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Toward More Culturally Inclusive Domestic Interiors in the Age of Global Mobility

Sondos Rawas

The Glasgow School of Art, School of Design, Interior Design Department, Glasgow, United Kingdom

Abstract: Global modernity, mobility and movement stand as characteristic features that are shaping current times. Marking and challenging the notion of identity, whether cultural, religious, or political, on a daily basis, is movement from nation to nation, region to region, city to city. Individuals and groups are overcoming and crossing geographical borders and cultural differences for study, tourism, lifestyle, or even to start a new life with their children. Thus, identity can be challenged and redefined, resulting in a hybrid identity. The concept of interiors, especially domestic interiors, while people are moving and stopping has changed and is still changing. This case study was based in the city of Glasgow in the UK, where a qualitative approach was adopted for the study of 20 Arab Muslim participants. Semi-structured interviews were conducted within their current private houses in Glasgow.

Key words: Domestic interiors, contemporary immigration, mobility, Arabic Islamic culture, design ethnography.

1. Introduction

A growing proportion of movement has become temporary, with businesspeople, tourists, and students all featuring significantly [1]. Boyle *et al*. demonstrate this by noting the 366,000 people falling into this category in the US in the late 1999s: foreign students, half of whom were Asian; young adults moving between regions in search of employment; families moving down the road to satisfy changing housing requirements; and other nomadic peoples for whom mobility is a way of life. The authors continue, explaining that these types of migration, which are different to the normal concept of migration, are firmly embedded within the complexity of people's everyday lives and experiences. In support of this argument, the theme of the Interior World Forum 2015 in their third international conference was "Nomadic Interiors: Living and Inhabiting in an Age of Migration." The conference aimed to outline how the concepts of place and inhabitation have changed in an age marked by migration, multiculturalism, and global forms of nomadism. Therefore, the focus was on new spaces and architectures generated by innovative nomadic practices, highlighting identity and diversity as marks of the contemporary global context. Contributing to this argument, this study explores the domestic interior in the context of contemporary global mobility and its ability to perform as the habitat of its nomadic dwellers. To explore this phenomenon, I examine Arab Muslims' contemporary mobility from their home countries to the West and the effect of that mobility on their cultural identity within their domestic interiors.

The UK holds one of the highest rates of both long-term and short-term immigration from outside the EU in Europe. According to the Office of National Statistics (ONS) migration statistics, long-term international migration involves "a person who moves to a country other than that of his or her usual residence for a period of at least a year (12 months) so that the country of destination effectively becomes his or her new country of usual residence" [2]. The ONS also defines short-term international migration according to the UN definition: "those that migrate between 1 to 12 months for all reasons, 3 to 12 months for all reasons and … those that migrate for 3

Corresponding author: Sondos Rawas.

to 12 months for work and study" (ONS, 2015). In 2016, non-EU immigrants accounted for 45 percent of all those coming into the UK. Formal study and work are the most common reasons for immigration to the UK: 136,000 people migrated to the UK for study purposes in 2016 and an additional 275,000 migrated for work-related reasons [3]. However, in reviewing the literature it was found that concentrating on one city within the general context gives better results. Alitajer and Nojoumi [4] used the city of Hamedan as a case study to investigate and analyze behavioral patterns in the spatial configuration of traditional and modern Iranian houses, while Othman [5] used the city of Brisbane as a case study to explore international Muslim students' application of privacy, modesty, and hospitality in Australia. Therefore, my focus shifted to the city of Glasgow, UK. According to Kearns *et al*. [6], migration to the city of Glasgow has more than doubled in the last decade.

2. Research Background

The quest for cultural identity versus the drive for modernization through the emulation of Western ways of life is a conflict that is challenging the ideas and practices of contemporary architects and planners in Muslim cities [7]. When one's cultural identity is located within the surrounding environment, any lack of identity with the built environment can be compensated for by other tangible and intangible forms of cultural identity; for example, in cities that are governed by Islamic lifestyle, the presence of mosques in every neighborhood compensates for the loss of the principle of modesty in modern Islamic domestic interiors. Modesty here means the presence of spaces for worship and spirituality [8]. But when one's cultural identity is located within an environment of a different ethnicity and culture, the house becomes one's only physical boundary where cultural identity can be expressed, practiced, and inhabited [9].

Identity and the built environment have always fed and influenced each other [10]. To understand the underlying factors that affect the identity of the built environment, we need to comprehend the meaning of the word "identity" and its relation to the built environment. Underlying factors in the environment are those that are non-tangible but can be associated with human life in any society. They include culture, religion, tradition, customs, and conventions [11]. When we use the word "culture" in conversation, we often mean things that reflect the higher aspects of the mind, such as art, architecture, literature, music, painting, and so on. However, "culture" has a broader meaning according to sociologists such as Giddens [12], who refer to culture as the ways of life of the members of a society or of groups within a society. It includes how they dress, their marriage customs and family life, their patterns of work, their religious ceremonies, and their leisure pursuits. Rapoport [13] saw culture as a system of symbols, meanings, and cognitive schemata transmitted through symbolic codes. Therefore, the built environments of particular groups are settings for the kinds of people which that culture sees as normative, and for the particular lifestyle that is significant and typical, distinguishing one group from another. Regarding culture and the house, Rapoport [14, 15] theorized that the forms of houses can vary tremendously and are shaped by a range of sociocultural influences, including religion and custom.

Defining the term "culture" has never been an easy task as it holds a very wide range of meanings, because culture is a medium that varies from place to place due to differences in beliefs, location, climate, and trends [10]. However, there are broad solid understandings of the term that aid in its interpretation. Culture, according to Giddens [12], is a "way of life of the members of a society, or of groups within a society," and Geertz [16] similarly explains culture as that "which enables humans to associate with one another through systems of shared meaning-making."

He describes it as a "web of significance created by humans through their daily interaction" [17]. Sharr [18] discusses Stuart Hall's definition of culture, where it is something that surrounds us all the time, which influences us, which "constructs" or "produces" our habits and values. These definitions of culture are useful since they provide a context in which domestic practices take place as forms of culture. A society can contain multiple cultural practices, which include how people dress, their patterns of working, how they pursue their leisure activities, and how their artefacts or designed objects reflect particular practices or values.

In the twenty-first century, however, as much as culture is a shared identity, it is changeable. In a documentary portrait of Stuart Hall's cultural theory [19], Hall explains how we perceive culture. He does not believe in an absolute culture; in particular, as a result of international globalization, he claims that we become hybrid people. In recent times, people's social and cultural identities are in a state of complex hybridity. Hall states that globalizing culturally means integrating all places together.

Buildings are evidence of the culture that made them. They are artefacts that demonstrate the values informing their construction and their life in use. A building's organization, atmosphere, and details embody the ideology involved in its inhabitation, construction, procurement, and design. It offers clues to the thinking of the individuals who participate in it, their relationships, and their involvement in the cultures where they live and work [18]. The notion that people's cultural values are embedded in architecture shows strongly in their most-private sphere. The embodiment of cultural values becomes more individualized and personal the more the boundaries of this sphere come closer to someone, and more unified and generalized the more the boundary pushes away from the private and into the public. Therefore, the microcell of the house is the smallest component of a larger cultural organism [20], in both its physical structure and the values and beliefs it reflects.

2.1 Life between Residential Arab Muslim Walls

"Everything exists in the Kasbah in Algiers: every element of an architectural style which is unceasingly sensitive to human needs and desires." These were Le Corbusier's words when expressing his enthusiasm after a trip to the Maghreb [21]. Buildings and interiors, especially residential forms in the Arabic-speaking world, have always been highly responsive to the surrounding environment in both function and context. Therefore, the domestic culture of the Arabic world, from the nomadic tents to the manor houses in the city to the modern domestic architecture, occurs in buildings designed by architects such as Hassan Fathy, Pierre Khoury, and Elie Mouyal [21].

Islamic countries are spread all over the globe from small parts of South America in the west, to South and East Asia in the east, and from Europe and central Asia in the north, to Africa in the south [22]. Although Arabic-speaking countries make up only part of the Islamic world, they encompass an immense area: from Syria in the north to Yemen in the south, and from Iraq in the east to Morocco in the west (Fig. 1). All of these countries share similar domestic lifestyles and domestic cultures, which have been shaped mostly by Islam [21]. The interior of the house is a holy haven to which the family can retreat, and it is protected in keeping with strict conventions. On the other hand, it is a place for generous hospitality. The rooms are usually furnished sparsely; however, color, ornaments, and other decorations turn the house into a sensory pleasure and a refined home [24]. The Arabic Islamic world, despite differences in terms of local culture and climate, has similarities shaped by the general tenets of the Islamic faith [7].

Although Arabic domestic culture has some common aspects, it also shows great diversity. While the style of domestic interiors is tied officially and

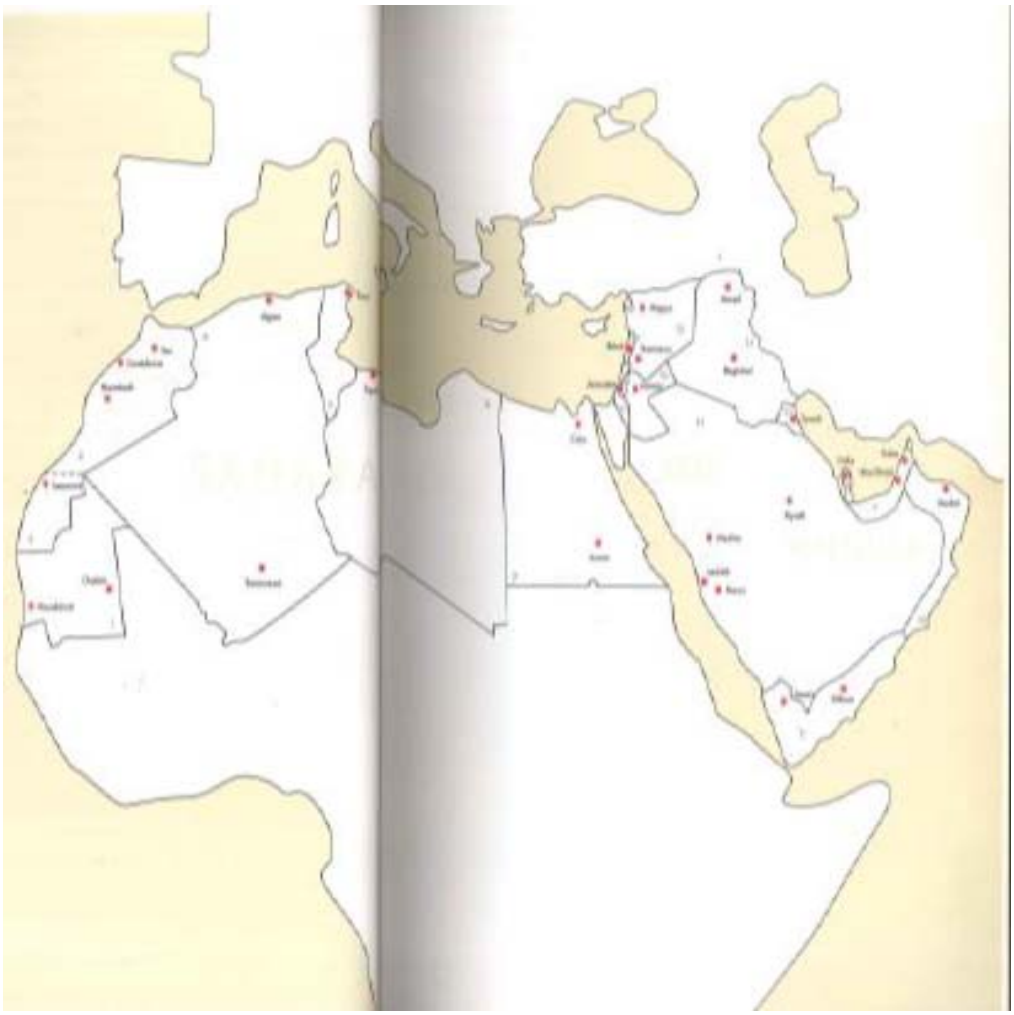

Fig. 1 General map showing the boundaries of the Arabic Islamic world [23].

closely to the religious culture of Islam, the local culture of each country, region, or city reveals its influence [21, 25], whether as a form of living activity or as cultural and architectural forms or objects. For example, in the Kingdom of Saudi Arabia, the design concepts, forms, details, environmental control systems, and careful use of the materials used in traditional architecture show an impressive response to the vast desert environment of Saudi Arabia, from the tall, airy structures of the hot-humid Jeddah area to the adobe group forms of the hot, arid central regions [26]. Although they are different in all that is mentioned, they share the principles of privacy, modesty, and hospitality, each in their individual ways and forms [27].

Arabs' houses in general have always been objects that respond to geographical, climatic, and cultural changes and needs. Because of the rich heritage of Arabic domestic and residential culture, they can modernize without losing identity or function [21]. Even Arabic proverbs describe the house as a reflection of the people who live in it: for example, "The secret is in the people who live in the house and not in the house itself" [26].

Many studies have discussed Arabic Islamic domestic culture and how it has affected the built environment, particularly the domestic one [4, 7, 21, 24]. A notable amount of research has explored the domestic sphere of immigrants and its importance as an object of identity within a majority culture that is

different, and the development of that sphere into a new home and identity [28-31]. However, there is a distinct lack of research on the domestic interiors of "new immigrants," "contemporary immigrants," "temporary immigrants," and "professional immigrants" in general, and female Arab Muslims as a minority ethnic group in a majority culture that is completely different, in particular. Therefore, this study attempts to understand the nature of Arab Muslim ethno-interiors or spatial relations, and sociocultural spaces in the UK, focusing on the house scale, theorizing about the spatial and physical manifestations of the integration, exploring design solutions that will assist in enhancing the quality of the domestic experience of a minority culture within a majority culture, and examining users' cultural practices within the space.

3. Statement of Problems and Purpose of the Study

The general research problem that this investigation encounters is defining and rethinking the unspoken worldwide mainstream belief that there is a certain housing model or a certain style of living interior, which has never been questioned, that has contributed to making certain kinds of interiors the norm. By examining the effects of contemporary global mobility on the accessibility and use of everyday domestic spaces, this study aims to explore and understand the responses of domestic interiors to the sociocultural spatial needs of their inhabitants in this age, and how a design ethnography approach can assist interior designers in creating interiors that better answer the needs found on a daily basis in the contemporary global context. Moreover, the aim is to examine the experience of designers and users of design as they interact with design practice, designed objects, or designed systems.

4. Research Questions

How do the utilization of space and cultural practices affect the organization of interiors?

To what extent does the built environment of contemporary domestic interiors in the West influence the cultural practices and the use of space of Arab Muslim users?

How can ethnographic practices enhance the practice of designing domestic spaces?

5. Methodology

The methodology used in this research is devised to explore the design, allocation, and use of space within the homes of Arab Muslim females and their families in the city of Glasgow, UK. Exploratory research examines a phenomenon or phenomena about which little is known or which are currently not clearly defined [32]. At present, there is very little knowledge about the domestic behaviors of Arab Muslim females and their families living in Glasgow, in terms of how they use their spaces to apply their domestic culture and how ethnographic practices can assist architects and designers in designing better domestic interiors. Thus, this research is being undertaken for the purpose of learning about and understanding the lived experiences of members of this group with respect to their religious faith and its influence on the design and use of space within their inhabited accommodations in the context of contemporary global movement and mobility.

The focus of the methodology was to develop a research plan and design that combine the general understanding and process of a research methodology that is formed by the practice of designing spaces and interiors. This approach is achieved by positioning myself, not only as a researcher but also as an interior designer, within the research design. Since the world of designers is already close to the world of researchers, Crouch and Pearce [17] argue that positioning designers within their everyday practices, and then positioning these practices in a broader context of what goes on around them, with the intention of establishing an "ecology" of design, gives

an understanding of what designers do and how their practice is situated within the design ecology, and provides concepts that can be used to understand the practices of the research and of the researcher. With the use of multiple sources and technics to gather data about a specific case study, different methodological decisions are appropriate [33]. Therefore, design ethnography was applied to explore the phenomena of contemporary immigration and mobility and cultural identity in domestic interiors in the city of Glasgow.

5.1 Design Ethnography

Design ethnography aims to capture how design is really used, as a corrective to how the designer might think it will be used. It offers a range of characteristics of user-centered design activities through the systematic study of culture, and is a new approach to design projects and the research used in many design fields. However, there is a lack of adopting design ethnography as an investigative approach to architecture and interior design.

Typical ethnographic methods are participant observation and in-depth interviewing, which lead to the creation of "thick" descriptions of the cultural practices being observed. In early examples of ethnographic research, these strategies for collecting data were thought of as ways in which an outside observer might come to know another culture as an insider might know it. That means there was an expectation that the direct participation of the researcher within the cultural practices would lead to a direct understanding of the experience of others. However, it was recognized, through ethnographic practices that were developed over time, that such a depiction of a culture, no matter how detailed it was, could not communicate the reality of a particular cultural identity directly. What was communicated was the interpretation of the researcher's experience and reality of the culture. The recognition of this problem led to a shift in ethnographic practices and purposes. Ethnographic practices and strategies began to be seen as methods to better understand the events, social interactions, and experiences that take place in social and cultural contexts, even if researchers are not engaged in true ethnographic research.

To investigate the aforementioned phenomena in Glasgow, I adopted ethnographic methods. However, classic ethnography involves participant observation and long-term cultural immersion in an unfamiliar culture and is therefore conducted less often, especially in a globalized, post-colonial world [17]. Yet the strategies developed by early ethnographers have been adopted and modified by researchers to the extent that most research in the social realm has been influenced and informed in significant ways by ethnographic practices [34]. These modified ethnographic practices are deployed in different research settings and locations. Some of these emerging cultural settings can be found where the research participants are members of a minority cultural group within a larger cultural setting or of culturally hybrid groups [17].

6. Data Collection and Analysis

The expansion of my social networking in other Muslim communities, such as the neighborhood's mosque, introduced me to other Arab Muslim females who, although the local culture is different, share common domestic cultural understandings that are governed by the teachings of Islam. Through the Saudi societies in all of Glasgow's universities—which have networks and relations with other Arabic societies in Glasgow—and the local mosques in Glasgow, I have reached yet more Arab Muslim females living in Glasgow temporarily for education or professional training, or while accompanying their family while other members are either studying or working. This allows a broad spectrum in my research. Little research has been done on this group of what are called "professional migrants" [35]. The exclusivity in including females but excluding males from my study comes naturally

for different reasons. The Muslim domestic domain is considered to be a female domain [24, 36]. Also, according to Muslim tradition, the man is the head of the house in public while it is the woman who runs it in private [21]. A social norm in the Arabic world in general and in the Middle East specifically is that women spend most of their time inside their homes [37].

The research focuses on rented apartments because they are the most common type of housing in Glasgow. Moreover, they are the preferred type of accommodation for professional immigrants in general [35], due to the nature of their movement, and for Islamic Arabic families and individuals in particular [5, 24] because the notion of privacy is a serious consideration in the culture, especially for women [8]. Considering the previous points, the sample consisted of 20 female Arab Muslims living in the city of Glasgow temporarily, with mixed marital status (single or married) and between the ages of 19 and 40. The sample size was selected based on the literature review, which demonstrated that 20 to 30 respondents provide an adequate and appropriate sample size in a study containing in-depth interviews [38]. Furthermore, qualitative analysis requires a smaller sample size compared to quantitative analysis, in order to avoid data saturation, which occurs when the participants are no longer providing any additional perspectives or information. In qualitative studies, in-depth interviews aim to further the understanding of a phenomenon and do not aim for generalization of the findings [39, 40]. In this study, the interviews stopped after 20 participants had been interviewed; at this time, I started to recognize that the answers were becoming repetitive and concluded that enough data had been collected for this phase.

6.1 Interviews

To gain a clear description of the situation from the perspective of the user, I visited 20 houses within the city of Glasgow. I adopted ethnographic practices for which the in-depth, semi-structured interview is a typical method [17]. The interviews took place in the participants' homes, which were both the locus and the focus of conversation [29]. Although there are limitations to direct access to and observation of the interior spaces of inhabited houses [4], I was able to access and observe 20 contemporary rented houses for one visit in different parts of Glasgow. The semi-structured interviews were based on open-ended questions and prompts. Interviews were conducted mostly in Arabic because, although most of the participants know how to speak English, we all felt more comfortable speaking in Arabic, especially when dealing with Arabic terminologies. I prepared the questions with appropriate prompts for participants. The interview questions were divided into sections to gather in-depth information and were focused on various aspects of the participants:

1. Personal background
2. Movement history
3. Their home in their country of origin
4. Their current home in Glasgow
5. Daily use of the space
6. Level of satisfaction with the current design and layout
7. Important or applied domestic principles
8. Modifications made to the interior.

Although I prepared a set of questions, due to the nature of exploratory ethnographic practices, many new questions depending on the individual case and participant emerged. I translated and transcribed each interview into a Word document. Although there is software that assists in this heavy task, it was a very useful process to undertake manually, as listening to the interviews provided me with additional notes and allowed me to further reflect upon the comments made.

6.2 Observations

Mainly, observation was adopted as a strategy for going out and getting close to the activities and

everyday experiences of the participants [41]. However, in keeping with ethnographic approaches, which typically use several methods to collect data [34], and the practice of interior design, I was interested in trying to incorporate visual research methods and processes to further emphasize the multidimensional nature of cross-cultural practices and the use of domestic interiors, rather than depending on words alone. Situating interviews within an observational and visual approach [42] was found to be very important in developing a method that would provide visual descriptions and inform the overall data collection as an analytic and interpretive process [43], as well as recording as much data as possible in a short length of time. These visual methods—sketched observations and photography—were integrated with interviews, observation notes, and go-along tours around some spaces and rooms within the house.

6.3 Sketched Observation

Sketching observations is a method used by scholars of sociology and anthropology to gain deep insights and an added point of view on the data. This was noted through the work of Bourdieu. He is widely recognized as one of the leading twentieth-century sociologists in the academic discipline of cultural studies. His contribution to architecture is significant, especially in the concepts of habitus and cultural capital. He offers designers and architects a way of thinking about the social construction of their social group and its relation to the social world around them by proposing that a social group within a society will create its own beliefs, values, and ways of reinforcing its distinction and existence. In particular, in his fieldwork in 1995 in Algeria, Bourdieu conducted an ethnographic study of a traditional Kabyle Algerian home. His analysis included artefacts and actions within the home and the space itself. The field data that he collected was transcribed onto 1,500 cards that recorded specific details about many aspects of Kabyle Algerian culture. Among the fieldwork and data collected, he produced field sketches and diagrammatic floor plans (see Fig. 2).

The methodology he used then unraveled the symbolic dimensions of domestic form and space in diverse contexts. The field sketches include both sketched floor plans and field notes of his observations.

Sketches are also an essential tool for designers. They provide the designer with new insights, which play an important role in the emergence of ideas [44]. Therefore, it was only natural that I use sketching as a method of reading the interior, recording observed practices and objects, and incorporating participants' notes and specific detailed information. I sketched the layout or plan of the house with a black marker on A3 white paper. This artefact of sketching what I observed and what the participants told me developed into a tool to further develop more focused questions and concepts. The use of artefacts that supplement observation enriches, clarifies, and validates the observations [17]. Patton [33] argues that such *bricolage*, where the researcher uses a multiplicity of data collection methods and combines them in creative and innovative ways as the research evolves, is commonplace in qualitative research. These "observation plans" provided me with a wide-angle viewpoint, which then gave me more focus during the interviews [17].

6.4 The use of Sketching as an Observational Tool

The sketches I produced represent certain concepts and possible design problems within the context of the research subject. The sketch of participant 1's home (Fig. 3) was made during the interview and go-along tour. The tour around the house enabled me to take a close look at the daily movement and practices that occurred there, and at any closely encountered domestic objects, and allowed me to ask questions regarding what went on in the space and why. For example, as communicated through the diagram, the living room was the main space in which the interview

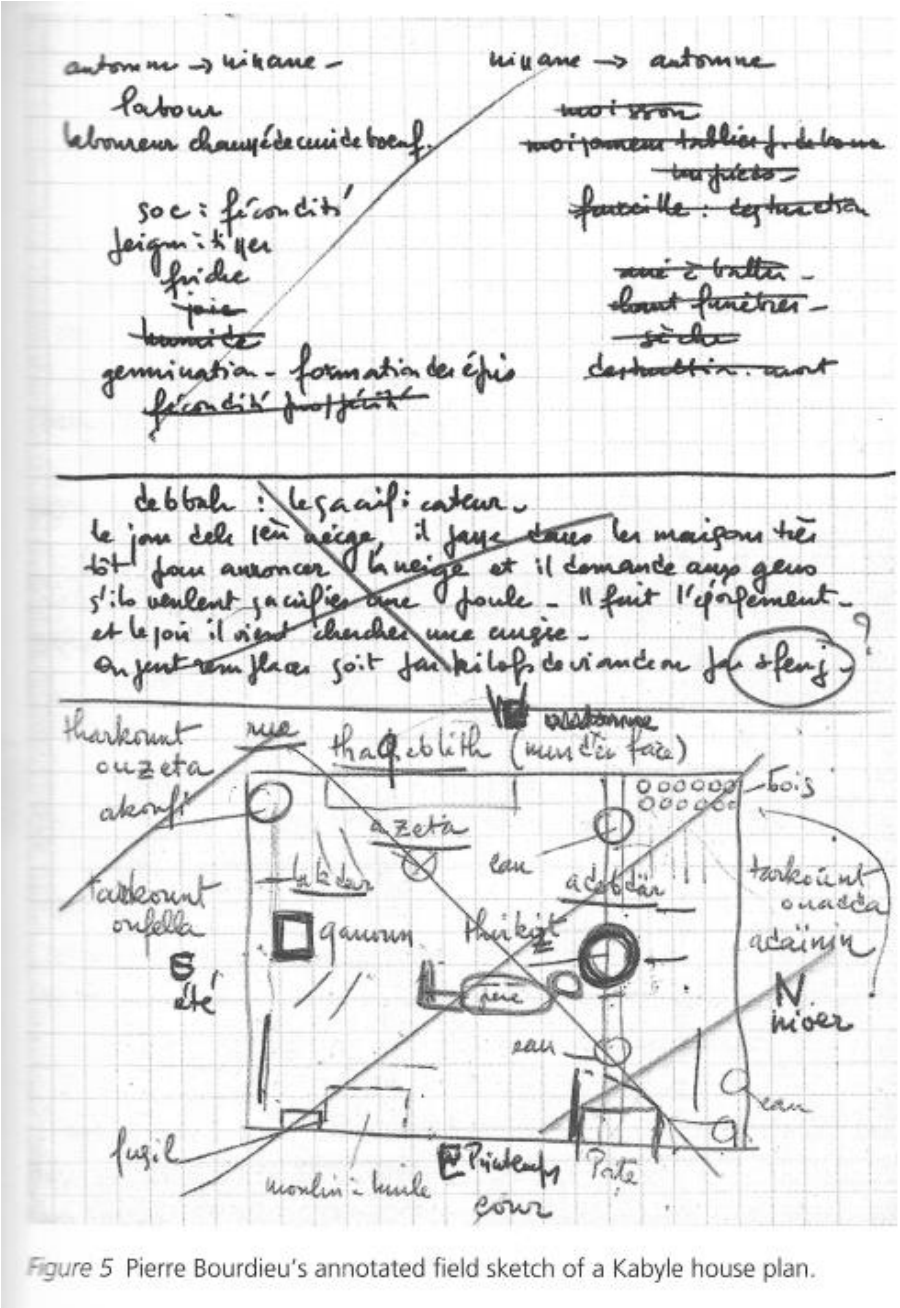

Fig. 2 Photograph of Bourdieu's field sketch,1995.

took place and was where I spent most of the visit. It shows that this is where the participant and her family spend most of their time and carry out most of their daily practices. There are several objects that the participant talked about that play an important role in allowing this to be the case, such as zones that the participant created to fit all daily activities within this main space. These visual recordings were supported with notes that show my observations and interpretations, along with the information provided by the participant, which helped with the production of a map of each household [43]. Moreover, as recorded in the diagram, the living room is the only space that shows details and communicates information. On the contrary, spaces such as the master bedroom, children's bedroom, and toilet do not communicate any

information. Although the participant talked about them, I was not permitted to observe or photograph them. This reflects the privacy level of the participant. I have communicated my inability to observe some spaces by hashing the entrance or the doorway as shown in the diagram. This observation urged me to compare how each Muslim female in her domestic interior interprets and reflects the principle of privacy.

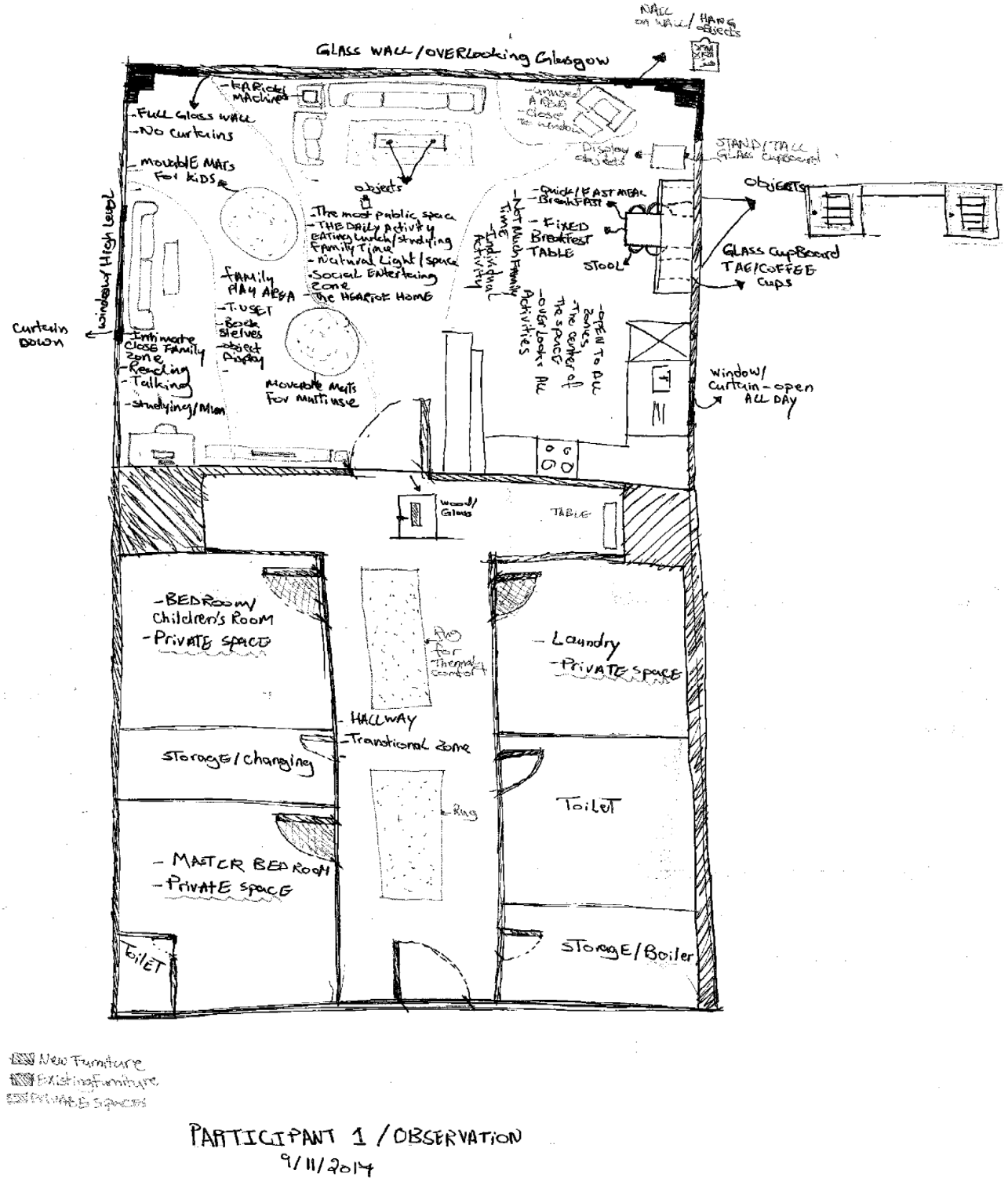

Fig. 3 Sketch of participant 1's home, by author, 2014.

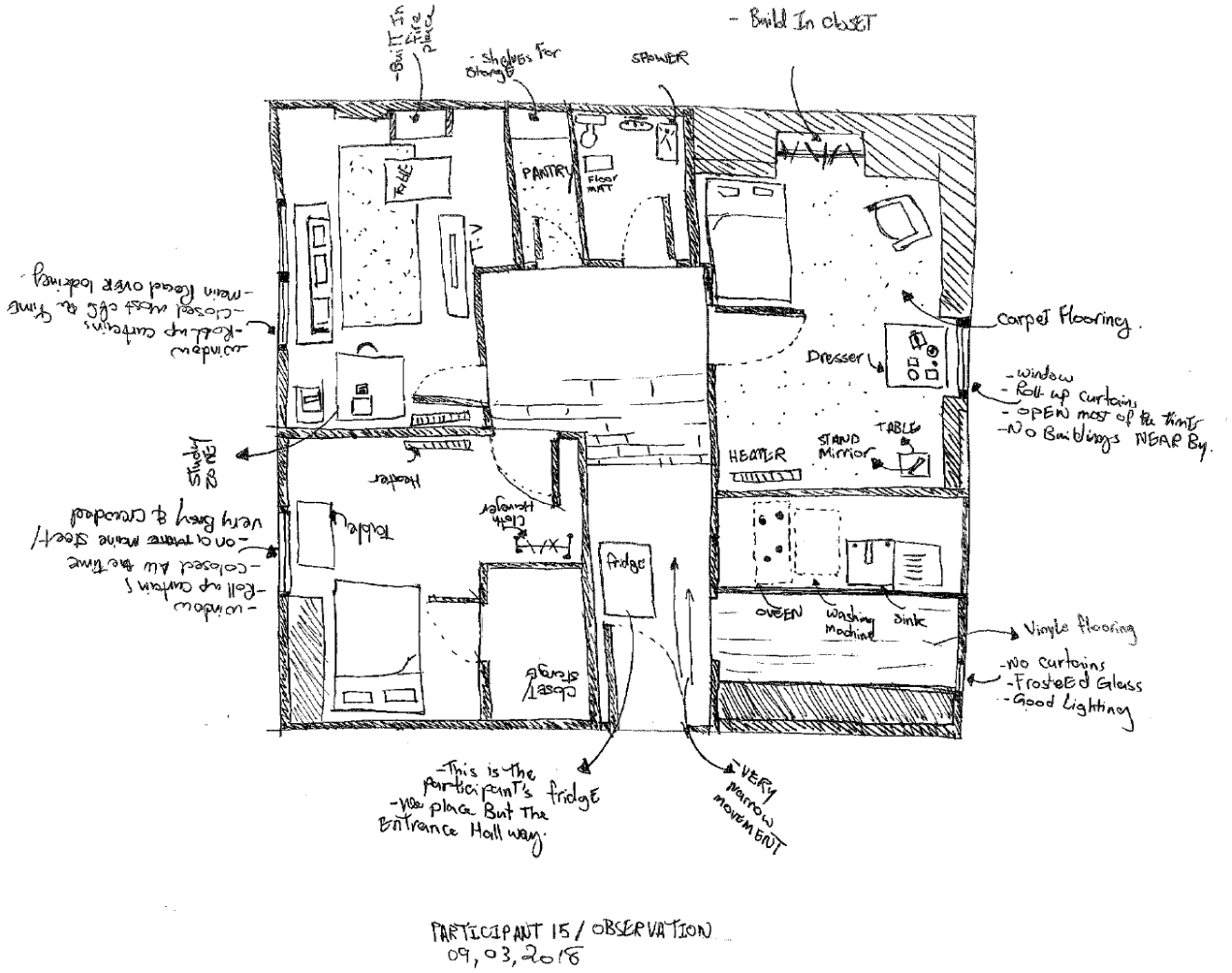

Fig. 4 Sketch of participant 15's home, by author, 2018.

On the other hand, in participant 15's observation plan (Fig. 4), I was able to record my observations through the whole apartment. She was open to touring with me through her everyday activity in every room. Her practice of privacy was presented in other ways. For example, the curtains in the living room and bedroom are closed throughout the day because the living room overlooks the main street and the bedroom window is close to the neighbor's in the next building. The observations of participant 15's apartment also recorded her daily dynamic movement through the entire interior, which is opposite to the observation of participant 1, where the daily dynamic is focused on the living room. She discusses how the living room is used mostly as her son's play zone and her study area. However, she uses one of the bedrooms as her retreat space from studying, house chores, and looking after her family.

Another practice I was able to record in my observation diagrams was the interpretation of spatial zones within the domestic zone. I use participant 17's sketch plan (Fig. 5) as an example. The two main spatial zones in this apartment are the public and private. The private zone is the master bedroom, the public, that is, the main spaces in the apartment, is the living room and the other multifunction room. The participant refers to this zone as the "social zone." Other than the family's daily practices happening in this zone, they socialize, study, and accommodate visitors from extended family here too. Participant 17

emphasizes that some elements of the apartment contributed to the creation of these zones. Mainly, the fact that the multifunction room was unfurnished by the landlord made it flexible for her to add and modify furniture according their needs. Another factor was the sliding door between the two spaces, which made it easy to adjust the space according to the gender of visitors. The movable panels allowed them to entertain both male and female guests at the same time. Usually the living room overlooking the kitchen is the women's zone and the multifunction room is the men's zone. A third spatial zone—as well as the public and private—is the semi-private or transitional zone. This zone is created in line with the females' progression from the private core of the interior toward the public nature of the exterior, hence the word "transitional." This zone was found to be the hallway of the apartment. The behavior of women changes when they are transitioning from the inside to the outside and passing through this zone. They will stop and put on their headscarves and put on their coats or *Abaya*. An object such as a mirror usually reinforces this zone.

6.5 Photography

Along with the sketches and notes for each case, photographs were taken. The photographs helped the documentation of the space, layout, and objects therein. The photographs were taken by me and they represent three elements in the data collection process. First are photos of the solid description of what appears in the environment. For example, Fig. 6 records the existing layout of the living-room space of participant 12. Second are photos of my interpretation

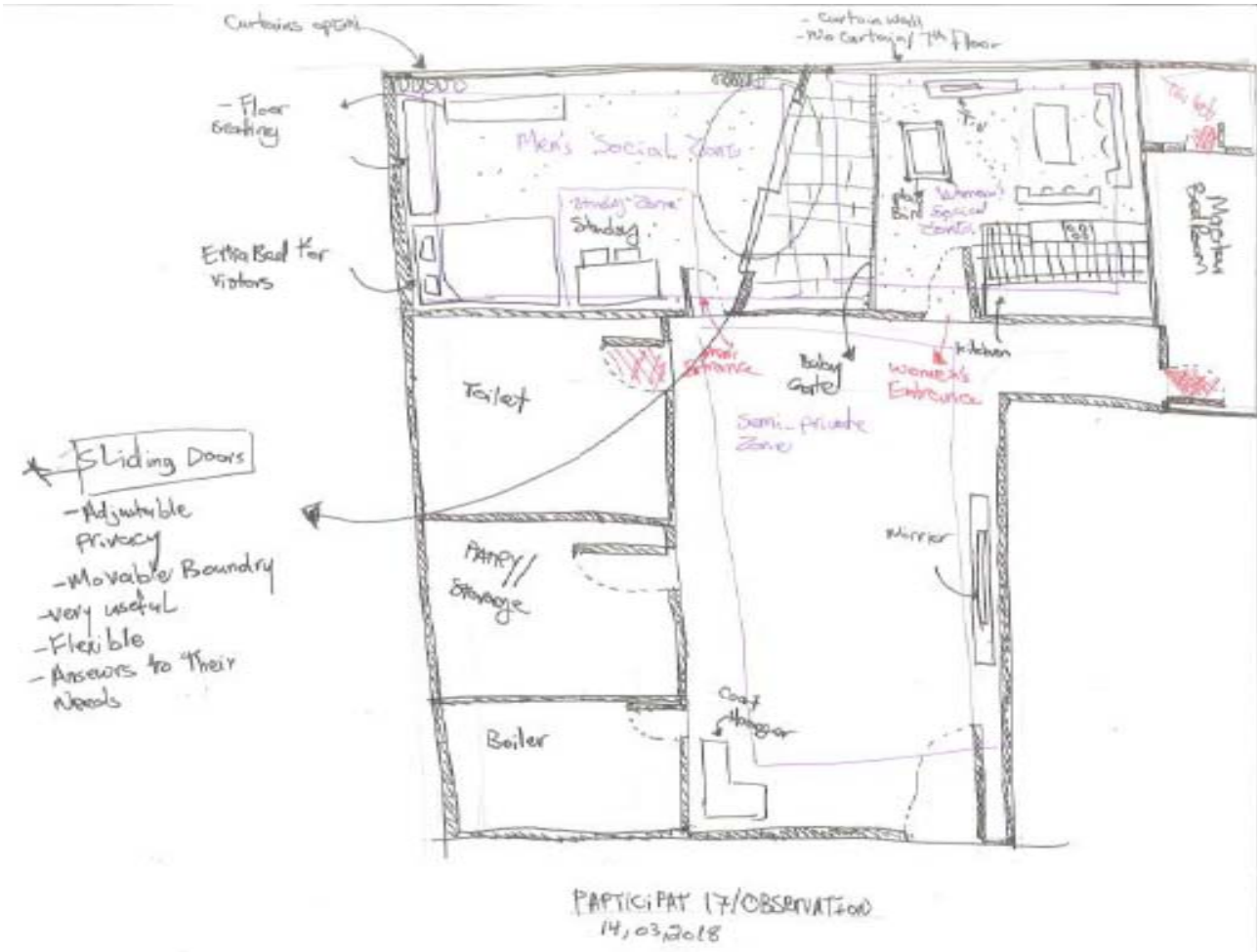

Fig. 5 Sketch of participant 17's home, by author, 2018.

Fig. 6 Photograph of the layout of participant 12's living room.

Fig. 7 Photograph of storage cabinets from participants 14's kitchen.

Fig. 8 Photograph of objects used daily by participant 11.

of what relates to the subject. Although Creswell [40] argues that photographs may be difficult to interpret ,Dunne, Pryor and Yates [45] confirm that the interpretation of photographs produces deep insights. Fig. 7 documents my interpretation of participant 14's use of vertical space for storage, as she emphasized the problem of storage and lack of space in the entire house. Finally, items that participant 11 shared directly from her daily reality [40] are shown in Fig. 8, which records what the participant pointed out and talked about in detail when she was asked about objects she brought from her home country.

7. Analysis and Initial Findings

The analysis of the heavy text typical of qualitative data can be done either manually or using computer software [34]. Although computer software is time-saving and more accurate than manual analysis [41], I conducted this phase of my investigation and analysis manually, driven by Wills *et al.*'s [43] experience of going through data about the use of kitchens collected by multiple methods from 20 households. They found that, although manual analysis was time-consuming for them, there were benefits in terms of ensuring a more robust interpretation of the data, leading to the creation of new and reliable knowledge about social practices. Coding is the process of organizing the data by breaking it into chunks (text or image segments) and creating a written representation [40]. Also, it involves taking text or pictures gathered during data collection and segmenting sentences, paragraphs, or images into categories and labeling those categories with a term [5].

There are two types of codes from reviewing the literature:

Codes on topics that I have come across in the literature that appeal to common sense [32]. For example, one of the codes that I read in studies of Islamic housing culture [8] related to the importance

of privacy and the different interpretations of it. Similarly, "privacy and Muslim females' domestic interiors in the West" was a topic or a code that I both expected and read about.

Codes that I found surprising and that were not anticipated at the beginning of the study [17]. For example, I undertook the exploration with the anticipation that, in most domestic interiors of female Arab Muslims in the West, culture would be heavily represented in physical terms, such as with domestic objects from their home country, family, and personal photos, and some drastic interior modifications. Although some cases did present this, a bigger percentage of interiors retained their Western style, and the cultural and identity dimensions in the domestic space were represented by other means. This resulted in codes such as "sensory cultural identity in domestic interiors" and "the Western living room" and so on.

Describing each code involves detailed rendering of information about people, places, or events that relate to the code [17, 46]. These descriptions provided me with possible themes and categories that could appear as major findings. Below, is an example of my "code descriptions." These descriptions are rationalizations of observations and interviews that were grouped together under one code. Each code was labeled with a color to show which were strongly present among the 20 participants.

7.1 Code: Sensory Identity in Domestic Interiors

This code includes participants who depended heavily on one or more senses to recreate or live their familiar daily practices within their domestic interiors. This approach was adopted by most participants as a way to go about and practice their daily routine within the restrictions of both a new environment and a rented accommodation. Within the houses of participants 1, 10, 11, and 17 (Figs. 9-11) the sound of the call of prayer five times a day is recreated using a digital clock that calls for prayer according to Glasgow's timings. In the participants' home countries, the call of prayer is heard from the neighborhood's mosque. The call of prayer is not only a religious connection; it is also a time organizer for the daily system in Muslims' lives. Many Muslims' daily practices are closely tied to the five prayers. For example, waking up and sleeping are tied with the first and last prayer. However, when someone is living within his or her familiar environment, the whole community and social systems are practicing the general Muslim routine. Therefore, participants utilized the sound of prayer within their domestic interiors in the West, where the call of prayer is not public, as a way to implement their daily practices. Some participants expressed the same behavior but used different devices such as mobile phones apps that call out for prayer.

Another aspect regarding sound is "sound privacy" or sound traveling from one house to another and its relation to the sense of privacy within the domestic interior. Most contemporary apartments in the Arabic world are built from soundproof building materials [47], because sound traveling from one house to another is considered against the principle of privacy in Islamic house design. Therefore, people from the Arabic Islamic world are not used to hearing

Fig. 9 Photograph of participant 1's digital Islamic watch.

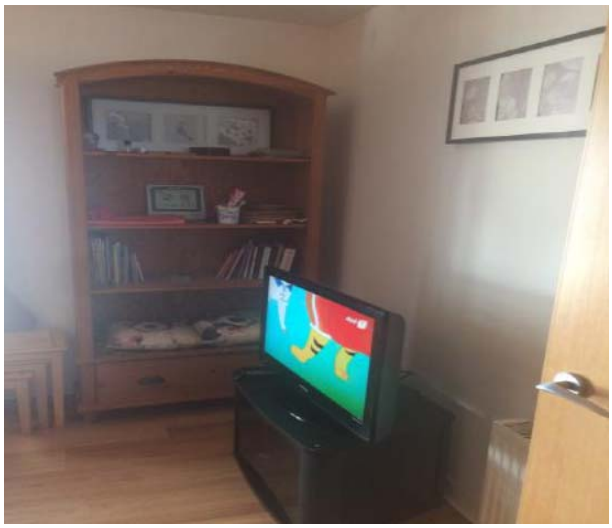

Fig. 11 Photograph of participant 10's digital Islamic watch.

Fig. 12 Photograph of participant 11's digital Islamic watch.

neighbors' voices in their living rooms, in leaving or entering their apartments, or in any other activities. When interviewing participants, most pointed out that sound traveling disturbs their feeling of home. Moreover, they are concerned about their own voices traveling outside the apartment. The Islamic teachings encourage speaking in modesty as a sign of respect to others in general and to neighbors in particular [29]. It is considered an act of harm if a Muslim disturbs their neighbors one way or another.

Another sense used by participants to establish their cultural identity through their daily practice within their domestic interiors is smell. Participants use the aroma of *Ouda* and cooking with traditional spices as a way to familiarize themselves with the space. The *Ouda*, also known as *Oud* or agarwood, is a fragrant dark wood used in incense, perfume, and small carvings. It is valued in the Arabic culture in general and the Gulf region in particular. The smell is associated with hospitality or special occasions because the sources are usually expensive [48]. Fig. 13 shows *Oud* from participant 4. Some participants expressed that their children would use phrases such as "It smells like home" when they burned *Ouda* or cooked with traditional spices. Fig. 14 records participant 15's cardamoms, which she brings with her from Egypt to use in her cooking.

Fig. 13 Photograph of participant 4's *Oud*.

Fig. 14 Photograph of participant 15's spice.

Fig. 15 Photograph of participant 5's wool blanket.

Touch was also noted to be important as I observed some participants' apartments. The tactile feeling of a wool blanket helps participant 5 sleep better because it reinforces the security and feeling of being at home (Fig. 15).

Other codes that were generated from themes observed were:

The contemporary Western living room as the Arab Muslim female domain

The notion of privacy of Arab Muslim females in Western domestic interiors

Senses and home identity

Recent global immigration and domestic interiors

Building policies of the private rental sector

Ethnographic practices in doing research in design.

8. Conclusion

At the present time, there is very little knowledge about the domestic behaviors of Muslim families in the Western world in the context of contemporary global mobility [5]. Moreover, other than simply investigating this particular phenomenon, not many studies introduce methods that can assist architects or interior designers to design toward a culturally inclusive forms of dwelling. Therefore, exploratory research was undertaken. Exploring a methodology to investigate a phenomenon which little is known about requires testing and trying multiple methods and reflecting on them, leading the researcher to build an inventive system of methods [17].

I have found that using multiple research methods provided me with a full, heavy, and rich record of the phenomenon, which opened up to multiple phenomena, such as hybrid domestic interiors and notions of privacy in domestic interiors. These data could be repeatedly viewed and reflected upon as the analysis progressed. Additionally, with participants, the "everyday" nature of what I am interested in made the conversations and tours very relaxed and light. This helped in creating a wide social network for further investigation.

The nature of the methods applied requires in-depth investigations and analysis. With 20 participants and manual coding and analysis, I was only able to scratch the surface of the research. Deep, focused analysis was not achieved. Therefore, the second phase of the study will include fewer, more focused study cases that are analyzed by computer software.

The initial results show that interiors of private houses in Glasgow are static against the changing and moving force of globalization influencing these interiors. As a result of global movement, social structure is changed. The sphere of interior design must begin to accommodate the emergent trends and changes in lifestyles. Different design-oriented scenarios for more culturally inclusive interiors need to be proposed, based on the needs of the users of these new hybrid interiors. Different interpretations of Islamic teaching and cultural living while living in a Western context, which depend on levels of adaptation, have nothing to do with levels of religious attachment, but stem from flexible living that is associated with constant mobility and temporariness. Finally, non-physical factors can also be used to enhance the experience of identity and home.

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