4944(86)80002-0)
- Smith, V. K. (2022). *After Years of Open-Plan Living, How Has Covid Affected Floor Layouts?* <https://www.mansionglobal.com/articles/after-years-of-open-plan-living-how-has-covid-affected-floor-layouts-01641731874>
- Soares Saraiva, S., & Serra, M. (2017). *BAHRAIN, CONTINUITY AND RUPTURE: TRADITIONAL AND SUBSIDIZED HOUSING IN BAHRAIN Social Adequacy of Dwelling in the Arabian Gulf View project*. <https://www.researchgate.net/publication/318311407>
- Sobh, R., & Belk, R. (2011). Domains of Privacy and Hospitality in Arab Gulf Homes. *Asia-Pacific Advances in Consumer Research*, 9, 88–90. <http://www.acrwebsite.org/volumes/1008994/volumes/ap09/AP-09>
- Sobh, R., Belk, R. W., & Wilson, J. A. J. (2013). Islamic Arab hospitality and multiculturalism. *Marketing Theory*, 13(4), 443–463. <https://doi.org/10.1177/1470593113499695>
- Soliman, J., & Kan, M. (2004, November 26). Grounded Theory and NVivo: Wars and Wins. *International Conference on Qualitative Research in IT & IT in Qualitative Research*.
- Suddaby, R. (2006). FROM THE EDITORS: WHAT GROUNDED THEORY IS NOT. *Academy of Management Journal*, 49(4), 633–642.
- Talib, Q. (2001). *المسكن في المملكة العربية السعودية*. King Saud university.
- Taylor, M. J. (2022). *Open Floor Plans And House Value (2021 Trend Analysis)*. <https://matthewjamestaylor.com/open-floor-plan-house-value>
- Tweed, C., & Sutherland, M. (2007). Built cultural heritage and sustainable urban development. *Landscape and Urban Planning*, 83(1), 62–69. <https://doi.org/10.1016/j.landurbplan.2007.05.008>
- Unwin, S. (2003). *analysing ARCHITECTURE*. Taylor & Francis. <http://fast-file.blogspot.com>
- Verhaeghe, G. (2017). Learning Architectural Design. Material and Immaterial Aspects. *Design Journal*, 20(sup1), S1140–S1153. <https://doi.org/10.1080/14606925.2017.1353057>
- von Goethe, J. W. (n.d.). *Quotable Quote*. Retrieved July 20, 2022, from <https://www.goodreads.com/quotes/151551-he-is-happiest-be-he-king-or-peasant-who-finds>

- Wallender, L. (2021). *The Open Floor Plan: History, Pros and Cons*.
<https://www.thespruce.com/what-is-an-open-floor-plan-1821962>
- Webster, S. K. (1984). Harim and Hijab: SECLUSIVE AND EXCLUSIVE ASPECTS OF TRADITIONAL MUSLIM DWELLING AND DRESS. *Women's Studies* , 7(4), 51–257.
[https://doi.org/https://doi.org/10.1016/0277-5395\(84\)90050-5](https://doi.org/https://doi.org/10.1016/0277-5395(84)90050-5)
- Yang, Z. (2007). *Ecological design values of traditional urban courtyard dwellings: a two phase study at 1 st to 10th lanes, Dongsì neighbourhood, Beijing*.

Appendices

Appendix A: Research plan schedule

Start date	Task	Duration	Comments
20/6/2021	Edit literature	Open	
1/9/2021	Selection of case studies	10 days	
5/9/2021	Interview questions design	10 days	Questions finalized
September 2021	Pilot study: interview	1 day	1 interview
September 2021	Validation and edits	5 days	
October 2021	Scheduling interviews	10 days	Professionals and inhabitants
October 2021	Conducting interviews	14 days	
October 2021	Case studies site visits	10 days	
November 2021	Case studies visualizations	20 days	
December 2021	Case studies analysis	15 days	
Jan 2022	Transcribing interviews	30 days	
February 2022	Nvivo: Coding interviews	20 days	
March 2022	Interviews analysis	15 days	
March/2022	All data finalized	-	
April/2022	Discussion and conclusion	10 days	
April/2022	Finalizing thesis	10 days	

Appendix B:

Interviewees Background

Architects	Education level	Position	Years of experience	Expertise Background
Arch 1	Bachelor's in architecture	Engineering office owner	19 years	mostly residential projects
Arch 2	Bachelor's in architecture/ Master's in design management	Engineering office owner	20 years	interested in sustainability, mostly residential projects
Arch 3	Bachelor's in architecture	Engineering office owner	20 years	mostly residential projects
Arch 4	Bachelor's in architecture	Associate director of engineering office	19 years	Architectural modern solutions, residential and commercial projects
Arch 5	Bachelor's in architecture	Project Manager	26 years	Housing developer, residential and commercial projects
Arch 6	Bachelor's in architecture/ Master's in architecture theory and design	Engineering office owner/ architectural teaching assistant	22 years	various projects on both interior and architecture, commercial, residential projects

Academics	Education level	Position	Research Background
Acad 1	PhD	Teaching assistant	day lighting and visual privacy in residential spaces (Bahrain)

Acad 2	PhD	Teaching assistant	Immaterial architecture (Bahrain)
Acad 3	PhD	Teaching assistant	Historical architecture (Bahrain) /urban design / sustainability
Acad 4	PhD	Teaching assistant	Impact of built environment on human behavior
Acad 5	PhD – graduating student	Teaching assistant	Social sustainability in housing

Male users	Age	Education level	Position	Status	Years of inhabitation	Type of plan
User 1	31 years	PhD student	chemical engineer	Not married, living with parents	25 years	Open hall, majlis, semi open kitchen, dining
User 2	31 years	Bachelor's	civil engineer	Married, 2 kids	1.5 year	Open hall, kitchen, dining
User 3	37 years	Bachelor's	lab technician	Married, 2 kids	7 years	Open hall, majlis, hall, dining
User 4	43 years	Bachelor's	human resource officer	Married, 3 kids	4 years	Open hall, majlis, semi open kitchen, dining

Female users	Age	Education level	Position	Status	Years of inhabitation	Type of plan
User 5	43 years	Bachelor's	English teacher	Married, has kids	6 years	Open hall, kitchen, dining, semi open majlis

User 6	42 years	Bachelor's	Government Engineer	Married, has kids	1 year	Open hall, majlis, kitchen, dining
User 7	36 years	Bachelor's	School administrator	Married, has kids	3 years	Open hall, kitchen, dining, semi open majlis
User 8	43 years	Bachelor's	Islamic teacher	Married, 2 kids	4 years	Open hall, majlis, kitchen, dining, and outdoor extension majlis
User 9	34 years	Bachelor's	Doctor	Married, 3 kids	1.5 year	Open hall, majlis, dining, pantry

Appendix C:

Interview Consent Form

[Impact of the open-plan residential interior design trend on Bahraini culture]

A master thesis submitted for University of Bahrain

Researcher: Zuhoor Kadhem

Supervisor: Nehal Al-Murabati

The project aims to investigate the open-plan impact on the Bahraini users experience. Culture was the first to influence home designs earlier, yet the open plan has come as a trend that didn't consider cultural factors.

Consent to take part in research

The interview will take (30-50 Minutes). **Thank you** for agreeing to be interviewed as part of the above research project. We don't anticipate that there are any risks associated with your participation. Ethical procedures for academic research require that interviewees explicitly agree to being interviewed and how the information contained in their interview will be used. This consent form is necessary for us to ensure that you understand the purpose of your involvement and that you agree to the conditions of your participation. Would you therefore read the accompanying information sheet and then sign this form to certify that you approve the following:

☐ I voluntarily agree to participate in this research study.

☐ I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.

☐ I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.

☐ I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.

☐ I understand that participation involves information about my lived/ work-field experience in open plan houses design and it's association to culture.

☐ I understand that I will not benefit directly from participating in this research.

☐ I agree to my interview being audio-recorded. I understand that all information I provide for this study will be treated confidentially.

☐ I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.

☐ I understand that disguised extracts from my interview may be quoted in the final Thesis paper.

☐ I understand that signed consent forms and original audio recordings will be retained in a hard desk that is only accessible for the researcher and the supervisor, until the exam board confirms the results of the Thesis.

☐ I understand that under freedom of information legalization I am entitled to access the information I have provided at any time while it is in storage as specified above.

☐ I understand that I am free to contact any of the people involved in the research to seek further clarification and information.

Signature of research participant

Signature of participant Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study.

Signature of researcher Date

Contact information

Ms. Zuhoor Kadhem Tel: 38834900 Email: 20161662@stu.uob.edu.bh

Appendix D:

Interviews Questions selection based on objectives

To recall the research objectives, coded to implement on interviews

1. To study the Bahraini culture in depth and emphasize the role of architecture in influencing the culture (for professionals) (**B**)
2. To investigate how the openness approach has affected the daily life in Bahraini homes. (**Op**)
3. To draw conclusion on the importance of designing interior architecture in corresponding to culture, that is to maintain the value of Arabian gulf identity. (**R**) for results

Demographic (G) for general has also been included, Necessity in research: on H-high / M-med/ L-low to insure asking related needed questions

Table B1 : Professionals

Group	Objective	Necessity	Question	Estimated Timing	Expected answer	Theme/code
Both architects and researchers	G	H	Position /Education level	1 min	Architect, teaching assistant	Demography
	B	M	Define culture/ is it changing?	2 min	Beliefs/ traditions/ yes it is changing	Culture
	B	H	What allows cultural changes?	1 min	Globalization, time, etc.	Changing Culture
	B	M	How is culture implemented at home experience	3 min	Through planning in relation to their daily life activities and beliefs	?
	B	H	Bahraini culture as you know it	3 min	Embraces privacy, hospitality etc.	Bahraini culture
	B	M	Traditional Bahraini architecture? Does it serve	3 min	It has implemented culture positively, examples	Traditional Architecture

		culture? in what way?			
Op	H	How does place planning influence user experience?	2 min	It allows the users to move in certain way, can alter the user feeling	Impact of place
Op	H	What is the meaning of home ?	1 min	Comfort, accessibility, identity	Homeness
Op	H	Did globalization impacted home feeling?	1 min	Yes, because.	Globalization
Objective	Necessity	Question	Estimated Timing	Expected answer	Theme/code
		Introducing	The	Open plan	Design
Op	H	When did it start/ came trend?	1 min	90s / 15 years ago	Open plan
Op	H	Was it successful back then?	1 min	No, because	Open-plan
Op	H	How does the open-plan serve the Bahraini cultural values ?	3 min	It serves hospitality, but	Open-plan vs Cultural values
Op	H	Are there different open-plan circulations that can serve privacy?	2 min	Yes , example	Circulation
Op	H	Is the open-plan successful referring to Bahraini culture?	2 min	No, because	Open-plan
Op	H	Do you think open-	1 min	Yes, because	Globalization

			plan trend is a result of globalization ?			
	R	H	Did people adapt to the open-plan in a way that altered their culture?	2min	No, because	Adaption / impact of place
	R	H	Does architects in practice apply architectural place theories?	2 min	Not really, because	Architectural offices
	G	M	Concluding thoughts?	1 min	I would like to add,	-
	Objective	Necessity	Question	Estimated Timing	Expected answer	Theme/code
Architects only	G	H	Years of experience	30 sec	15+ years	Demography
	Op	H	Owners priorities in home designs?	1 min	Aesthetics,	Priorities
	Op	H	Why does house owners prefer open-plan now?	2 min	Because of land shortage,	Why open plan?
	R	H	How do you apply architectural theories of place making in your designs?	3 min	By thinking of clients needs,	Architectural offices
	Op	H	Scale the importance of open-plan design in Bahrain?	1 min	It is important because	Open plan importance

R	H	How long do you take planning a middle-class house? Would it serve the clients better if it takes more time?	3 min	1 month , no because	Architectural offices
R	M	“is it as deeply thoughtful as designing for yourself? Why?	2 min	No, because	Architectural offices

Table B2: Lived experience users

Objective	Necessity	Question	Estimated Timing	Expected answer	Theme/code
G	H	Age group	1 min	30+	Demography
G	H	General background	1 min	Position, education, martial status	Demography
G	M	Previous home experience?	2 min	It has closed majlis, was an apartment	Previous home
Op	H	Have you participated in designing your current home?	2 min	Yes, I have discussed it with,	Users priorities
B	H	Have you considered cultural factors while designing your space?	2 min	No, because	Users priorities
Op	M	What type of open-plan is your house?	1 min	Open kitchen, open hall, etc.	Actual experience
Op	H	How long have you been in the	1 min	2 years,	Actual experience

		open-plan house?			
B	M	Definition of cultural values?	1 min	It is our way of living,	Culture
B	M	How strict are you when it comes to cultural values?	1 min	Not strict,	Cultural values
Op	H	What was your priorities in home design?	2 min	Comfort, aesthetic, etc.	User priorities
Op	H	Why did you choose open plan?	2 min	Because of land size, etc.	Why open-plan
Op	H	How do you experience cooking / dinning? does it match your previous way?	3 min	We no longer cook Bahraini dishes, etc.	Adaption / impact of place
Op	H	Do you separate genders in gatherings? Why?	2 min	No, because	Impact of place/ cultural change
B	H	Why do you think those values started to fade away?	2 min	Globalization, etc.	Cultural change
Op	H	Does the place planning force you to move in a certain way? Women? Men?	3 min	Yes, women can't move freely,	Impact of place / Actual experience
Op	H	Do you feel comfortable inviting both genders at once	2 min	Yes, because,	Actual experience

		in an open-plan house?			
Op	H	Does your spouse feels the same? Access/ movement	1 min	Yes because,	Actual experience
Op	H	How would it be after 10 years when your kids grow up?	2 min	There might be conflicts	Adaption/ Impact of place
Op	H	Have you started inventing more people or less?	2 min	Yes, but	Actual experience/ does it serve culture
Op	H	What are the best/ worst features on the open-plan experience?	2 min	Lack of privacy, etc.	Actual experience
R	H	Have you thought about these questions before this interview while experiencing home?	2 min	Yes, but wasn't clear enough	Actual experience
R	H	In your opinion, is the open plan successful referring to Bahraini cultural values?	2 min	Yes, to a certain extent, because	Conclusion / Actual experience
R	H	Have you adapted and overlooked some values?	1 min	No, but	Adaption/ impact of place
R	H	Concluding thoughts	1 min		-

Appendix E:

Sample Interview

Academic

1. So tell me about yourself

Well, my name is xxx I am a lecturer at the university of Bahrain, currently on my last year of PhD, having teaching experience of around more than 10 years. Some kind of voluntary work in the research with kind of urban perspective, so things like the Pearling road, where we got to survey some traditional buildings, we got to talk to some of the local residents. My area of research right now is xxxx, so it's about mainly incorporating the community into the housing decision making process more or less.

2. what is your definition of culture itself?

that's a difficult one, so my definition would be I guess it's about the norms, the practices, the common feelings that a group of individuals have or shared at a specific time, or at a specific place in that certain time. So it has to do with the way you understand things, and the way you act as a group, not as an individual.

3. and in your opinion is culture a fixed thing or is it changing?

Well culture definitely changes, and it also affects things, it is a kind of those relationships where you don't understand which one is affecting the other you know, it's like a cycle, so you know things are changing and they're affecting the culture and the society, and you know that culture is affecting whatever other variables are there too. So you can't really start knowing which one is the cause of the whole story or the whole change, but it's not static that's the thing that you know.

4. and in your opinion how is culture implemented at home experience?

well two aspects of that thing do you mean as a user how does it affect the way I understand this place as users or as designers? OK so as users I think culture does two things, it creates a certain set of expectancies, so you expect your residents to look in a certain way, function at a certain way, you also kind of act in this space in a specific way because of your culture. So maybe you are taught to want a separate outdoor kitchen, you are taught to want an enclosed Majlis, so regardless of

whether you are still using those or not you're kind of wired to want these things without a critical assessment of whether you need them or not. **So there is that dimension where you want something because of the society around you**, and then there is what you were asking about you know that the other variables that start changing into the dynamics of how you're using space or creating space.

5. can you describe the Bahraini culture as you know? The culture experienced at home like how do they perform their culture at home.

OK I think there are two things that operate here, the first is the traditions that we have as Bahraini's, then the modernity that is also coming into the society. So as Bahraini's for example, we are taught to appreciate our privacy, we are taught to expect certain type of spaces that are fully enclosed fully private, but we're also going towards the more kind of casual informal lifestyle, where everything is open and everything is kind of connected, **I think we didn't reach a balance between the two yet architecturally speaking**. So we don't know how to satisfy both needs at the same time, **I mean we kind of go with it to extremes, either everything is very open and it doesn't suit our kind of conservative culture, or everything is very enclosed and it doesn't suit the way we're kind of opening up to the changing lifestyle and all**. I would say that probably media or the global kind of social media, those kind of things are definitely creating some kind of pressure now, **because there is that local dimension but there is also that universal aspect where everyone wants the same thing**, where for example my kids for example use the dollar as a currency although they've never been to America. So, **we're living in a weird time where culture is not really a direct outcome of the place you are living in**, yeah I think we're at a very conflicting stage and we are still not clear of what we want yet, or how to provide what we want.

6. what do you think about the traditional Bahraini architect architecture referring to the courtyard house design does it serve culture and in what way?

if you mean does it did it serve culture at that time, then I guess yes, and that's definitely because you know we were at a time where we don't have a lot of technology, so just environmentally speaking that that kind of house design suited kind of limitations that we had, you know the way it cools down the inner space, the way it is create this this small indoor space, **but I think most importantly the way all family members are connected through that common outdoor space**. Everyone I guess needs that outdoor space and somehow the courtyard has

provided it, but also provided the **privacy** that people need in their houses, I guess at that time the **extended family were gathered horizontally I would say, so we needed that open space in the middle. While now we are extending in a way vertically**, so we have all the family members, you're building these flats for your kids in first floor second floor third floor. So **we are kind of changing that courtyard with the staircase for the elevator right now**. So it used to be a social space which is very positive I would say for individuals, **specially with the way male and female life where were separate** because a woman have to socialize in a more enclosed way, they needed to be at home but they needed also to a certain sort of social life. So I think that served that purpose very well, whereas **right now we don't really have that you know understanding of gender differences, what woman needs in an architectural space**, what men need and what the whole family needs. So I guess that's how the courtyard served us at that time. **But if the question is does it suit our culture now then I guess not**, its a beautiful feature but it doesn't serve the social and the culture it had before, it is just a nice thing to have.

and why it is not serving right now?

because you know that courtyard was doing two things it was, a circulation space and a social space, so right now I can't really imagine someone having a circulation space with you know the outdoor temperature, the heat, the dust unfiltered, **we need something to kind of moderate that temperature**. So it wouldn't really work for residents right now, they won't be satisfied with the level of you know special kind of thermal comfort that we need.

7. in your opinion what is the meaning of home?

home is where I think you feel yourself you know, you're not obliged to act in a different way, you are not obliged to do what others are expecting you to do, and it's a place where you can feel comfortable, peaceful and you know happy I would say.

8. can you tell us or can you recall when did the open plan design first started in Bahrain and when it became a trend?

The open plan design I think not the 90s we didn't have the open plan, in 2000 we started to see a shift towards open plans, so we kind of wanted that but also it didn't fit our lifestyle, so we had a problem there. **So we see it in TV, we like it, we do it in our houses , it doesn't really work, but I think it's becoming more of a common thing right now**, I would say from 2010 until now probably.

9. Why you think people started accepting it?

I think it looks good looks very beautiful, so the owners wanted it you know, but they only accepted it because the size of the residential units became much more smaller you know. So with the layout we had with everything enclosed in walls, our species become much tinier than what we used to have, so we had to remove those walls and open up everything. So I think once we started having smaller land, smaller plots, smaller affordable housing units, that's when people started accepting the fact that we have to kind of shift to open plan concepts. Yes I guess that's more or less, and when the culture started being more individual also, where your family was just your family you know, you your husband your kids and no one else, you're not expecting people to visit you, everyone on social media connecting, you don't need that Majlis being closed anymore, no one is really cooking because both parents are working, so you know you don't need those clearly defined spaces anymore, they're just open and you order food, you're not worried about the smell, you're not worried about who's visiting you, you're not worried about gender separation men here woman there, and yeah things like that I guess.

10. the traditional architecture has served the privacy by planning corridors only for guests or separating guests area from the dwellers area how does the opener plan server Bahraini cultural values in your opinion?

Well, I think there is a problem in the way we are using the open plan right now, because what's happening is we are kind of designing the ground floor fully for guests and not for residents, so we designed this very beautiful thing that we put a lot of money in, a lot of love in, but then we appreciate it so much that we don't want to ruin it, so we don't let anyone go there, no one sits there, we just go up to our tiny living space in the first floor, and just live there which is quite a shame to be honest. I mean if you have a nice space, use it! don't use it to show off only, but we're still not there culturally speaking, we're still trying to figure out what we're doing. But I think there is still a problem in terms of separating the public and private life in the house in the open plan, we the residents don't know what to do, the designers don't provide suitable alternatives, and we need to think of multiple uses of space, and we need to rethink the way spaces are enclosed you know, like for us a door is a door, you just open it just opens in or out, whereas it doesn't have to be like this you know you can put more money in a door in a glass wall for example that separates two spaces, yes that door might be more expensive but it's

less expensive than a hall in a plot of larger land if you are going to buy a larger plot size, larger house. So we need to show people that those things are possible, we need to show them that those things are efficient, and I think as designers we have more responsibility than the people who are coming for us, we should provide them what they need without them telling us the spatial solution that would fit that problem.

and can we speak more in details about the cultural values as let's say about the family privacy if there is a men gathering at the house where would the other family members have access to?

yeah I think that's exactly what I was talking about, the way in which we enclose and define spaces, we definitely need to rethink those two things, points of entry and enclosures. So a space must be designed to serve more than one purpose I guess, so a Majlis should be designed in a way that it's open, in some days but fully closed and other days you know with sound isolation with all those things that makes it fully separate. We also have the dimension of extended families being vertically connected, so it's not just the guest anyone who are coming, it's is your brother-in-law, is your son in law, all that extended family members who you want them close but you want to give them their privacy. So even the vertical circulation is also important, I guess once we figure out the vertical circulation to connect how different families are living in one space, and once we figure out how that entry point for Majlis should be solved, I think that would create a great impact on the design of open houses in Bahrain.

and if we speak about it the women wearing hijab or their kind of topics that women should not speak certain topics near men or even the tone of the woman voice, even with the gender separation not being implemented nowadays, how it can be served in the open plan?

yeah that's what I was saying you, there are types of doors, there are types of windows that are fully sealed, that artfully create full privacy, some of them are smart you know, with the Press of a button you get a full enclosure between two spaces, sometimes even a curtain can do, if you separate the Majlis from the living room, have the control in the hands of female residents, if they would feel more comfortable, and that would serve the purpose. But we have to respect our culture, because unless you do it, you would create a very beautiful house that doesn't really function, which is what we are doing right now, that's why people are having the ground floor only for guests, unless you have developed fully modern culture

where you don't obey the gender separation anymore, the people being in different places, if that's the case then the open plan concept is for you, but that's not the way all Bahraini families are I guess, and probably I mean with our culture that's not the way we want the spaces to be, that's not the way we want the culture to be pushed into, because if you keep everything open with no privacy you will push people to act differently, in a way that we don't prefer I guess in our culture, or you would keep them acting the way they like you know with gender separation with I would say modesty somehow, but having to live a very very boring life, so they won't be able to open the windows, no curtains in the afternoon or in the evening, no open space I mean if you don't have open space in your house then woman literally cannot see the sun lights, you know because we need a space where you would take off your hijab, and you'll get some fresh sunlight, or not worry about what you wearing in your house, it's just your house basically! or your sisters house your mom's house, those are the spaces that we have. So we have to respect our culture and design with those things in mind, so I mean I think we need to improve also the indoor outdoor connectivity, but also have them maintain privacy we need to create that smaller garden effect, or outdoor space effect that we had from the courtyard house where everyone could just go outside wearing whatever they're, you don't have to be modest, you don't have to be too careful about even looking good you know, you want to just wear something comfortable and workout. So I think you're touching upon very important things in your design and they reach to issues that relate to comfort, that relate to ethics, that relate to the way we see ourselves, and also in modernity definitely we need we need to move forward and not stick ourselves in a bubble that we used to live in 50 years ago.

11. do you think this open plan design has impacted the meaning or the feeling of home for the Bahraini families?

Absolutely, I guess when privacy disappeared at home we kind of tried to go away from each other, by hiding behind our phones, because the room is open fully but I still as a teenager I need my privacy, as a mother sometimes I need it, sometime for myself you know just to be alone, to just think of myself as a woman who has a life other than being a part of a family member. So I think with the walls going down we kind of looked away from our social bonds in family, which I think we didn't expect, we expected that once the whole space is open then we would be more connected more bonded, but that didn't happen! everyone turned out to his room, the one who uses ugly indoor living space which doesn't have any window, which doesn't have any garden, why would I stay in a closed living space if I can go to a

coffee shop and have a much more beautiful space! So that's we have to respect our culture, but also in a way that acknowledges the modern life that we're having right now.

12. there is a saying by Marco Frascari he says architecture is formation of controlled spaces do you think architecture would influence people to behave differently in a way that would change their cultural identity ?

It does, it does somehow! and it should! because you know normally we think of culture as this positive good thing that we all like, but it's not always the case. Culture is important because this is how you understand yourself and the world, that you sit the way you behave and expect others to behave, but not everything we had in the past is definitely positive. For example, all cultures used to be very enclosed before, you know you have citizens from the same country same norms, that is not the case anymore! So do you want to keep that? you want to build spaces that only support that kind of separation between different groups of people? or do you want to encourage them to change the way you're acting, with understanding the space. So I think spaces do change the way you behave, and at some points you have to change the way people behaves, either to make them more environmentally responsive, or to make them more equitable to respect other minorities or other ethnicities that exist.

13. But speaking about home is the place where they have to feel comfortable, and at the end of the day it is their only zone where they feel themselves as they are, how it would be affected by the open plan ?

I think we need to preserve somehow the openness of the spaces, because we are definitely going to much smaller sizes of houses and that's important environmentally, that's just the reality of how we live, because of the population right now. So we do need that openness as a solution but we need to do it with paying attention to two things, creating space that is nice for us as family members, and also having that layer of privacy for when you have people over. **But definitely we have to design the house with the family in mind first**, and not with guests in mind first, and I think this is the problem with what people are doing, they're doing amazing houses for guests and then ugly spaces for themselves. And then they end up hating their houses, and not inviting people over, because they don't know what to do. **So we need to prioritize the users, but also acknowledge the fact that there will be a day they need to invite people over**, those people shouldn't be mixed up with the other residents, and we kind of want to show off our spaces, we want to

show them that we had a beautiful fancy house, and that's just the way people left want to be you know! but if you think about it we're only having people over if we are really committed, then we're having them over once a week and they're mostly other family members, so it's not really a great level of privacy that you want, maybe the husband might need privacy for accessing his room, maybe the kids might need privacy or the boys should depend really on what type of family profile you are having, are you having boys or having girls, and what type of lifestyle are you looking for? **once you analyze that two, you should be able to customize the space that you want** for your own lifestyle, and this needs good communication between the designer and the clients from both ways I guess.

14. do you think architects in practice apply architectural theories in their design? this sense of a place or the homelessness the placelessness these theories

OK not not really, but there is I think a better shift towards doing this not in **houses though**, in outdoor spaces I think outdoor spaces came or public spaces came along way in Bahrain! you know the way they are changing to U shape spaces, the way you have a lot of smaller coffee shops close to your houses with nice views and all. But I think we still didn't develop this in the house probably, yeah so no I think **we are still as a culture we are still detached from linking theory to practice**, and it has to do with the way we think of how we have been teaching our students somehow, because it feels like you know the **university is this fancy thing where you use big words big concepts that don't really apply in real world**, and then you know you go to the clients and they're very simple people who don't know what they want you know, and then and then there is a lack of communication, so we have to have education that creates better channels of communication you know, create that link between the university as a place to teach students and probably the industry! you know connecting them better to offices where you see real clients and so on, and I think community participation is also an important part of the whole thing, you know we have to involve the community making decisions more and more, or at least thinking that they're making decisions you know it also makes an influence! this makes you feel good.

15. In your opinion what are the owners priorities in home planning or designs nowadays? let's say if we are we're having for the cultural values, making use of the plot size, visual beauty

Yes full use of plot size that is definitely there, designing something that looks good for others, prioritizing guests over family members unfortunately, doing I think they try to make big rooms as opposed to functional living spaces, making things that appeal to others! I think that's a big thing of what we want, we want our houses to look good in pictures you know! when we put them on social media.

so do you think it was priorities meet their needs?

No, no I honestly don't think so, and This is why I said that you know there is there is unclarity in terms of what the clients needs and what the architects are supposed to create. So we probably don't know exactly what we want? or we are not good in and putting them in words, and there is also the point that architects are not really excellent in making our wants into spaces. So there is a large level of miscommunication there, and there is there is unclarity for the user may be, inexperienced in the side of the designer, I think it comes to the fact that we ask people about what they want spatially, so when you have your client you ask that you ask them you know how do you want your house to look like? or what type of room do you want? we don't ask them how do you want to live! how do you expect yourself waking up in the morning, what's the first thing you do what's this room you use the most? you know because we are supposed to know how spaces function better than them! because we're not supposed to make their decisions for them, if they want their houses to be fully accessible for everyone at all times because that's the way they live, then we should give them that space! but if it's only because they don't know what type of room they want then that's on us, that's our problem as designers! so we should move towards asking clients about their lifestyle, their expected outcome from the space the way we want to feel in a space, the way you want to use the space as opposed to “please tell me what style do you like, what size of room do you want?” and you know how many floors?

16. and do you think people started to adapt to the open a plan in a way that changed some of their cultural values or it will affect later?

I don't think it has yet, I mean for people who want their privacy they're still haven't open floor plans with large windows but keeping them closed you know! switching off the lights, making sure the curtains are closed! not going to their beautiful gardens! because you can't go without Hijab! so we created the spaces, they don't the suits our lifestyle or our beliefs or our norms yet, and there are two options will either you know live away we don't want because we don't have the space for it, or we force ourselves to live in a way that doesn't really suit this

space! so I will keep the lifestyle I used to have, and have a space that really doesn't support that, or I would have to change just to fit the beautiful house I had.

17. I think we have reached the end of the questions tell us more about your opinion and the issue of culture and open a plan trend or a summary of your thoughts or anything that you want to add?

I think we have covered it all! Yeah the questions were very thorough. it's an environmental necessity, it's a political necessity, because you know we don't have enough spaces! we have to have smaller houses, we have to make those smaller houses look bigger, **so open plan concept is a very good solution, we just may have to make it adapt to our culture**, and there are a lot of technological solutions, some of them are passive, the type of glass, the shape of the house, some of them are active you know a press of a button or electrical curtains or whatever. So we have to include both in our designs, and we have to maybe have a smarter house you know, **something with more variety in the way it functions**.

Appendix F:

Sample plan solutions proposed by architects

