Visual Privacy in Residential Architecture of Nablus, Palestine

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Submitted to the
Institute of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of

Master of Science
in
Architecture

Eastern Mediterranean University
June 2018
Gazimağusa, North Cyprus

Approval of the Institute of Graduate Studies and Research

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ABSTRACT

The concept of privacy is one of the prime states of the individuals and one of the greatest limitations to the public. Among cultures, this social value comprises an essential factor that manipulated diverse facets in life. Privacy considerations commonly influence the entire architectural assembly of an environment. Relatedly, the prevailing global tendency toward modernity has altered the distinctive privacy characteristics of prevalent traditional styles, specifically in residential buildings among conservative societies of the Middle East. Strikingly, even when privacy is desired by occupants of modern-day housing, recent designs neglect from consideration of this desire. In response, building occupants carry out numerous and random modifications to curtail privacy intrusion, so the problems of this study composed. Hence reducing these random attitudes by exploring different procedures for erecting residential buildings that respect to visual privacy considered as a main aim for this study.

This study is based on the common method of extracting indicators from the literature review, through gathering data from various resources by directed qualitative content analysis then analyzing various cases according to the extracted categories. The scope of the study focusing on visual privacy in the existing architecture of residential buildings in the old city of Nablus, an area most influenced during the Ottoman era (1517-1922), among analysis ten cases and one region particularly according to the extracted indicators of the physical patterns and parameters. The results of this research lead the designer to improve visual privacy considerations inside the residential environment and recover the urban environment from the recent bizarre

modifications to residential buildings, further discussions and research evaluating visual privacy matters in several areas might be depend on this study.

ÖZ

Mahremiyet kavramı bireylerin en önemli durumlarından ve toplumun en büyük sınırlamalarından biridir. Kültürler arasında, bu sosyal değer yaşamda farklı yönleri hareke geçiren önemli bir faktördür. Mahremiyetle ilgili mülahazalar genellikle bir çevrenin tüm mimari yapısını etkilemektedir. Benzer şekilde, moderniteye yönelik hakim olan küresel eğilim, özellikle Ortadoğu'nun muhafazakâr toplumlarının konut binalarında, yaygın geleneksel tarzların kendine özgü mahremiyet özelliklerini değiştirdi. Şaşırtıcı bir şekilde, mahremiyet günümüz konutlarının sakinleri tarafından arzu edilen bir durum olmasına rağmen, son yapılan bina tasarımlarında bu arzu göz ardı edilerek ihmal edilmektedir. Buna karşılık bina sakinleri, bu çalışmanın asıl nedenini oluşturan, mahremiyet ihlalini azaltmak için çok sayıda ve gelişigüzel bir takım değişiklik yapmaktadırlar. Bu nedenle, bu çalışmanın temel amacı, görsel mahremiyete saygılı konut binalarının dikilmesi için farklı yöntemler araştırılarak bu gelişigüzel tutumların azaltılmasıdır.

Bu çalışma, literatür taramasından elde edilen göstergelerin çıkarılması yöntemine, çeşitli kaynaklardan niteliksel içerik analizi ile veri toplanması yöntemine daha sonra belirlenen kategorilere göre çeşitli vakaları analiz etmeye dayanmaktadır. Bu çalışmanın kapsamı Osmanlı döneminden (1517-1922) en çok etkilenen eski Nablus kentindeki konut yapılarının mevcut mimarisinde görsel mahremiyete, özellikle fiziksel desen ve parametrelerin çıkarılan göstergelerine göre on adet vaka ve bir bölge analizine odaklanmaktadır. Bu araştırmanın sonuçları, tasarımcıyı konut ortamındaki görsel mahremiyet unsurlarını iyileştirmeye yönlendirmekte ve kentsel çevreyi konut binalarında son zamanlarda oluşan gelişigüzel modifikasyonlardan kurtarmaktadır,

bazı alanlarda görsel mahremiyet konularını değerlendiren ileri tartışma ve araştırmalar bu çalışmaya bağlı olabilir.

Anahtar kelimeler: Mahremiyet, Görsel Mahremiyet, Mesken, Mimari Boyutlar, Eski Nablus Şehri

ACKNOWLEDGMENT

My deepest appreciation is owed to my thesis supervisor Assoc. Prof. Dr. Rafooneh Mokhtar Shani Sani, for her guidance, support and considerate advising throughout this thesis, I am extremely indebted to her active participation to complete this study.

Additionally, I want to thank all the members of the faculty of architecture at Eastern Mediterranean University, particularly my committee members for their insightful comments and instructions. Also best thanks to my former instructors at An-Najah National University in Nablus, Palestine for their guidance and encouragement.

Last but not least, I would like to express my special thanks to my lovely parents, my partner, my brothers, my sisters, and my friends, for their special support and encouragement for me to pursue this study, without their endless love, sacrifice and invaluable support, all my efforts could have been incomplete.

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INTRODUCTION

1.1 General Over View

In the current era of rapid and abundant inputs and fluctuations, our lives are influenced emphatically and sometimes adversely. In contemplating the architectural world, methods of design, thinking, and concepts contravene the ways of our progenitors; this is especially apparent for privacy aspects. Privacy and its manifestation in the built environment compose one of the principle social-moral issues which mutate in transfer from one culture to another. Broadly, privacy is the quality of being separated from organization or observation and this expression goes back to the 15th century (Georgious, 2006). In other words, privacy can be characterized as the nature of being disengaged from the view of others or the state of being covered (Websters, 2017), and it is perceived in numerous aspects of life.

In architecture, privacy compels spaces for being with some and separated from others simultaneously. As well, privacy in a given space may vary with some constraints at one time and stronger constraints during another. In housing and city design, privacy is a most crucial issues (Albustani, 1985). For Muslims, privacy is derived from "individuality" to provide spaces for persons, whereas for Romans privacy relates to individual property that is not for use by the state or the public good (Dunbabin, 1994). Regardless of culture, privacy commonly affects the forms of dwellings and settlements according to Rapaport (1969) and Dikmen (2005). This social value so

strongly depends on appropriate design in residential buildings that architects must recognize these values and alter the process of design to accommodate them.

Although these design considerations have been very essential previously and especially in Islamic cites, nowadays on account of modernity trends, residential buildings and entire zones have been erected without considering this aspect of socio-moral values. Despite the historic character of Nablus, Palestine, the same transformations have occurred there. These trends are contrary to privacy and prompt major problems from damaging the overall vision of the city to touching the everyday life of individuals. In Nablus, since it is understood that the cultural bonds affect the Palestinian society deeply, especially along religious lines, designing for residential privacy is vital (Stevenson & Ball, 1998).

Newly-designed residential units and current strategies are indifferent to pondering the neighborhood rights and rules of separation; designers ignore the strict social beliefs in Palestinian culture, which means they inadvertently encourage inappropriate blending of men and women's use of space in daily social life (Al-Tawayha, 2011). Ultimately this action, or rather inaction, disregards Palestinians' fundamental ties to family, highly-valued hospitality, and sense of neighborly respect (Tawayha, Braganca, & Mateis, 2015). Without appropriately-designed residential areas, people may come to prefer the characteristics of modernity, which represent dismissal of traditional social values and disregard for visual-privacy regulation between adjacent buildings. These issues do not solely relate to Arab culture because, no matter the culture.

In Nablus, newer regions are built and organized counter to the old city strategies. There, the spatial aspects are considered with more weight than the social connections and interactions between family members that were engrained in traditional societies (Hall E. T., 1966). Essentially to avoid the continuation of this trend, discovered solutions from conventional techniques should be transformed into suggestions for correcting these contradictory situations in contemporary neighborhoods.

1.2 Problem Statement

During the two previous centuries, globalization in general and modernism in particular began affecting many aspects of life, including architecture throughout the whole world. Likewise, Nablus, Palestine and their architects experienced the influenced of these trends, so they started to introduce new residential patterns. The new patterns created mostly high-rise buildings in Nablus without considering the important socio-cultural value in this society such as privacy and visual privacy among buildings specifically. These arbitrary introductions were not caused by modernism exclusively; political conflicts in the region played a critical role in shaping this situation and stimulating the construction boom.

As a result, new regional architecture neglects the cultural values of these societies, ignores the significant of visual privacy among residential complexes, and manifests some distance from conventional considerations of privacy. Therefore, there is a strong need to arrange such a kind of study to focus on the prior examples in the old city and extract the proper solutions for attaining visual privacy among residential buildings and districts, to be reused in the contemporary architecture by suggesting some appropriate recommendations.

1.3 Research Aim and Objectives

The main aim of this study is to explore different means of attaining visual privacy in residential architecture. To reach the aim, there are five objectives; The first one observes how privacy was achieved in traditional architecture; Secondly illustrate the old patterns and elements that were used for visual privacy in residential zones of the old city of Nablus, among the ten cases and the selected region specifically; Thirdly demonstrate the results of analyzing residential buildings in the old city through the lens of privacy, on both physical parameters and patterns; Then direct designers towards creation of an environment that respect the prevailing cultural issues of visual privacy; Lastly suggest some proposals for new contemporary designs.

1.4 Research Questions

There are very few studies focusing on privacy issue in Nablus and research on visual privacy is particularly rare. An important question answered by this thesis focuses on what visual privacy aspects have been observed in residential architecture in the old city of Nablus. Others questions ask:

- In what specific ways has visual privacy been represented in traditional residential architecture?

- Which methods are utilized to acquire desired visual privacy in this old district according to observations and much site-collected data?

- How could visual privacy be achieved in contemporary residential environments?

- Which types of architectural response to visual privacy issues should be suggested and used in Nablus' contemporary residential architecture?

1.5 Research Methodology

This study is based on the common method of extracting indicators from the literature review then analyzing various cases according to extracted categories. The literature review is based on the content analysis method of gathering related data from various resources and organizing the data according to directed qualitative content analysis. To enhance comprehension of visual privacy aspects, later chapter clarify privacy definitions, illustrate proximity variables that regulate privacy, and crystallize privacy's essential functions and affective factors. Afterword, efforts focus specifically on visual privacy in the built environment, in residential architecture, and on how this aspect is considered for contemporary Islamic houses. Consequently, the literature review concludes with the main indicators of visual privacy; physical patterns for urban scale and physical parameters for building scale, the second section contains building elements, height and orientation, and spatial organization.

For the analysis section, the classified indicators from the literature review are applied on several select cases in the old city of Nablus. The analytical approach depends on observations to deduce several conventional methods for attaining visual privacy in residential architecture. Discussion of the cases eventually obtains the results and develops some recommendations for designers under visual privacy considerations (Figure 1).
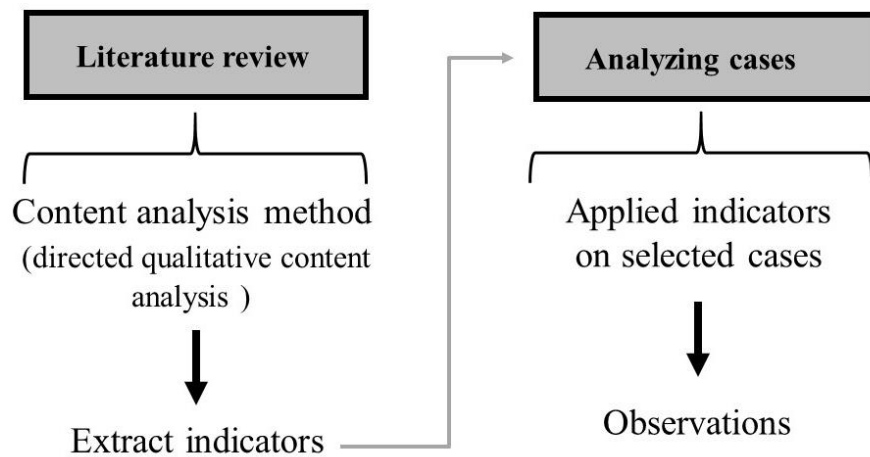
Figure 1: The methodology of the thesis (Created by author)

1.6 Limitation of the Research

The scope of this study is confined by various restrictions. The study focusing on visual privacy in Nablus city specifically, as the old city district is rich with valuable residential buildings that attaining visual privacy, while the situation among the contemporary regions is contrast, neglected from this consideration. Particularly, the analysis and discussion address only the existing architecture of residential buildings in the old city of Nablus, an area most influenced during the Ottoman era (1517-1922). Furthermore, ten cases and their immediate vicinities are analyzed after selection according to the four main types of residential buildings in the old city, which are the palaces, mansions, houses and residential complexes. Hence the restrictions for this thesis arranged.

Chapter2

PRIVACY IN RESIDENTIAL ARCHITECTURE

2.1 Introduction

The motivation behind architecture can be summarized in finding places to be more human for individuals using, more alive and more satisfied. In other words, places combine behavior of humans with technology and beauty, or "utilitas, firmitas, and venustas" in Vitruvius language (Moore, 1979). While the architectural design goals try to provide unique layouts, which are satisfied the required activity patterns of the users in the buildings and environment to fulfill their needs. So, it is essential for any architect to try to fulfill the psychological needs side by side with the physical ones to shape a proper architectural space. For instance, in the architectural design, the bubble of personal space is a logical unit that mightily been contemplated in design (Lynch, 1960). The conceptualizing interactions and collaboration of space might be an intriguing and helpful idea for architects.

Specifically, privacy factor one of the main psychological needs that must be considered by the designer. Since it is defined as a procedure that leads individuals to open and close themselves in several levels to others through various circumstances, by utilizing personal space, territorial behavior and different components to accomplish the desired privacy degree. Designers should realize the interaction between human behavior and space geography, by accomplishing levels of privacy specifically, through open spaces design, and association of buildings.

Mostly the identity of any society has been made by socio-cultural values. Any architects must recognize these values to provide the appropriate designs. It has often been argued that the new buildings and settings, hold off many old features, and do not respond to the way of life of their inhabitants, neither historical nor contemporary. So, people inside their houses started to behave according to their needs, for instance, in the field of visual privacy, it can be noticed that they added some items and affect their environment to fulfill this desire. To diminish this gap, architects need to concentrate on the last outlines of users and focusing more on the users' needs and social patterns inside the house this variable concept.

Consequently, from aforementioned issues and reasons, it is fundamental to concentrate profoundly on the meaning of privacy, the issues related to it and to the visual privacy specifically through literature. As this matter has been raised a lot through the thoughts of ordinary people, architects, urban designers and social scientists, to add more appropriate solution, that balance between modernity and social values (Abu-Gazzeh, 1996). The data in this chapter gathered from various literature resources, divided into main ten categories to encompass all the aspects of the issue to be utilized later. The information defines privacy terms and its regulators according to the proxemic variables, then functions of privacy illustrated with the main three influencers of privacy; psychological, social and architectural factors. After those, fundamental ways to measure privacy explained briefly. Later, the type of visual privacy demonstrated specifically and information expounds to cover issues under visual privacy and built environment to reach at the end to the part which have discussed deeply visual privacy within residential architecture, traditional Islamic houses and contemporary architecture, to provide proper preamble for the next chapters.

2.2 Definitions of Privacy

Privacy encompasses diversified definitions through several resources. From dictionary it is the state of being apart from other people or disguised from their view, or the notion of being free from any disturbing causes that affect the personal's private life, moreover, it can be synonyms for solitude; seclusion and secrecy (Dictionary, 2017). Also, privacy refers to the status "in which one is not observed or disturbed by other people" (Oxford, 2017). Additionally, the term has been indicated in Britannica encyclopedia as the quality of being separated from organization and observation (Georgious, 2006), it can be briefly explained as a position of seclusion too. Furthermore, it can be characterized through Webster's online dictionary, as the state of being covered or a nature of being disengaged from the view of others (Websters, 2017), (Figure 2).
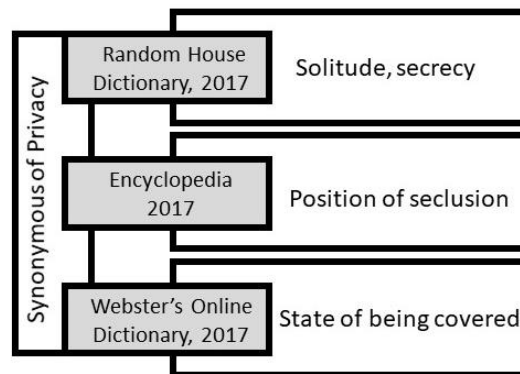
Figure 2: Main synonyms of privacy (Created by author)

Generally, privacy the privilege to be free from secret surveillance, and the right to choose how, when, whether and to whom the persona's data be appeared. Can be separated into physical, informational, decisional and dispositional categories (Abbas & Mesch, 2015). The term" Privacy" had been recorded firstly in 1400-50, as a late Middle English word 'privace' (Dictionary, 2017), it is an expression backpedals to

the 15th century (Georgious, 2006). Also, it can be similar to secrecy, sequestration and isolation expressions. As all of them refer to protecting something or concealing someone from others. Specifically, the way one's actions, thoughts, and communications are being hidden from knowing by other's, is related to privacy and secrecy. While, sequestration and isolation are related to physical separation (Dictionary, 2017), (Figure 3).
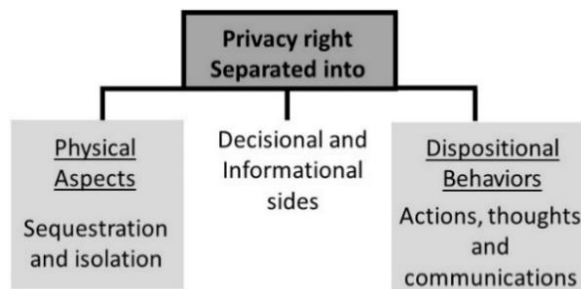
Figure 3: The three categories under privacy right (Adapted from (Abbas & Mesch, 2015), edited by: author)

Commonly, through several dimensions of privacy, there is one critical point in each one of those definitions. According to Lange (1987) whose restricted them and defined it as the capacity of one individual or gathering of people to dominance varying visual, audio and olfactory connection with others (Ramezani, 2010). In further meaning, privacy has a cozy relationship with social interaction, it can be seen from (Rapoport, 1977) point of view as the ability to control social connection and having the capacity to pick the coveted rate of social interaction.

Referring to the literature many authors and philosopher mentioned and defined "privacy" term in many aspects. According to Westine (1970), he saw privacy in two types, firstly as a face for loneliness, which occurs when person takes the full advantages of his privacy, secondly as a way of closeness and intimacy, which be more

sensible in cases like closeness of relative-family member. While, it is a human's tendency to set their closeness, separation and distance with others, and consider any variance in this relationship as unwanted (Fallah, Khalili, & Rasdi, 2015). For Rapoport (1970), privacy is the way toward defining a limit between individuals, it is a way that decides how a man communicates with others (Figure 4).

Westine 1970	Loneliness, closeness & intimacy
Rapoport 1970	Boundary
Huang H. & Bashir M.	Human right
Rapoport 1977	Pick social interactions

Figure 4: Main synonyms of privacy (Created by author)

From ancient time until now, privacy in many realms seen as human right, regardless it is level of achievement and existence in people mind or cultures. Generally, in a recent research which has been set to examine if privacy seen as a "human right" through general global public, the results represented that the majority- around 80%- agreed with this concept (Huang & Bashir, 2015). Additionally, there is some religious conception of privacy, especially in the Islamic world, these concepts affected the space design, in order to save and preserve the privacy of the family, for instance, divide the general lives into public and private sides, gender segregation, focus on detachment of women in some cases. In comparison with Christian society, the Muslims individuals concerned with the belief of privacy and prefer the notion of hiding some things. Privacy can be a human right concept or a social norm, hence the discussion on this issue began.

In architectural scale specifically, it represented as a logic process and defined in various methods. For Albustani (1985), it is one of the most important issues in design cities and housing, it was derived from "individuality" for Muslims, as a way of giving spaces for individuals. While for Roman they defined private spaces in this law as the individual property, not for state (Dunbabin, 1994). Likewise, privacy according to (Dikmen, 2005), it is one of the factor that make up the socio-cultural elements in housing designs geometry. For Rapoport (1969), through his discussion it implies, one of the general items that affected the forms of dwellings and settlements, also it assumes part in the useful of them. It is a clear separation of domains, thus by this brief review, valuable state of privacy in design appeared.

2.3 Regulations of Privacy

Privacy can be classified through several issues. According to Altman privacy set as a collection of six points "interpersonal boundary, desired privacy, achieved privacy, privacy as a dialectic process, privacy as an optimizing process, privacy as an input and output process, and privacy as different types of social unit's involver" (Altman, 1975). While through the process of the interpersonal boundary, meaning of privacy can be divided into "optimizing nature of the process, input and output of contact, and the applicability to different social units" (Witte, 2003). By referring to optimizing process, it is essential to be aware of other's desires, as a degree of contact with others set under an ideal level, hence more or less achievement of the level, an unsatisfactory condition will appear. So, users then try to reach to the optimum degree through various regulators, thus people look to enhance the level of privacy by conveying their current situation to the desired level (Witte, 2003).

Generally, it is possible to see the regulation of privacy as an optimizing process. These regulators distributed through five behavioral mechanism; verbal behaviors, nonverbal behaviors, personal space, territory, and cultural mechanisms, that used to achieve the desired level of privacy by determining or increasing the interaction with others (Pedersen, 1999).

The architectural psychologist Altman (1976) saw privacy and proxemics as common examples for the behavior of people in environment. He identified proxemics as the various spaces between individuals which are been convenient for social interaction, while the interpersonal mechanism of manages and controls interactions with others is privacy (Snyder & Catanese, 1979), (Figure 5). These two terms refer to personal behavior patterns, while for bigger scales, they deal with social patterns like community and neighborhood. Additionally, other authors like Westine (1970), Hall (1976), and Pedersen (1987) recognize the needs of individuals with privacy, and joint them with physical boundaries, like the environment where persons live.
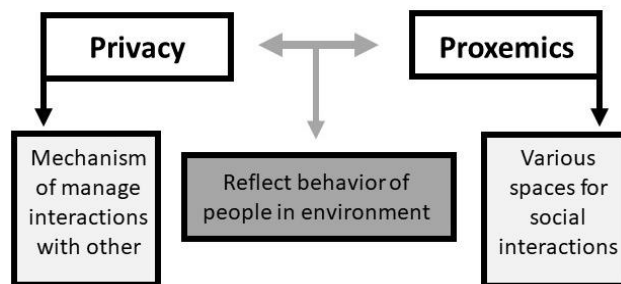
Figure 5: The overload between privacy and proxemics
(Adapted from (Snyder & Catanese, 1979), edited by: author)

Commonly the process that done by physical environment to achieve and regulate privacy is actually complex. To illustrate, indispensable explanation must hold through several levels. Firstly, it is ought to concentrate on issues that related to the

environment through self-scale, like personal space. Secondly, focus on aspects distant from the environment, e.g., territories and areas, lastly on more and more remote environmental features, e.g. cultures (Altman, 1976). To clarify and portray the set and arrangements of the problems in environment and the connected behavior of human to them, these concepts of personal space, territoriality, crowding and privacy have been utilized over and over in the literature (Vaziritabar, 1990), as these notions recently, obtained from studies of ethological and connected to human behavior (Figure 6).
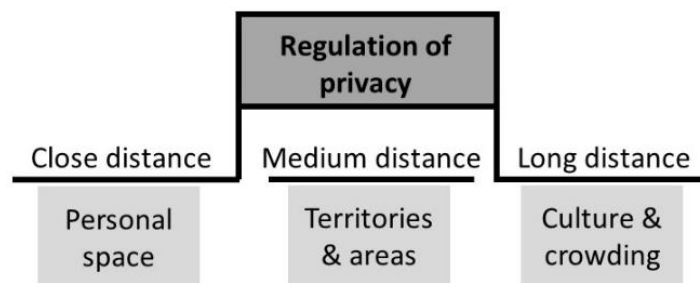
Figure 6: Regulations of privacy (Adapted from (Altman, 1976) & (Vaziritabar, 1990), edited by: author)

2.3.1 Personal Space

Typically, privacy occurred in interpersonal level, that arranges the interactions through individuals. In the past, privacy was a way which used by people in trying to avoid themselves from interaction with others. While according to Altman, one of the main researcher in this field, privacy includes a varied combination of social relationships: "individuals in relation to individuals, individuals in relation to a group, and so on" (Altman, 1975). Moreover, later he defined it as "'selective control of access to the self or one's group" (Altman, 1976). In addition to that Altman provided privacy in one of his articles in 1977 as a dynamic and dialectic method over interaction with others, where people sometimes be closed from others, whereas in sometimes be open and accessible to others.

The level of desired privacy can be realized and fulfilled through several compositions. These combinations of personal behaviors or mixed usage of mechanisms by people and cultures lead to regulating privacy (Altman, 1977). Privacy can be connected to several visions of the self and of the self- society connection, hence it is important and nature can be recognized. It is a way to preserve the liberty of the self, accordingly the self-making reduced, if the privacy decreased (Cohen, 2013).

The concept of privacy, can be a key opens the ability to manage individuals or gatherings in visual or sound interactions. In this realm (Hall, 1966) proposed four distance zones, that linked to interpersonal contact; Intimate distance, e.g. from body to about 1.5 feet, personal distance covers area 1,5-4 feet, social distance 4-12 feet and public zone beyond 12 feet (Hashim, Ali, & Abu Samah, 2009), these four categories of distances differ from one culture to another (Vaziritabar, 1990), (Figure 7 & Figure 8).

Degrees of proximity

Intimate space 0'- 1.5'

Personal space 1.5'- 4'

Social Informal 4'- 8'

Public space more than 12'

Social formal 8'- 12'
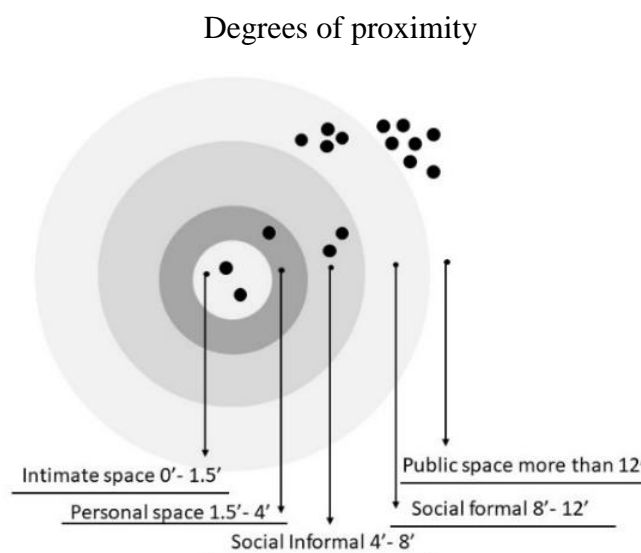
Figure 7: Distances zones according to interpersonal contact (Inspired from (Hall, 1966), edited by: author)

Intimate Distance	Nonverbal communications
Personal Distance	Organism maintains between others
Social Distance	Psychological distance
Public Distance	Human relationships

Figure 8: Altman four categories with Hall interpersonal zones (Inspired from (Hall, 1966), edited by: author)

Personal space, is a specific concept of environmental behavior. It can be defined as a sphere that is undetectable, small and defensive, which is used by creatures between self and others, briefly it is a space of personal buffer zone (Snyder & Catanese, 1979). Also, it is one of the main concepts of spatial notions, that described behavior of human and derived from environmental studies primarily (Vaziritabar, 1990). Hall (1966) illustrated these distances through examples from different cultures, like, Middle Eastern and Latin communities, etc. in comparison with northern European and North American cultures by explaining the meaning of closer and interactional distances there. So, the space zones of persons changed according to the nature of the relationships with others.

Focusing on privacy and personal spaces, according to researchers in the literature about personal-space behavior. Privacy and personal space have been seen as a dynamic process of making the self in interpersonal interactions, less or more available, as it desired. Generally, in interpersonal interactions to ensure some privacy, it is essential to see the personal space as a protective layer of space. Many writers have been treated and identified personal spaces as one of the basic mechanism to obtain privacy (Vaziritabar, 1990). Between privacy and personal space, there is a

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positive correlation and a related definition between them, these illustrated in the findings of a recent research (Snyder & Catanese, 1979).

2.3.2 Territoriality

Another mechanism to regulate privacy can be achieved by objects, areas and territories. Through some researchers Altman Taylor and Brower, the behavior of individuals according to their territory, can be seen as a method to manage interactions and create orders like, the regular spatial patterns that had established and used by peoples and persons (Altman, 1976). Commonly, the feelings and sense of one's identity were derived from territories, according to the opinion of Ardery (Altman, 1976). So, territoriality and visual privacy, both of them are ethnological explanations and can be utilized for patterning, which is generally unrecognized (Abu-Gazzeh, 1996).

One of the main expression that used to identify person's territory is boundary. Previously through history, all cultures have marked, maintained and defined boundaries in different ways and scales (Vaziritabar, 1990). Boundary can be defined as one of the major functions of human territorial. These boundaries in the examples of homes, be in a shape of walls, fences and plants. While in some cases like occupancy, for example, it might be seen as a boundary, through its symbolic meaning, these fences and doors used to protect the self from unwanted intrusions, it can be found and observed in public places heavily (Altman, 1976). Moreover, identity is a way to set a boundary between self and non-self. According to Altman, there are three types of territories, named by him as primary, secondary and public territories (Vaziritabar, 1990).

Many writers have connected and linked the two concepts of privacy and territories together closely, as it has been seen through literature. For example, territoriality increase power, privacy and comfort by maximizes control over space. While, Pastalan discussed that in order to get some degree of privacy, it is essential to use territoriality as the determinant or agent of behavioral mechanisms (Vaziritabar, 1990). Moreover, many scholars have treated territoriality as a privacy mechanism when they linked the two concepts together.

Also, findings of an experimental study done by Bowers, are confirmed this suggestion. The study conducted that the function of territoriality provides, allowed privacy in places for human, and showed that there was a strong relationship between both notions (Lerup, 1973). Territory and privacy work together in a regular manner to produce their effect upon the person, thus his individuality will be encouraging and promoting. Additionally, spatial territory provides a place with privacy as well as social contacts (Altman, 1975).

2.3.3 Culture and Crowding

Culture affected the mechanism of privacy and the behavior of inhabitants in this realm. Culture can be comprehensively characterized as the convictions, value systems, standards, mores, myths, images and symbols, dialect, conduct and auxiliary components of a given gathering or society (Fallah, Khalili, & Rasdi, 2015). It is a series of values which influences attitudes and behaviors of society (Abbas & Mesch, 2015). More, culture is the aggregate equipment of thoughts, ideas, foundations and conventionalized exercises of a people, according to Rapoport (1969) beliefs. Moreover, culture helped to develop a particular society through relating to a specific mentality (Posner, 2004).

Privacy and its desired level differ through cultures and these variations appear from behavioral mechanisms. As it is a process spread universally, privacy includes and involves rarely regulatory mechanisms, in the realm of culture, it combined two opposite concepts, crowding and social isolation, as crowding show high level of interaction, while isolation became from low level of interaction, Figure 9 (Altman, 1977). Hall (1976) recognized between high and low levels of communication context, for instance, the western culture set as a low context cultures, while Japanese, Arab and Mediterranean peoples show high level of context in their cultures, where interpersonal contact outweighs everything else (Abbas & Mesch, 2015), so privacy seen a dialectic process.
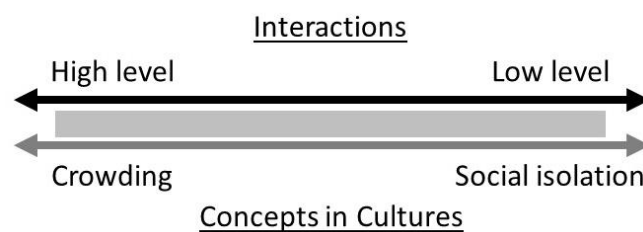
Figure 9: Privacy concepts through interactions and cultures notions (Adapted from (Altman, 1977), edited by: author)

Crowding, the term through its relation with behavior and privacy, it can be seen as a problem in the environment. According to Altman (1977), crowding prevents person from achieving some goals, as it is an experience which resulted from the undesired excessive interaction between others. There are some suggestions evidence that traditions and cultural norms intervened the crowding experience and resulted cultural response (Figure 10). While for Stokols, crowding occurs through three theoretical perspectives: "stimulus overload theory; behavioral constraint studies; and ecological models". If we related crowding with privacy, the notion of density must appear, around the dwelling, privacy is primarily adopted by the environmental physical

setting (design) rather than by its density (Vaziritabar, 1990). Crowding sense is necessary to transferee density into a lack of privacy.
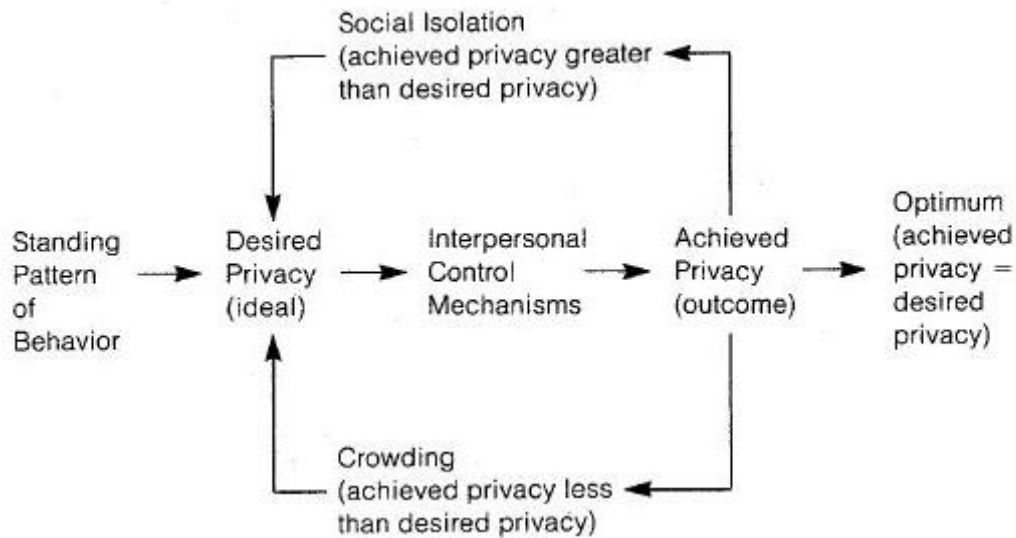
Figure 10: Dynamic model of privacy (Lang, 1987)

There is a natural inclination in individual towards privacy, the most vital of which is acknowledged at home. Generally, the shape and organization of the house is affected by cultural midst, as the house is the phenomenon of culture (Rapoport, 1969). In Rybczynski opinion, he conceptualizes home as a "symbolic place that offers notions of domesticity, comfort, and well-being through domestic intimacy and privacy" (Othman, Arid, & Buys, 2014). So, to achieve those values, the home collected three principle structures, "the personal home"; an expansion of one self with focal passionate expression, "the social home"; a zone where relationships are share, engage, and build, "the physical home"; the architectural and design style with structure and space (Othman, Arid, & Buys, 2014).

Specifically, in the traditional Muslims houses, the Privacy, modesty and hospitality are main three components affected the creation of the home there. As Privacy factor,

one of the main principles issues there, it plays essential role in how inhabitant of the home plan, construct, see, and utilize their inside home spaces. According to these value, traditional Islamic homes includes four primary layers of privacy: between neighbors' homes, amongst the two genders, between relatives inside a home, personal privacy. Moreover, the local area of the home can be viewed as a female space. There are main three types of privacy to achieve those needing in the scale of home, they separated through olfactory, visual and acoustically sides. All of them accomplish ideal levels of privacy and privacy for their families, for the owners and dwellers of the home (Othman, Arid, & Buys, 2014).

Privacy appears heavily in the Islamic world. Privacy is one of the main issues that has mentioned in the holy Quran, which is the main references in their religious, you can find many says in Quran set for achieve it (Marda & Acharya, 2014). Also, in Islamic teachings, "privacy has been given a holy value and caring for privacy that starts with believers themselves" (Memarian, Oljerdi, & Kermani, 2011). When one override the boundary of privacy, he will face some types of punishments specifically in some regions like Saudi Arabia, Pakistan and Bangladesh. So, the importance of privacy in Islamic world come from citizens beliefs and doctrines.

In this realm, privacy formed by two main factors. According to findings from paper done by Alkhateeb (2017), the first factor is owners' one personality, and the other is social norms, internal factors and external factor respectively. While in the social norms part, the hospitality desire appears, as it is part of ideas and heritage in the Arabic region. So, in the domain of culture, because privacy in Islamic world expands on both physical and intangible areas (Marda & Acharya, 2014), so it can set as an effective example in compression to other cultures.

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To sum up, spatial behavior variables, "personal space, territoriality, crowding" and privacy, all have spatial and social connotations. These variables governed with privacy needs; as the two environmental mechanisms, personal space and territoriality, are controlled with others by some degree of privacy, while in Altman's view, the failure in achieving desired privacy, lead to sense and experience of crowding. So spatial behavior variables, are the reactions and behaviors of the people in relation to build environment (Figure 11).
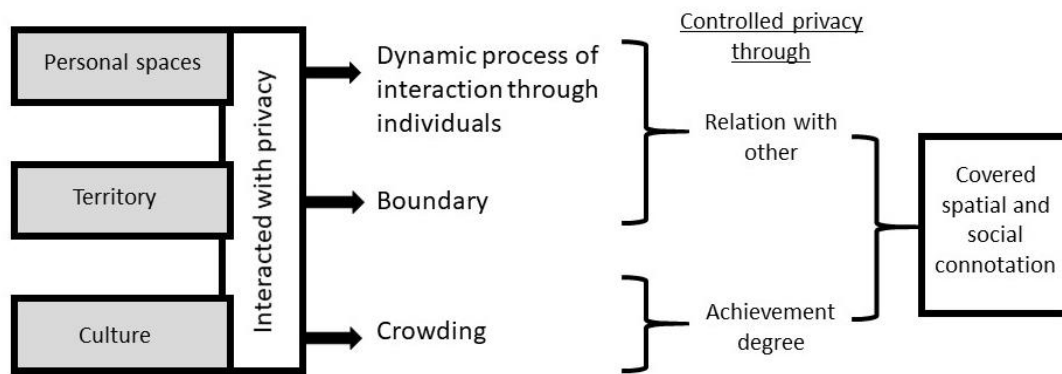
Figure 11: The regulation of privacy (Created by: author)

2.4 Functions of Privacy

Privacy composed different interpretations and investigations beyond the concept of human privacy. A typical definition could demonstrate that privacy is a procedure which controls exchanges between people, upgrade self-sufficiency and limit vulnerability (Abu-Gazzeh, 1996). From this point of view, privacy serves primary functions: "management of social interaction, establishment of plans and strategies for interacting with others, and development and maintenance of self-identity" (Altman, 1977).

In addition to Altman (1975, 1976 & 1970) definition of privacy functions', Westin (1970) identified that there are four major functions for privacy. These functions involve, protection and maintenance of personal autonomy, release the opportunities of emotions, self-evaluation, and protect and limits the communication", in this realm many hold the same view and analysis his categories (Vaziritabar, 1990). Through distributed it to main four concepts of privacy: Solitude, reserve, anonymity and intimacy (Lang, 1987). Where people generally suggested by Westin to seek a balance between openness and closeness (Westine, 1970), these functions show how people behave and do when they have or have not privacy.

The four main sorts of privacy, which done firstly by Westine, can be noticed by several researchers Pedersen, Marshall, Westine. The first one is solitude, a neutral or desirable state which provide separation of a person from everyone, can be achieved through loneliness behaviors of individuals (Demirbas & Demirkan, 2000). Secondly, reserve which included the foundation of psychological boundaries against interruption (Altman, 1976), the corresponding nature, plus several estimates by others, it can be seen as a hidden shape of privacy (Newell, 1995). While anonymity noticed as sort that give person the chance to be in public without being perceived or being the subject of consideration (Demirbas & Demirkan, 2000). The last one is intimacy, it is the desire of individual or group to advance deep relationships with just favored people. However, this sort has existed if privacy achieved between people (Newell, 1995). Moreover, it suggested being separated into two sides by (Pedersen, 1999), with family and with friends. Additionally, two other concepts mentioned by Marshall (1974), the seclusion and not-neighboring (Figure 12 and Figure 13).
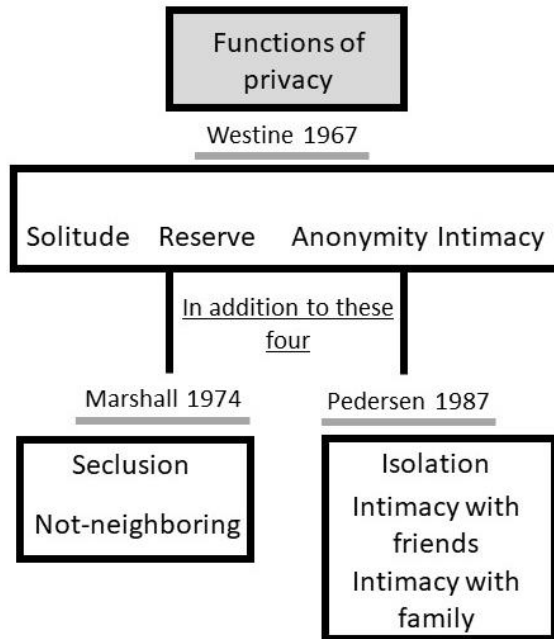
Figure 12: Main concept of the functions of privacy (Created by: author)
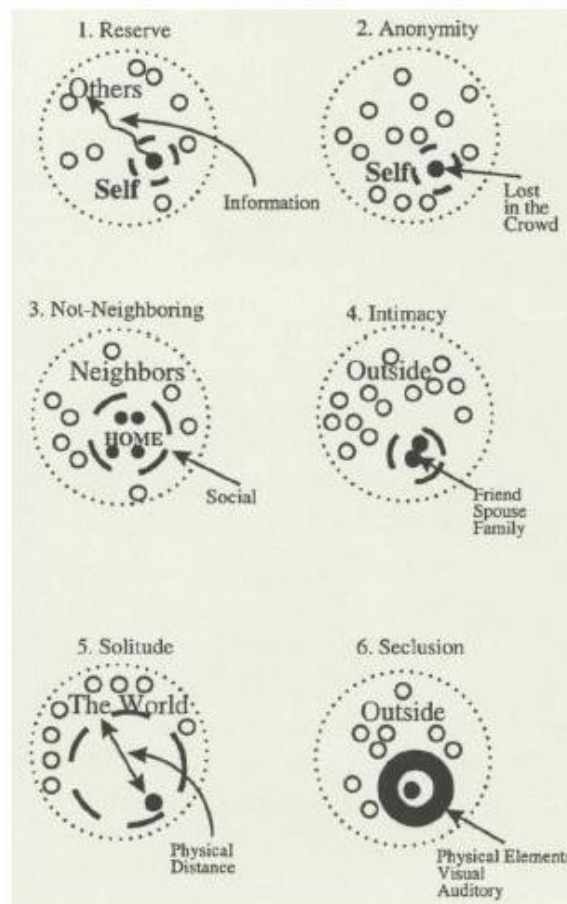
Figure 13: Privacy types (Al-kodmany, 2000)

2.5 Factors Affecting Regulating Privacy

Privacy is a changeable episode which consummates the desire of self-absorbed over social imitation, it is basically demanded. Within it managing individual's interactions with others, to be visible or invisible, can be regulated. It permits to provide separation between various domains, such as houses from street, by maintaining their sociological and psychological connection with society. Hence, it is connected to the feelings of individuals', their relationships with others, their specific norms and how it can be read within built environment by physical factors. Through these realms privacy classified over two fields; architectural side and behavioral one, both of them depend on human to module the living space, on the individual space "dwelling" scale or the whole site "environment" (Namazian & Mehdipour, 2013), so on these levels privacy influenced by diverse factors (Figure 14).
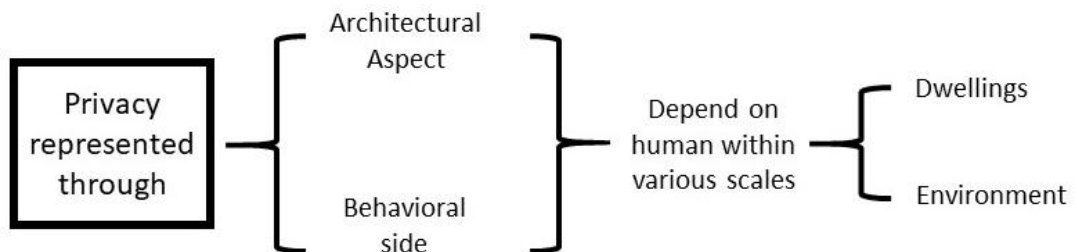
Figure 14: Dependencies for privacy (Adapted from (Witte, 2003), edited by author)

As privacy connected with social interaction, the achievement of the inhabitants' psychological well-being through the built environment is the fundamental roles of architecture. The relation between space and individuals is very intricate through dimensions of culture, psychology, economy and physical sides (Figure 15). Moreover, the individual characterizes the space, the space characterizes the individual; the individual offers significance to space, the space offers significance to the individual (Edwards, 2006). Over the preceding dissection in illustrating the

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meaning of privacy and explaining the related terms with it through various literature, it is essential now to clarify deeply how the meaning of privacy raised in the architectural environment by specific components (Figure 16).

Figure 15: Categories affected privacy through spaces and individual aspects (Adapted from (Edwards, 2006), edited by author)
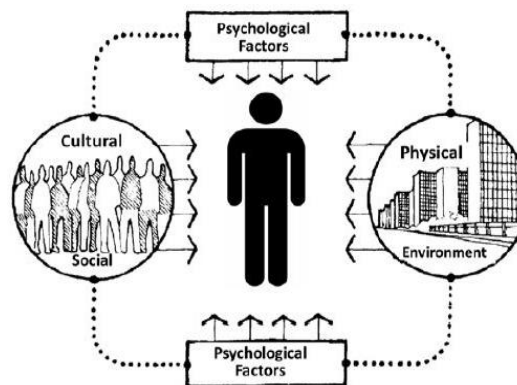
Figure 16: Factors impact human psychology (Moore, 1979)

Generally, there are several components impacting privacy. Similar to the personal sense, individuality, space distance and culture, while architectural elements in the space are discerned as a tool of clarification. Its common that the main five senses of human affecting the degree of privacy deeply; to enhance, proximity, visibility, acoustics, olfactory and accessibility values, are several expressions assumed a basic part in affecting privacy (Vaziritabar, 1990). Moreover, they affected the interaction between privacy and human psychology.

In order to attain proper environment parallel to inhabitants needs, every parameter requires various recommendations of contemplations. This matter attained through utilizing spaces by vertical or horizontal boundaries, organizing opening, reapplied strategies that derived from the past and further suggestions (Figure 17). Whereas the personal identity, self-evaluation, and various level of communication play an essential role, also the arrangement of separations between individuals help in controlling the relations between others (Altman, 1976). Furthermore, culture influences the limits of what is viewed as private (Marda & Acharya, 2014).
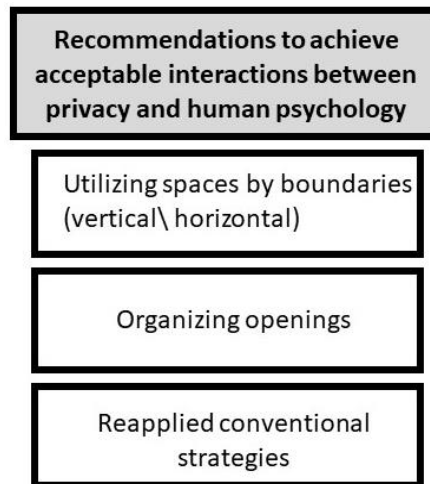
Figure 17: Some recommendations to regulate privacy with human psychology
(Adapted from (Altman, 1976), edited by author)

2.5.1 Psychological Factors

Privacy could advance according to the psychological and philosophical issues, owing to its consideration as one of the main issues that related to the human. Commonly it is a right for all human, but the degrees and methods of regulation it varied within cultures. In order to develop human's, it is essential to concern with privacy; as personal autonomy one of the human values which related to privacy, whereas self-identity, self-independence and self-worth have been discussed within personal autonomy discourses (Witte, 2003).

According to the aforementioned notions, questions that help in defining what people are considered. Like, how people linked to their world, and determining the place and time of interaction with others, could be classified individually. Consequently, the personal zone will be touched apparently besides the inhabitants' privacy which depends on these thoughts and beliefs, accordingly the whole environment gradually, from building units to city and community will be influenced. To emphasize the effects of these psychological factors, Westine inspired from them, his main four functions of privacy, that include personal autonomy maintaining, emotions realizing, self-evaluation functioning, and communication limiting, while others analyzed and hold his classes (Vaziritabar, 1990), (Figure 18).
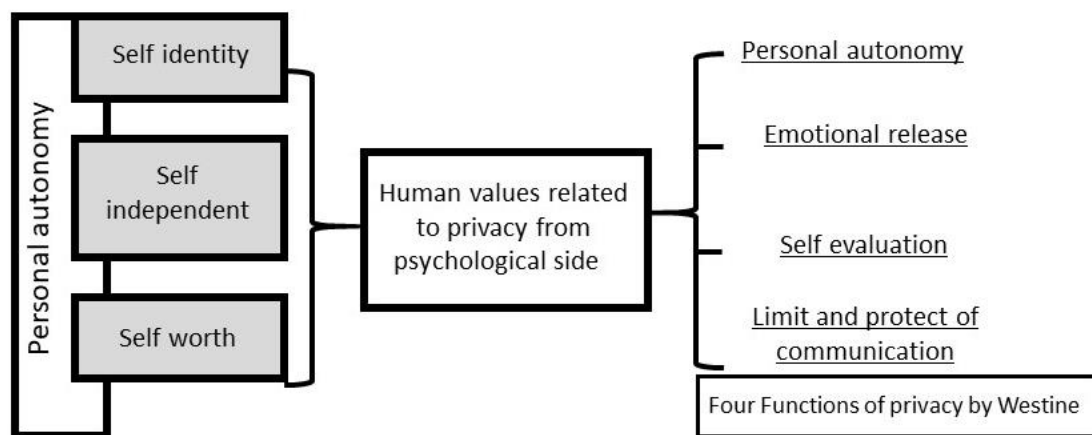
Figure 18: Regulating privacy according to psychological issues (Adapted from (Witte, 2003)& (Vaziritabar, 1990), edited by author)

The occupants' interactions and their feelings corresponded with the architectural countenances and elements designing within the various built environment. The influences of our senses, our lives and our emotions can be translated through the built environment, these gathered meanings regulated our usage of spaces and the access degree within spaces (Namazian & Mehdipour, 2013). Due to the importance of transferring the psychological and behavioral notions to physical language, the impact

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on various degrees of privacy aspects within society will be affected particularly, so the significance of this factor raised. Generally, psychological demands are not hearing as a term under the architectural realm, since it is the clients and users' feelings, emotions and notions (Russell & Roberts, 2002), (Figure 19).

Psychological demands

Feelings of users

Cultural and social values

Notions of human
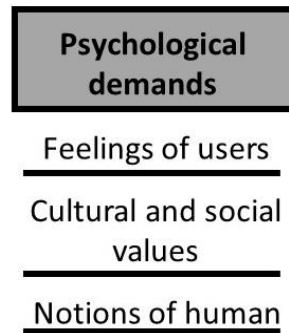
Figure 19: The psychological demands of privacy (Adapted from (Namazian & Mehdipour, 2013), edited by author)

The psychological demands of individual influenced by various aspects, so people within diverse culture operated assorted behavior according to privacy issue specifically. Various people prefer to spend their times inside their houses without any kind of interaction, high level of privacy for instance, 90% of Americans inhabitants spend their life inside buildings (Namazian & Mehdipour, 2013). While in other regions of the world they prefer to communicate with others but they provide privacy within gender segregations in spaces through a various level like Islamic cultures. Furthermore, human senses related to privacy matter too, from overlapping the main five senses with privacy philosophy main notions classified; such as values of proximity, accessibility, visibility, olfactory and acoustics, all of them create effective influence on privacy side, within built environment particularly (Vaziritabar, 1990), (Figure 20).
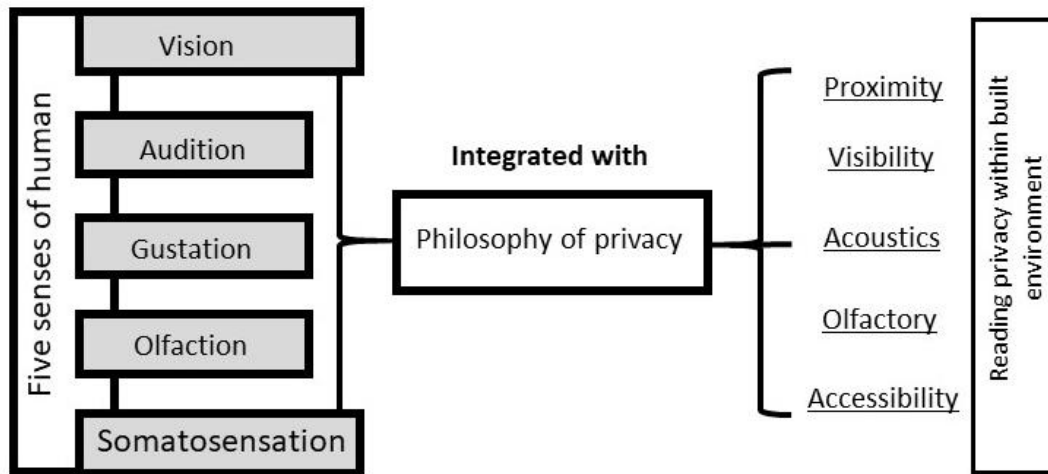
Figure 20: Human senses in the built environment under privacy issue (Inspired from (Vaziritabar, 1990), edited by author)

2.5.2 Social Factors

The society composed when individuals sharing the same place of living, with the same general conditions, toils, pleasures and participating in similar statutes, legislation, and arrangements. Each society shared specific features which distinguished it from others, through built environment these countenances appeared, as inhabitants from various nations, religions, families and professions, that reflected their beliefs within their zones mainly. Each individual within these societies demands specific needs according to his psychology, culture, religious, customs, traditions, economy, political rules and environment etc. where privacy requirements one of this needing (Touman & Al-Ajmi, 2017), (Figure 21).
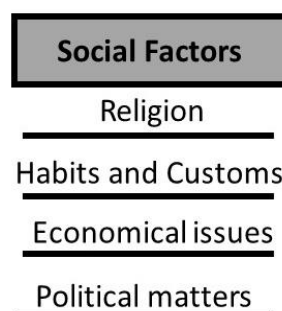
Figure 21: Main factor affecting privacy within social aspects (Adapted from (Touman & Al-Ajmi, 2017), edited by author)

Commonly, societies have been influenced defiantly by teaching and beliefs of religion, from ancient times before our heavenly religions. Various laws, legislation or roles materialized from religion, also general relationships among inhabitants can be adjusted from religion too. For instance, Islamic religion provides unique teachings to regulate social interactions, it encourages intense connection between individuals besides high concentrating on respect personal privacy (Ibrahim & Ahwal, 1987). Specifically, within Quran and Sunnah the main two resources for the Muslims life instructions', privacy for houses, families, persons and women especially have been ordained in various occasions of the Holy Quran (Yusef, 1983). To achieve the demanded privacy, they have been reflected in Islamic architecture and built environment (Abdel-Fattah & Saeed, 1984).

Each society owns his peculiar traditional habits and customs which affected every aspect of life. These set within sociological traditions term, where it did not change over years, in contrast, it developed, moreover customs and habits are inheritable values that related mainly with behavioral aspect of individuals (Touman & Al-Ajmi, 2017). These issues regulated the sociological aspects of societies too, culture and civilization of Islam represented these values within it in various sides, so forms of penalties derived from them (Saliem, 1985).

On another hand, through western communities, never seen societies deeply linked with traditions. Habits and traditions varied within countries, evolved among time and affected extremely human behaviors that try to keep various degrees of privacy with others (Abdel-Jawad, 1982). Despite those variations between societies, each society preserves dominant patterns of habits and traditions, that fit with the nature of individuals over their society. Accordingly, the effect of those values can be noticed

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within inhabitants' environments and their ways of life (Figure 22), (Touman & Al-Ajmi, 2017).
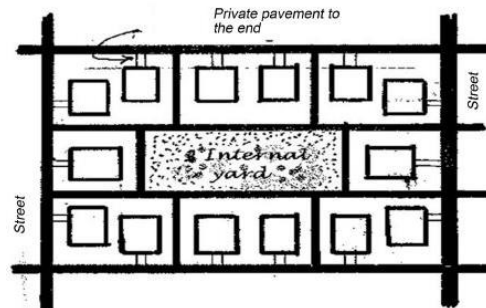
Figure 22: Suggested complex that maximizing privacy consideration; by prevent any direct neighbor contact, and open the houses directly toward street to increase distance between buildings (Touman & Al-Ajmi, 2017)

The intention of achieving privacy through disparate social levels depends on other factors like economic and political issues within specific society. Economic circumstances are significant to attain privacy. For instance, within some dwellings additional entrance hall or rooms might be annexed to enhance privacy, hence the general cost will boost. Accordingly, architectural principles and achieving privacy approaches are depended on the desire of the owners to seek for the economy or not (Al-Bena, 1985). To obtain maximum privacy through building units the economic cost will compound, to emphasize; within neighborhood site the distance between units must be between 18 to 36 m to acquire perfect privacy, so the scale of cost and expense will expand (Al-Naja, 1988).

While political matters manipulated attaining privacy issues positively or negatively. Politics of countries have the right to change the traditions and habits, thus criteria of privacy have diverged appreciably through times. It could be distinguished within the initial occurrence of city planning, such as establishing enormous walls and immense

gates to achieve privacy for the inhabitants of their cities and equip isolation for people (Touman, 2005).

Furthermore, environmental issues like climate, for example, is affected regulating privacy too. To assert the dwelling shelters involved various approaches that enhanced the environment of the region. As in earlier ancient eras, human used cave inspired from his environment to shelter himself while over years these shelters developed according to the surrounded environment under privacy considerations. For instance, Muslims used courtyard houses to dwell, also they utilized lattice windows, called meshrabyia to regulate privacy issue and control ventilation (Touman & Al-Ajmi, 2017).

2.5.3 Architectural Factors

Focusing on some architectural components that shape the space and regulate privacy at the same time. To illustrate, the wall, which is a vertical divider plane, characterizes as an enclosure and essential element in the process of shaping any space, utilized for delineating an area, enclosing volume, protective boundary (Waran, 2015). However, partitions and walls fill in as screens from outer to inward spaces to provide privacy (Altman, 1976). While any closed space by walls without any opening represent high level of enclosure, then again including openings like windows or entryways, which are another two components which influence privacy, will promote more and less degrees of privacy. This element set under boundaries realm generally, which could be applied both in dwelling scale or neighborhood zone until reach the city scale, to form spatial territory for the user that fit physiological privacy needs and social interaction.

Controlling the visual and audio privacy aspects through physical environment is a basic issue. This control occurred through gaps in the walls or boundaries between objects in the dwellings and neighborhood scale. For instance, windows and doors in the divider help in managing privacy. Windows could be defined as a gap in the wall made essentially to empower ventilation in the space. Likewise, it let light to enter the zone and open the view for the user; hence the relation with privacy regulation set here. As windows in buildings looks like the eyes to the face, they go about as visual connections between within and the outside world (Abdellatif, 2017). The level of privacy rises or lessen according to the various sort and size of the windows, which utilized as a part of a building. Also, the strategies by designers and architects to open them in the scale of neighborhood, affect the achievement of privacy too, especially in the conservation society (Altman, 1976).

In addition to that, the entryway is another way of an opening in the wall, which allows to enter or exit from the space. It is basically a cut through a plane taking into consideration an entry through it, in this way, entryway implies as part of a section between two domains. Being access focuses to one domain from the other, it builds up the feeling of change of moving starting with one then into the next domain from public to private, in to out consecrated to disrespect and so on separated by the divider plane (Waran, 2015). Also, other components like, furnishings, movable partitions, type of tinted glass or decorated one and further elements, delivers the capacity to restrict other's perspective of oneself. Commonly, the level of achieving the desired visual privacy depend on boundaries, openings and entryways. In Figure 23 the procedures on how the elements in architectural design impacted privacy, represented in sum, through overlap them with the prior primary privacy factors.
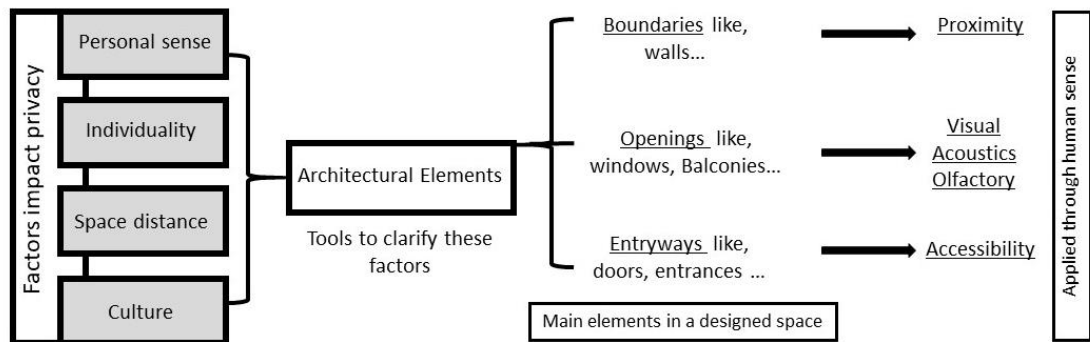
Figure 23: How architectural elements effected privacy (Created by author)

2.6 Measuring Privacy

The space organization of the dwellers influenced severely by compassed privacy over cultures in different levels. While measuring privacy hold an essential role in the space arrangement of houses, likewise designing of the homes have been affected by privacy measures which are illustrative of particular cultural norms (Bekleyen, 2011). Among various countries and cultures, the greed for privacy fluctuates amid them, commonly individuals within various cultures seek for a level of privacy (Hall, 1966). Whilst according to Pedersen (1987), he illustrated that gender diversities lead to these trends for searching about privacy in almost every culture, because there are still no main clarifications for this desire (Pinsly, Gewirtzman, & Burt, 2007).

Measuring privacy one of the fundamental matter that have been considered within several former authors, they suggested various method to assign its level according to the users' necessity. Altman organized one of the significant ways, depending on the interaction of social regulation according to behavioral mechanism, that classified through; territorial behavior, verbal and non-verbal content, and cultural norms (Margulis, 2003). To attain these regulations of privacy, he offered two categories of privacy, desired privacy and actual level of it.

To conserve privacy regulations' three cases demonstrated. By Altman (1975) referring to the achieved and desired level of privacy; when achieved privacy is equivalent to the desired one, an optimum condition prevailed; while if achieved privacy is fewer than desired one, an invasion condition raised; more when achieved privacy is exceeded desired privacy, a case of loneliness (Pinsly, Gewirtzman, & Burt, 2007), these cases stated by him for privacy generally and could be applied for visual privacy specifically (Figure 24).
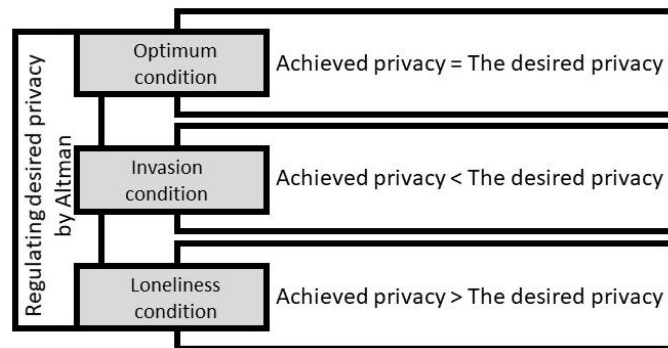
Figure 24: The strategy that suggested by Altman to measure privacy (Adapted from (Margulis, 2003), edited by author)

Others anticipated Westine theory to set methods that could measure privacy. Marshall considered six functions of privacy by depending on them, she produced Privacy Preference Scale (PPS). While Pedersen and Hammitt, focusing on and developing some scales to measure various types and functions of privacy that have been identified by them. Furthermore, Self-Concealment Scale (SCS) has been created by Larson & Chastain (1990) to measure trait of personality that illustrated the desired of people to threat others about their closed information or trying to show high level of intimate, this scale corresponded with the communication function of Westine (Margulis, 2003), (Figure 25).

Mechanism of measuring privacy	
Altman theory	Achieved and desired privacy
Marshall scale	Privacy Preference Scale (PPS)
Larson and Chastain	Self-Concealment Scale (SCS)
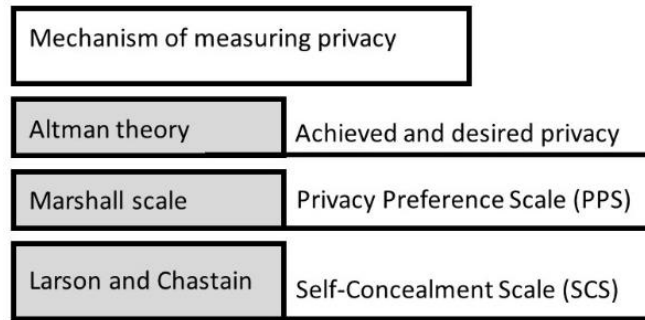
Figure 25: Various authors methods to measure privacy (Adapted from (Margulis, 2003), edited by author)

Measuring visual privacy leaned on physical issues and psychological aspects of the users. Establishing mechanical devices to measure spaces could not be simply arranged, by virtue of depending visual privacy on lines of sight, interrelationships of spaces and architectural components like planting, fences and screens. Issues of privacy and visual aspect depends on the designers of buildings to execute contemplations within the designing period and proceed arrangements which suit the general guidelines of authority (Barton, 2012).

For instance, Islamic rules motivated to attain privacy issues such as visual privacy or spaces segregation by genders and through residential architecture deeply. They recognized these as a crucial item to regulate cooperation amongst females and males. Thus, measuring the existed situation of visual privacy nowadays, is essential to attain the acceptable satisfied situation within homes. While demanding this desire is varied within individuals, sort of questioner will assist to proceed the real condition of the society. Because self, family then society all prime components to privacy process, as it is regulated communication within society and individuals beyond private and public spheres (Esin & Alkhazmi, 2017), (Figure 26).
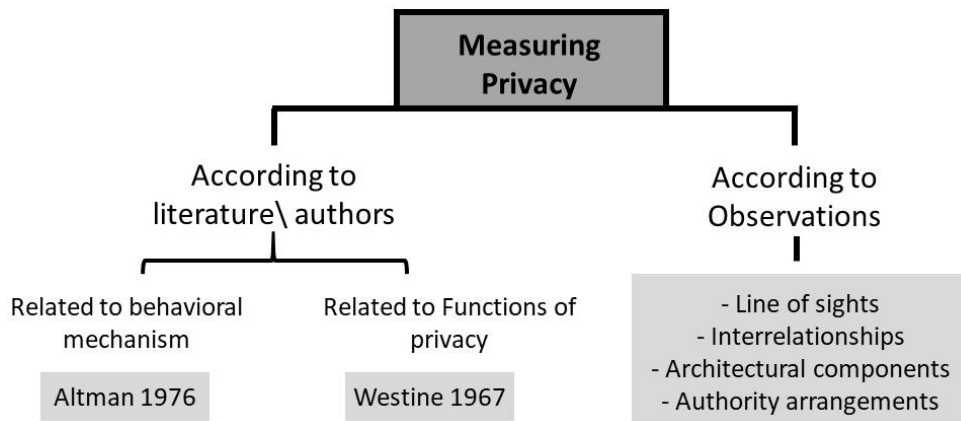
Figure 26: Arranging the main methods to measure privacy within literature (Adapted from (Barton, 2012) & (Esin & Alkhazmi, 2017), edited by author)

2.7 Visual Privacy

Privacy concept related mainly to the mechanism of communication between humans in the environment, on both psychological or physical aspects. It is one of the environmental quality which related mainly to the building occupant's, the society social structure and to the site qualities in spatial and architectural realm (Bekleyen, 2011). The concept of privacy is noticed through main two aspects, psychological side or architectural realm. Formerly the concept of how psychological privacy work has been discussed, by explained how the sense of control over access to oneself or group worked, it is about social issues. While under this subtitle the architectural side will be demonstrated. As generally, privacy through architectural issues affected by various factors; these factors are olfactory, visibility, vocals, accessibility and proximity (Georgious, 2006).

Architectural privacy through built environment can be achieved through visual and acoustical issues. Particularly in this thesis, the visual privacy will put under the scope of gathering information and discussion. Specifically preserving outlook to the observers, controlling surveillance and managing the effective clustering of spaces are

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some issues that related to visual privacy (Barton, 2012). Also "visual exposure" notion is derived from the "visual privacy' (Pinsly, Gewirtzman, & Burt, 2007), while surveillance issue in architecture set as one of the architectural concepts of visual privacy side by side with absolute privacy and "un-private" house, as users refuse to show their privacy to any random surveillance especially in the residential environment (Witte, 2003), (Figure 27).
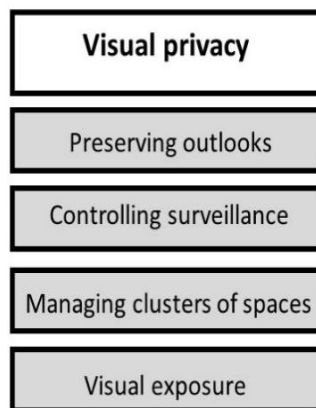
Figure 27: Related notions to visual privacy (Adapted from (Witte, 2003), edited by author)

Additionally, cultural predispositions affected the acceptable degree of visual privacy. As the behavioral mechanism regulates the desired privacy generally and the passable views from others particularly; for example, Americans accepted the openness with less segregation rather than Germans, whose are considerably more delicate to intrusion, as they show more attention to the physical separation and own larger individuals personal space zones (Al-Boukhari, 2015).

The important of achieving privacy and visual privacy definitely obtained from several issues and authors opinions. Many authors discussed that cultural believes and norms, merits of society and various functions of spaces, are several variables that enhances the desire for privacy (Rapoport, 2005) & (Newell, 1995). While Altman (1977),

Altman (1975), and Westine (1970) mentioned that to attain proper privacy, social, cultural and environmental factors must be included through the psychological phenomenon (Figure 28).
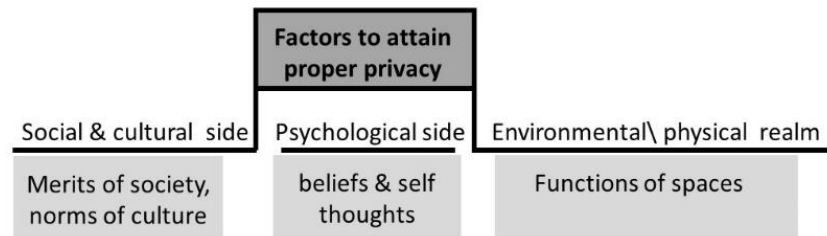
Figure 28: Various factors affecting attaining privacy (Adapted from (Pinsly, Gewirtzman, & Burt, 2007), edited by author)

Whereas Al-kodmany clarified that the residential realm in Arabic cities like Damascus, have been affected by influential factor in both contemporary or traditional regions, which is visual privacy by relying to the definitions of Altman (Al-kodmany, 2000) & (Al kodmany, 1999). Moreover, the significance of this realm of privacy manifested through the urgent necessity to conserve family zone and spaces from stranger sights specifically in eastern cities of the world (Yousf, 2011), so various strategies, facilities and equipment's utilized to acquire this need.

According to this importance of visual privacy it is essential to preserve and achieve it through various actions under the architectural realm. Assorted issues must consider, like space segregation according to sex, distributing various architectural elements in proper location or height, annexing several elements to prevent penetrating views (Pinsly, Gewirtzman, & Burt, 2007), and regulating the distance between adjacent buildings in the urban scale. As the issue of the distance between physical environment affected the resident's visual privacy deeply (Al kodmany, 1999), additionally the location of openings is significant in preserving visual privacy.

Also, various elements assist in contributing visual privacy. Like; shutters of window, curtains, fences and screens. To enhance Altman (1975) demonstrated the states of privacy which could apply to visual side, according to him he distinguished the desired and achieved privacy among three matters; The optimum state where both issues be equaled (Achieved=desired); The invasion state which occur when achieved privacy became less than desired one, so the crowded feeling manifested; And the loneliness case where achieved privacy exceeded the desired privacy, hence social isolation well be experienced (Al-kodmany, 2000).

2.8 Visual Privacy and Built Environment

One of the main issues set beyond supporting privacy through architectural side, is the relation between visual privacy and the enclitic environment. Under this realm environment can hold various definition, in general it is the components, frameworks and physical structures which illustrated specific functions (Archea, 1977). Environment is the medium we live in it and the physical ambience we move through it (Margulis S. , 1995), on other hand some demonstrated it in a symbolic way, that represent what inside our head (Margulis, 2003), or the determination and the extension of behavior, by referring to Altman (1975).

Additionally, Altman (1975) illustrated three mechanisms of environment; territoriality, personal space and clothing according to the self. Whereas the linkage between fixed privacy psychological depiction and the concept of environment are rarely existed within "environmental" theories, one of these scarcely examples; what Archea (1977) discussed about visual access and exposure theory and its implementation to visual privacy aspects. While others were affected from privacy regulation theory of Altman; as annexing various mechanisms through physical

environment, like walls as a kind of barriers, or select their positions (Kupritz, 2000). Additionally, Newell (1995) emphasized mightily within his articles that privacy set one of the environmental components.

To enhance the significance of linking privacy with environment some issues have been raised through literature. For instance, Marshall (1970) evidenced additional two environmental concepts to the main four functions of privacy which have been set by Westine prior; Seclusion and not-neighboring. Whereas others like Altman and Kupritz for example, expounded that to comprehend the nature of privacy properly, relevance between environment and privacy must arise (Margulis, 2003). Altman specifically used both social and environmental psychological notions to propose the original idea of this linkage within his theory of privacy; as users regulate their social interaction through some mechanisms of environment like crowding, territoriality and personal spaces, with techniques of spatial behavior too. Another realistic explication, visual privacy decreased if various houses put within a small area, so the size of the environment will affect privacy degree (Day, 2000).

Generally, built environment consolidate setting of human behavior with organizing spaces. In this realm various ways could represent built environment; like space organization, as space compose built environment deeply, rather than other components such as form and materials, while space organization heads the pyramid of comparison to inspect the optimal level (Hashim, Ali, & Abu Samah, 2009). While through visual privacy regality, the role of deterring or seeking contact between elements rely on the environment (Witte, 2003). For clarification the achieved privacy of the users must meet the desired privacy to accomplish the satisfactory condition through buildings and their environment.

To attain defining environment, many physical components utilized to restrict zones. Like using fences, lawn and hedge to detach public street and spaces from the house, so individual's territory defined by these symbols of privacy, which determined where strangers should use from they could not trespass (Witte, 2003). Conversely these symbols in the case of seeking contact, might denote against the needs of residents. Particularly through urban scale, usually front fence between neighbors used to attain ideal level of visual privacy, whereas in the building zone doors symbolize to be a dynamic factor; which authorize user to allow or prevent contact with others. However, curtain over windows perform the same function too, so it is noticeable that there are several components, strategies and delineation to border environment within scales.

2.8.1 Supportive Environment

The Environment should be supportive enough to fulfill user's regulation of privacy. This supportive environment obtained through modifying contact between others under their behavioral procedures to manage privacy. It is ought to be permeability dynamic enough to provide opening or closing and inspiring choices for isolated places from any observation. Which overlap with the dialectic process of privacy; that including both looking for more contact or constraining interaction.

Environment through visual privacy must be receptive to the desires of user's, improve his privacy level, and support his behavioral using in regulating privacy. Environment supposed to be inviting, uninviting and the range between at the same time (Witte, 2003), supporting privacy dynamic needs and facilitating the clients' control of association with others. On other hand, surrounded environment affected the satisfaction of the users, as good neighbors for instance, encourage a client to set and live comfortably in a house (Figure 29).
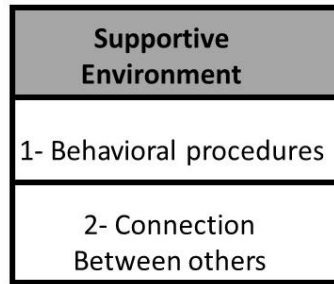
Figure 29: Main factors to obtain supportive environment within visual privacy
(Adapted from (Witte, 2003), edited by author)

Considering the encompassed environment to attain visual privacy is extremely significant issue, thus various elements are utilized to form supportive environment. Through architectural space realm, diverse components used as privacy regulators. In another word, increasing or decreasing level of privacy needs of occupants, done by providing proper space with some elements (Georgious, 2006). In this domain Witte (2003) proposed that "The environment needs to be supportive of the user's privacy regulation, supporting control over contact with others and supporting the behavioral processes used to regulate privacy". This managing carried out through windows for example; which authorize clients to isolate themselves or open themselves to others (Witte, 2003). While doors also can assist in possessing the space, it might unbar or lock to other spaces.

Furthermore, altering the location of opening or addendum partitions could upgrade visual privacy in the zone. Also, utilizing Frosted glass over opening extend higher level of visual privacy, side by side with curtains. Consequently, by this arrangement users could control their connection with others by this type of supportive environment with related components (Othman, Buys, & Aird, 2014). Word-widely, the used of these elements to acquire visual privacy is employed in several projects; like the utilizing of sliding glass and curtains in Shigeru Ban's Curtain Wall House (Picture 1),

while others architect such as Frank Lloyd wright in his home in Pralrie town provide segregation and absolute privacy within plans in Picture 2, also Mies van der rohe's and Mastenbroek's and MVRDV's Double House were adopted the same strategies (Picture 3).

Picture 1: Shigeru Ban, Curtain Wall House (Witte, 2003)
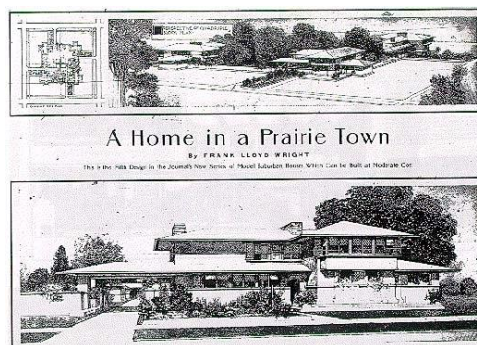
Picture 2: Frank Lloyd wright, A home in a Prairie Town (Witte, 2003)
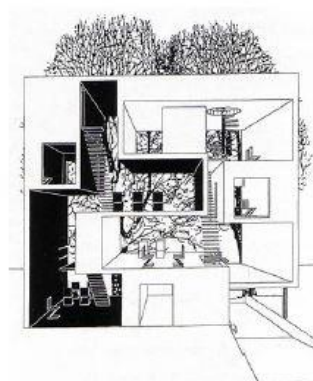
Picture 3: Bajame Mastenbroek's and MVRDV's Double House (Witte, 2003)

Together both on urban and building scale the supportive environment supposed to be accomplished. On the preceding discussion elements on small scale will be manifested briefly, while on urban scale the strategies within Islamic cities provide a proper and worthy example. To explain, basically Muslims built environment must be treated according to the social desires of inhabitants deeply, privacy matter specifically in visual side affected the building design and setting, the essential religious concept must be reflected within built environment, that mainly invited to insure needs and rights of individuals and achieve social integration (Othman, Buys, & Aird, 2014). In buildings any sort of activities which hurt the utilization and clients of open spaces and neighboring structures are prohibited. So, in urban scale, it is obvious that supportive environment attained through lay various instructions side by side with some physical components set under boundaries term.

2.8.2 Boundaries to Achieve Visual Privacy

Under the main goals to acquire visual privacy within environment 'boundaries' expression highlights. It defines as a regulator that dominant what is exposed or hidden between two social spheres, additionally it can be viewed as a space of correspondence between two domains. According to the architectural realm, the tools which regarding with boundaries to regulate levels of privacy split into three main categories; physical parameters, spatial organization and communication.

Personal space attached with communication aspect that related to mind beliefs of person to shape his private sphere. Also, to the personal domain of body, as "private circle begins getting shaped from the level of the individual's psyche and stretches out to the individual space of the body" (Vassilaki & Ekim, 2015). Generally, spaces of communication within two realms, psychologically or physically, can be seen by boundaries.

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Organization of space commonly pursue to create a progressive arrangement of mutual spaces, from room scale to neighborhood then environmental scale. Mainly through these spaces limitations and points of confinement are composed in the zones where private and public confront. Additionally, by these spaces relation between neighbors and residents outdoor and indoor, are compile within character of private and public shades (Gehl, 2011). On other words, to avoid abrupt transition between two contrasting areas of privacy, concept of "intermediate" utilized, which knowns as thresholds by referring to spaces domain and nature of limit too (Vassilaki & Ekim, 2015). Hence character of semi-public and semi-private carried out, to provide progress zones through insinuate space for individuals and uncovered normal zone.

The environment must be acquired with physical parameters to consummate the desired visual privacy. One of the main notion through this realm is the defined territory zone, territory acquainted as the unlimited exertion of persons or gathering to dominance over a specific physical space, it is shape the sense of privacy, identity and uniqueness. On actual meaning, various tools utilized by the users to maintain their visual privacy like; establish walls throughout houses, add fences of plants or mental, hedges and curtains from several materials (Al-Boukhari, 2015).

Ones more, the need for physical boundaries raised as socio-religious values. In some cases, gender segregation appeared within the same environment too, for preventing any sight from any penetration of visual privacy, specifically in residential buildings. Commonly separating components, connection within people's and spaces organization are all ways to shape boundaries between two realized territories, both on authentic or semantic meanings (Georgious, 2006), (Figure 30).
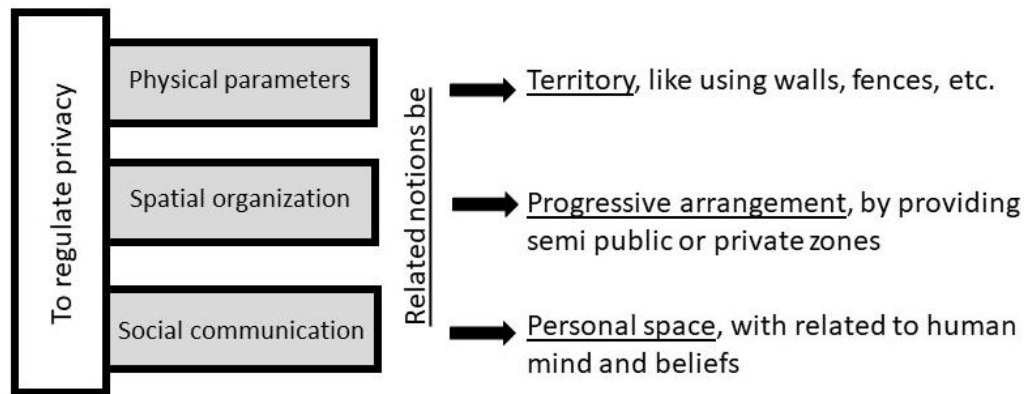
Figure 30: Factors modified shaping boundaries to provide level of privacy (Adapted from (Al-Boukhari, 2015), edited by author)

2.9 Visual Privacy in Residential Architecture

The desire for achieving visual privacy has been noticed in various aspects, the most significant side for attaining it be within residential zones such as the home. Dwelling generally can be seen as a mediator between person and city, also between both public and private spaces. The first universe of individuals are their houses, so it is essential to form a comfortable environment to live in it.

Also, through dwellings, our self-identity and our living organization are composed its characters. Moreover, home provide proper environment of communication where the interactions with others, specifically outsiders, are being regulated (Witte, 2003). Also, home being the place of privacy, as it is one of the main reasons of the necessity of having dwellings in any time or location, with diverse levels. So, privacy should be implemented within residential context.

In particular, privacy within home set as substantial mission to be obtained. Commonly the built environment design and the shape of dwellings specifically, are being affected mightily by various aspects that related to the occupants needs and status, while

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privacy and social occasion one of them (Pinsly, Gewirtzman, & Burt, 2007). Furthermore, Gottlieb (1968) clarified within her book Environment and Design in Housing: "The Most basic function of a dwelling Is to create shelter and privacy". The Home besides it is physical meaning to create spaces by walls and roof, it holds physiological meaning's and the feeling's that must be satisfied (Pinsly, Gewirtzman, & Burt, 2007). On other hand, the main architectural structure that possessed by every citizen in the house, individuals create this zone in view of their status, social beliefs, cultural values and further Influential elements (Yousf, 2011), (Figure 31).
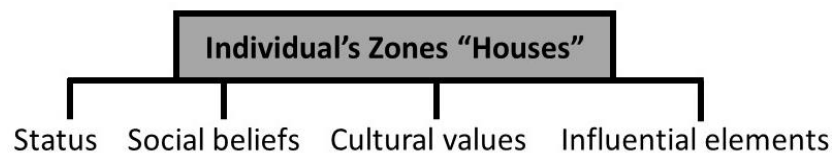
Figure 31: Main factors affecting individual's zones (Adapted from (Yousf, 2011), edited by author)

In this realm perceptions of privacy and personal control over the comfort of one's private space, are set under the qualitative consideration of the residents' comfort, which satisfied both physiological and psychological needs. Moreover, according to beforehand questioner done by Kennedy et all (2015), almost 90% of the participants tend to adopt visual privacy as an important element within home. Generally, families prefer to perform their usual activities without jeopardizing their needs for visual privacy within their home (Othman, Arid, & Buys, 2014). While the definition of residential visual privacy can be realized as the capacity of implementation spaces which embracing users' activities within days, without any sort of views from strangers (i.e. passers or neighbors) (Al-Kodmany, 1999). Moreover, through various societies, privacy and visual aspects of it have been seen under the socio-cultural components, which affected the design of housing particularly (Bahammam, 1987).

This necessity can be respected in houses through spaces organization and arrangement (Bemanian, Saremi, Ahmadnejad, & Ghadi, 2015).

The exigency of observance visual privacy within residential architecture is fundamental matter for various reasons. It is obvious that within home, the arrangements of individuals and the common sense of domestic spaces are influenced by various components like religion and culture (Rapoport, 2005). Beneath religion causes, the Islamic religion appears strongly in obtaining visual privacy through dwellings particularly and within whole aspects of life commonly. As the main resources for the Islamic directives are both holy Quran and "hadiths" which is several saying by Prophet Muhammad (PB UH) and stated pointedly the significance of protecting the privacy of inhabitants (Bemanian, Saremi, Ahmadnejad, & Ghadi, 2015).

Islamic teaching consider privacy one of main three aspects which required to be fulfilled in home, side by side with modesty and hospitality. To emphasize, according to these Islamic teachings, traditional homes of Muslim mostly in the Middle East have been established. Bahammam (1987) clarified that as result of this lessons, houses in this region employed privacy within three layers to attain it through visual, acoustical and olfactory side, these layers are "privacy between outsiders and neighbors, privacy between male and female, and privacy between family members and relatives inside a home (Othman, Buys, & Aird, 2014), (Figure 32 & Figure 33).
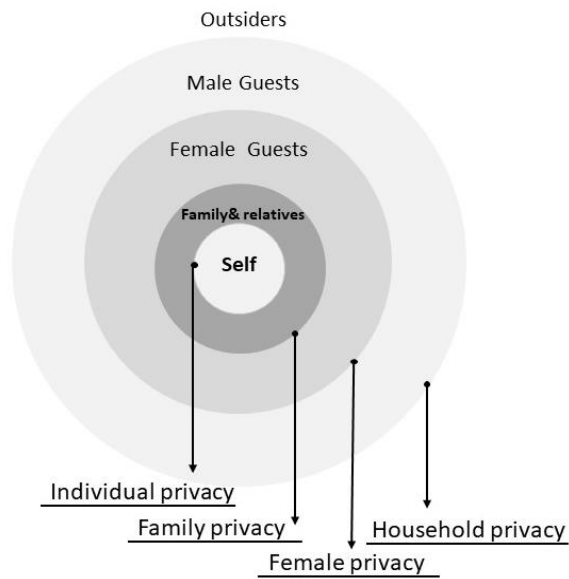
Figure 32: Hierarchy of home privacy domain (Adapted (Othman, Buys, & Aird, 2014), edited by author)
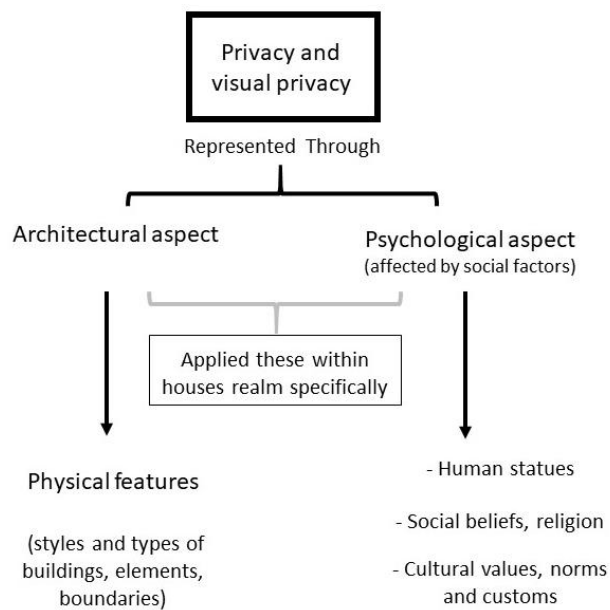
Figure 33: According to Islamic religion how privacy regulated (Adapted from (Othman, Buys, & Aird, 2014), edited by author)

On another hand, world-widely cultural variations affect privacy desired. This Isolation requirement diverged according to the relations with neighbors in the U.S. For instance, referring to a research done by Pedersen (1987), the expanded privacy need decrease if you hold good social ties with neighbors, in contrast it increases if you suffer from poor social ties with them (Al-kodmany, 2000).

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Additionally, types of individuals activities affected the desired level of privacy. For instance, eating or studying demand low level of privacy in comparison to sleeping and body hygiene. While about visual privacy especially gender issues play essential role to this necessity; women generally request more level of it than men, to enhance visual privacy still being desired from female occupants within houses in traditional neighbors in addition to modern ones (Al-kodmany, 2000). Therefore, factors that affecting visual privacy are various and depending on many individual's aspects (Figure 34).
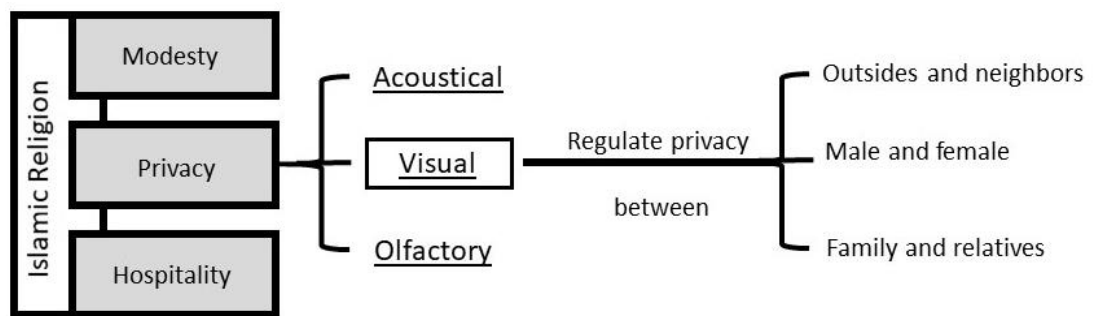
Figure 34: Factors affected privacy within dwellings (Created by author)

Consequently, visual privacy within residential architecture is one of the main issues in architectural realm generally. Houses consist from fundamental component within built environment, also it is reflected the user's self and identity (Hashim, Ali, & Abu Samah, 2009), likewise considering this socio-cultural value within it, is very essential. As well the process of adjusting breakthrough privacy of daily activities from strangers' relay on the function of the home under visual privacy realm too (Al kodmany, 1999).

According to those divergence reasons designing of dwellings must be providing high rank of inhabitant's lifestyles besides satisfactory visual privacy degree. In thus within

housing design, visual privacy seen as a crucial component, so many tools utilized to enhance achieving it from designer or users, which could be considered as physical patterns (Esin & Alkhazmi, 2017). Furthermore, various physical parameters or factors can be noticed within residential environment, they distributed into building elements on dwelling scale, strategies of height and orientation between convergent buildings and organizing spaces (Figure 35). All of them need to be illustrated deeply, as they affected the achievement of visual privacy through residential architecture.
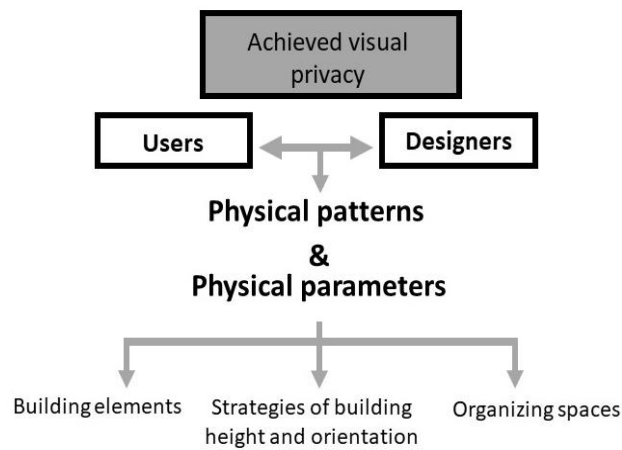
Figure 35: Main factors affecting achieving visual privacy within dwellings (Created by author)

2.9.1 Building Elements

By relating visual privacy to the physical architectural features of building, some items have been applied to the structure to complete needing for visual aspects. In the realm of achieving this desire, various elements perform fundamental role to obtain it within building environment. These distributed under openings, yards, spaces and boundaries categories. Windows and doors are both main items within openings section; inside and outside domains are connected within main visual linking which is window. Regarding to its location in space the desired visual attitude accomplished, because

through it outside environment (i.e. streets, neighbors,) are revealed, thus it is significant is crystallized (Al-kodmany, 2000).

To confirm houses with slight openings, their connection with outside world will be restricted, consequently the life of it will be limited. On the other hand, windows nowadays employed for daylight, view, ventilation and relation with environment, that conduct regrettably against the terms of visual privacy (Vaziritabar, 1990). Also, inhabitants prefer zones with windows more than without it, to gain natural view mainly to affect their health and well-being (Pinsly, Gewirtzman, & Burt, 2011).

Otherwise in order to limit zones and create privacy, a dynamic item raised which is doors. In the traditional architecture, opposite openings specifically entrance doors are being prohibited and avoided to establish by architects, moreover, a distance should be designed between two opposite opening to hinder any stranger from looking directly to the house (Bemanian, Saremi, Ahmadnejad, & Ghadi, 2015). Furthermore, the importance of this components in the dwelling realm appeared as it is considered as a stage for transferring between public and private, inside and outside environment (Esin & Alkhazmi, 2017). The significant of investigation visual privacy through openings appeared through illustrated their main roles in the residential environment.

Courtyard and front-yard both two sorts of spaces that improve inquiry of visual privacy within dwellings. Formerly, courtyard in traditional old cities, specifically Arabic ones, represent an attractive zone for women users in the house. this kind of opening spaces facilitated in accommodating several private individuals' activities like, talking, eating, setting, etc. (Al-kodmany, 2000), (Figure 36). Whilst in contemporary perfect neighborhoods, kind of Front-yard existed, but it is seemed

sometimes to be semi-private spaces, as it is shared within neighbors (Figure 37). There are private types too, they used through occupants for ordinary activities such as playground zone for children and setting areas for adult. While yards generally could confer essential spaces compatible with residential socio-cultural value to enhance their environment on both scale, buildings or urban one.

Figure 36: Drawing of Courtyard in a traditional neighborhood (Al-kodmany, 2000)
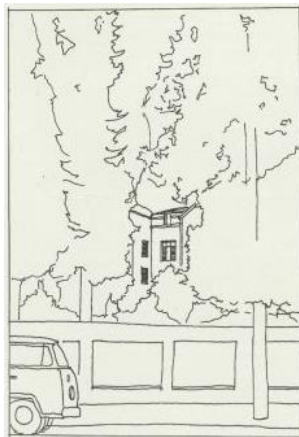
Figure 37: Front-yard determined by fences in a modern neighborhood (Al-kodmany, 2000)

Visibility did not restrict on openings elements, it can be observed through any hall that permit for any visual penetration over inside and outside. A further sort of spaces can be noticed in this realm, which is the entrances hall. Through conventional housing, twisting corridors are taking into consideration to link exterior front door with

interior courtyard (Al-kodmany, 2000). These halls or corridors satisfied visual privacy for families, they prohibited any unexpected direct sight when the door is opening. Also, these zones can be called as vestibule which is clarified as "space that is usually places after port and its major functionalities to divide the entrance path into two or more directions" (Bemanian, Saremi, Ahmadnejad, & Ghadi, 2015). Through it a separation between public and private spaces attained and supplemental vision inventory of passers acquired too (Figure 38). Thus corridors, vestibules and entrance halls preserve the sanctity of home and sever any foreign vision towards family zones.

CY = Courtyard
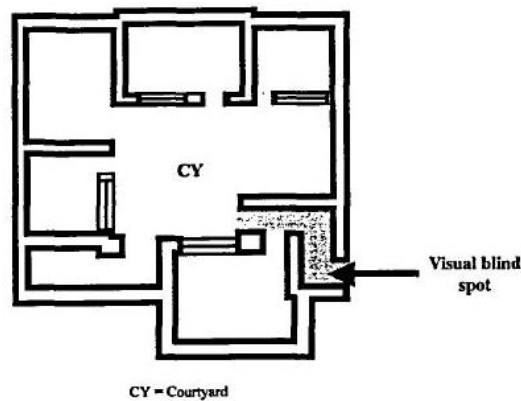
Figure 38: Twisting entrance concept (Al kodmany, 1999)

Furthermore, boundaries between domains and environments used to enhance the level of visual privacy. As the relation between two domains within residential architecture one of the main fundamental issue in architectural realm, organize visions and views between them is prominence matter. Diverse kinds of fences are efficacious elements that utilized to block any kind of viewing by intrusive passersby (Al-kodmany, 2000). Various material used to form it like, metal, concrete and iron grille, as well as dense greenery set under fences too, especially on the urban scale. While during the building level, some kind of shutters, blinds and curtains are appended to the existing openings

to ensure visual privacy. However, the urgent need for visual separation between zones could be accomplished through further building elements (Figure 39).
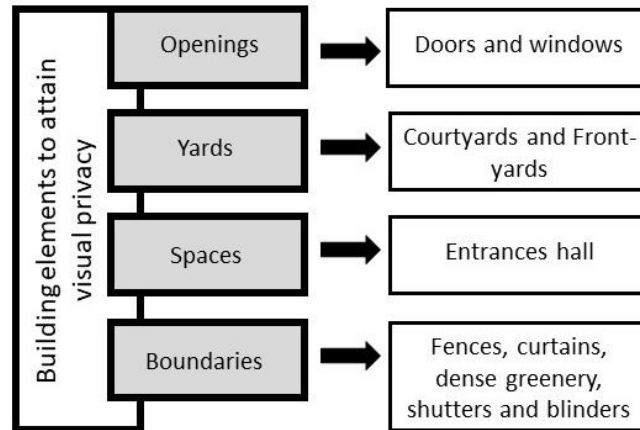
Figure 39: Main elements within buildings to achieve visual privacy (Created by author)

2.9.2 Orientation and Height

Visual privacy sureness within residential architecture are occurred amidst urban scale by focusing on the factors that affected relation between buildings. Outwardly environment versus inwardly one, built environment orientation and layout, exterior modification and treatments of the facades and site plans, all are contributing to complete satisfied level visual privacy (Al kodmany, 1999). For instance, orienting houses to out with convergent distances, lead to decrease visual privacy in comparison to the inwardly orientation strategies within homes. Correspondingly setting residences with various heights beside each other, will damage the privacy of the lower residents, the visual privacy will strip from their life (Al-kodmany, 2000), (Figure 40), while using the direct opposition layout in neighborhood site plan will reduce the degree of the accomplished visual privacy degree (Figure 41).

Achieving visual privacy within building orientation and height strategies	
Relation between buildings (outwardly versus inwardly)	Exterior modification
	Treatment of facades
Built environment orientation ad layout	Site plan
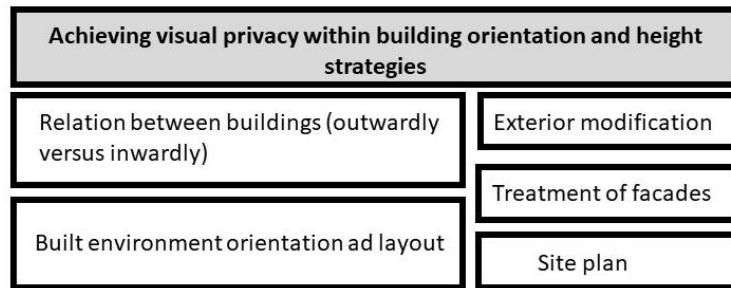
Figure 40: Factors complete attaining visual privacy (Adapted from (Al kodmany, 1999), edited by author)
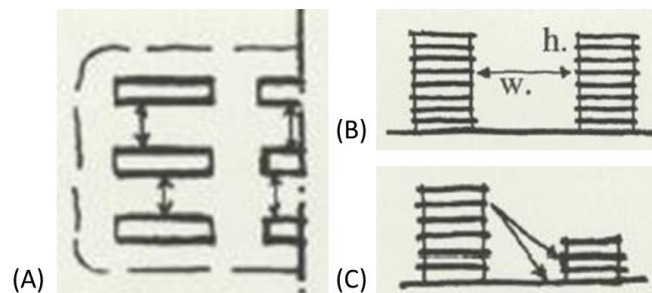
Figure 41: The exposure of visual privacy in contemporary housing: (A) The achieved visual privacy will be reduced within the direct opposition site plan layout. (B) The ration of Height\width might impact the achieved visual privacy (C) Reducing visual privacy when two buildings with various height established beside each other (Inspired from (Al-kodmany, 2000), edited by author)

In this realm, further notions were raised in addition to that. Such as, distance of line of sight be more qualified than physical distance; inwardly houses settles near each other and providing high level of visual privacy rather than nearby houses that established with farther physical measurement (Figure 42). Additionally, openings orientation (i.e. windows and doors) play an essential issue to assure providing visual privacy, and the residences height that governed by some urban design guidelines (Al-Kodmany, 1996). Designers must be aware for those issues to be considered within constructing buildings, side by side with the inhabitants' desire.
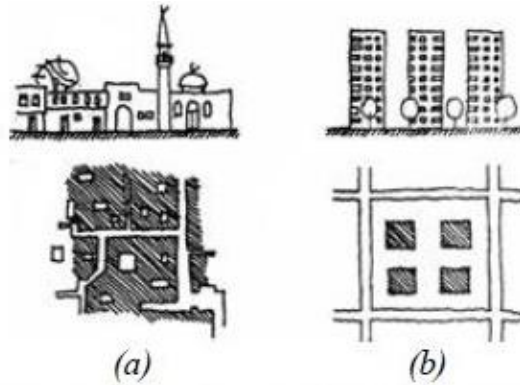
Figure 42: Drawings for traditional and contemporary neighborhoods (a) Inwardly oriented houses-traditional houses (b) outwardly oriented houses -modern apartments (Abbasoglu & Dagli, 2005)

2.9.3 Spatial Organization

Organizing spaces one of the main processes that utilized to the purpose of serving visual privacy within residential environment especially. The built environment consisted from the spatial organization and behavioral settings; whereas spatial organization composed as one of the fundamental characteristics that used to be one of the methods to read the environment and to fabricate comparison through structures, hence visual privacy specifically can be achieved through these strategies distinctly. Owing to the fact that various factors like 'cultural values, religious allegiance, privacy needs, social customs and economic background' are affecting the behavioral actions, while behavioral settings in houses done by spaces (Hashim, Ali, & Abu Samah, 2009). The significant of arranging spaces manifested in organizing behavioral aspects where visual privacy defiantly has been affected (Figure 43).
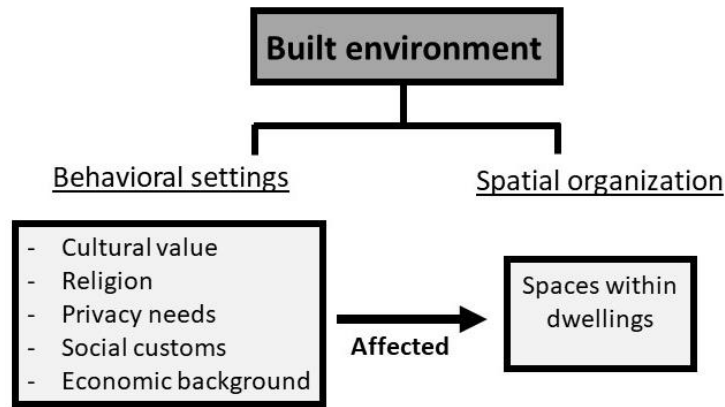
Figure 43: Components of built environment to adjust visual privacy (Adapted from
(Hashim, Ali, & Abu Samah, 2009), edited by author)

The implementation of organizing spaces within build environment encompass binary

contrapositions. By concentrating on residential built environment dual oppositions

can be recognized; such as segregation between male and female, back and front,

private and public zones (Al-Boukhari, 2015). However, occupants to revolve around

the variations within spaces categories, utilized spatial and temporal boundaries

(Leach, 1976), these boundaries affected the degree of privacy within space (Figure

44).
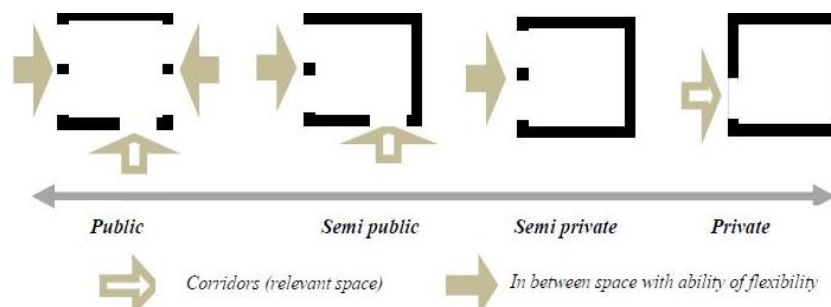
Figure 44: The privacy degree according to opening within boundaries (Shabani, et
al., 2010)

The level of spatial segregation depends on various ethnic, cultural, beliefs and climate

factors. For instance some cultures accepted transformations within a same space to

be used by various function and distinct level of privacy, such as transfer living room

to be bedroom in the night (Georgious, 2006), on other hand some countries endeavor to separate the functions of the same family within different storey in the same house, to enhance the saintliness of privacy and conserve visual privacy of the users (Figure 45).
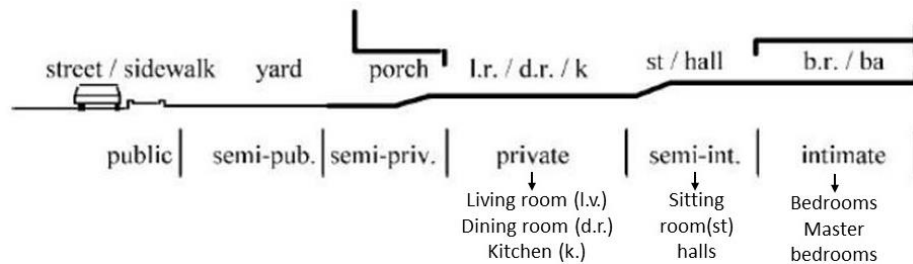
Figure 45: Mechanism of achieving notion of segregation through spaces (From (Esin & Alkhazmi, 2017), edited by author)

Spaces one of the primary elements that regulate the residential environment on various scales. On the building sphere, employing this progression between public and private zone within modest zones, are required strongly from the inhabitants within contemporary dwellings in the conservation communities, to emphasize a questioner distributed to wonder about the role of the spaces hierarchy in accomplishing visual privacy, the majority of the results (around 95%) compounded with the remarkable function of those spaces in attaining visual privacy. While within other research done by Hashim et all (2009), participants corresponded with the notion of annex intermediate zone for reception guests (Figure 46).
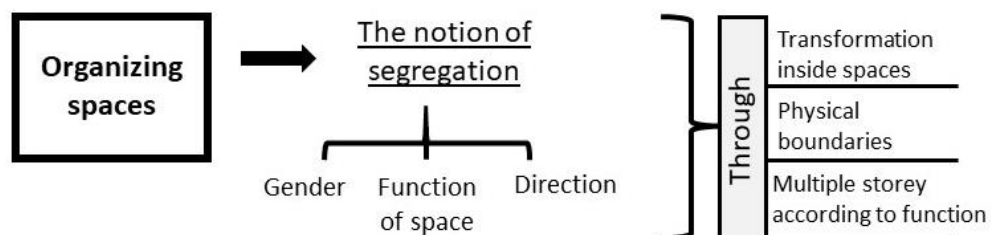
Figure 46: How the degree of privacy change from outside to inside dwellings (Adapted from (Hashim, Ali, & Abu Samah, 2009), edited by author)

While on urban scale, using space hierarchy through contemporary neighborhoods, foster the quality of it through fulfillment the desired privacy. Moreover, in the preceding old cities among Islamic regions, separation between activates occurred; the economic function was segregated from residential districts, they have been established in public zones to affirm the sublime value of privacy and the significant implementation of visual privacy within various scale and strategies (Al-Boukhari, 2015).

Substantially the notion of intimacy, the concept of privacy and spatial consideration are associated together, occurring one side depend on the other. Eventually, considering visual privacy within residential environment could be affected by various factors, which assist also in accomplish it (Hashim, Ali, & Abu Samah, 2009). Cultures diverse in achieving it according to believes, norms, religion and needs. The conventional Islamic cities idealized in this realm, as a result deep analyzing within its consideration will lead to enhance the understanding of visual privacy issue.

2.9.4 Visual Privacy in Traditional Islamic Houses

Privacy one of the main aspects to be considered in the Islamic cities previously. In each society whatever its location, all sides and elements of urban fabric were consolidated and built to accomplish privacy (Bara, 2009). Generally, the spaces in architecture and several elements in buildings should be as a way to control privacy (Georgious, 2006). Furthermore, the idea of privacy speaks to an imperative consider of built environment phrase, which examines the analysis of design home and spatial association of social spaces. Privacy broadly treated as one of the necessary attitudes to be contemplated through architectural design of public buildings to residential houses exceptionally amid Islamic architecture. This assumption arouses the architecture and urbanism of Islamic cities, from private to semipublic and even public,

from smallest buildings to largest spaces (Bemanian, Saremi, Ahmadnejad, & Ghadi, 2015).

Visual side is examined from the same degree of importance within houses. On account of designing dwellings which introduced typically as a contemplation of the settlers' pursuit to initiate their own private territory regarding to their various cultural, religious and economic conditions (Esin & Alkhazmi, 2017). Simultaneously, through social live visual privacy in Middle East is counted as a very critical notion, thence the impacts of this esteem can be perceived in designing houses. Mainly, the structure of those compact cities customarily consists from houses that encompassed from walls and molded around inward yard, to afford imperative procedure that gives visual privacy (Bekleyen, 2011). In addition to that there are many other strategies which utilized within various elements, functions and procedures to enhance this desire, thus in the following an analysis of the privacy themes within traditional houses will arise.

Considering visual privacy in dwellings emanate from cultural demands and religious instructions of the residences. Among traditional homes, visual privacy carried out through diversified architectural operations by specific elements and featured patterns, beneficial to conceive satisfying residential environment. The importance of provide visual privacy within the home refer to some values in Islamic religion, one of them is modesty which is appeared through many aspects, by preventing any strange men (non-muhrims) from seeing women without hijab (Othman, Buys, & Aird, 2014), through utilizing spaces hierarchy, entrances hall, and additional approaches, usually conventional house expressed humility too.

Another basic value is hospitality, assorted elements or spaces have been prevailed to attain this value under conserving visual privacy. For instance, specific zones called majlis founded in some type of houses in Middle east, it is segregated from the whole functions and associated directly with the main entrance, majlis represents the masculinity and honor of a Muslim host's (Sobh & Belk , 2011). According to those high social principle values, which somehow against visual privacy, the approaches that used to acquire it were proper and qualified, also emphasized the desire of achieving visual privacy in Islamic cites (Figure 47).
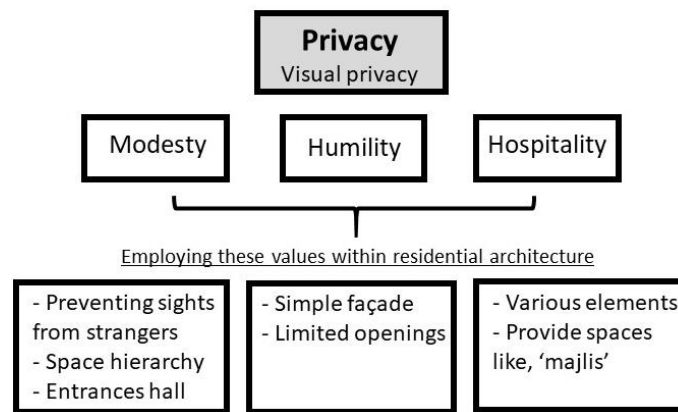
Figure 47: Approaches for Conserving visual privacy according to Islamic values in houses (Adapted from (Othman, Buys, & Aird, 2014), edited by author)

Houses constructed in keeping with the beliefs of its inhabitants, climate and culture of the region, status of users and their preference. Further religious issues, explicitly in conventional eastern societies, influenced the design strategies acutely. By attributing to Al Quran and Muslims prophet, designing the houses required detailed thoughts and considerations in numerous perspectives (Yousf, 2011). Precisely, the teachings of Islam did not overture restricted features to the houses, as long as cultural and social customs are diversifying over times and places, accordingly specific customs must be corresponded with the instruction from Al Quran and Sunnah, to regulate the designing of the houses. Broadly, houses of Muslims used to be a product

of the inhabitants' values and Islamic beliefs (Figure 48). To the purpose of consummating purity and goodness life in dwellings, it is essential to acquire residential privacy (Al-kodmany, 2000).
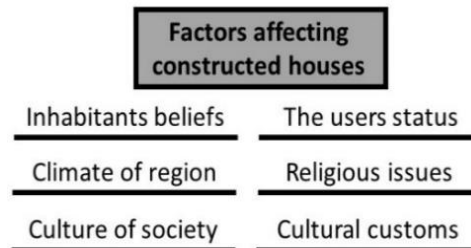
Figure 48: Main components influencing the traditional houses construction
(Adapted from (Yousf, 2011), edited by author)

Beyond architectural realm, by peeking a search within Quran text and Sunnah, once can find various explanation and directive to attain visual privacy within human personality and beliefs. They assert pinching views towards other houses are forbidden and one's who act like this deserves sort of punishment. While according to gender mater, men must not look on women of others too (Al-kodmany, 2000). So, visual privacy includes various aspects by referring to the Islamic religion, and from here the importance of this issue consists.

Conventional homes of Muslims formulated to proceed visual privacy intensely. By returning to the teachings from religion, common residential homes traditionally were reserved visual privacy explicitly (Abu-Lughod, 1993). Different considerations investigated in dwellings, such as frequent inwardly orientation against blanked exterior walls, specifically kind of items were combined to the openings to enhance visual privacy like; meshrabiya (cross section wood screens), on the urban scale some guidelines conducted the relation between neighbors within determine building height and openings positions in walls to secure visual privacy (Al-Kodmany, 1996), further

judges over times settle restricted regulations in favor of conserving visual privacy through dwellings and residents zones.

Ahead before focusing on small scale, one of the main approach within conventional cities to enhance privacy must be illustrated which is 'hierarchy of spaces' pattern. That utilized deeply and consist one of the features of Islamic cities. According to it, houses considers as a private zone, while spheres are used by people for public usage and recognized as public domain, whereas between both districts two other types have been developed in hierarchy to full fill the social values of the communities beyond visual privacy (Figure 49).

Figure 49: Sketches explain the graduated transition in the Islamic old cities (Qamhieh, 1992)

Each gathering of houses clustered around semi-private zone to achieve their social activities, which form a space between several buildings, called hosh. These semi-private spaces were made for meeting the nearby relations "extended family", (Braganca, Mateus, & Tawayha, 2015), and connected with the main road with dead-

end roads just for the big family use. Additionally, utilizing hierarchy of spaces according to their functions appeared too, for instance to reach the main commercial center "the public zone" of the city you will pass through various privacy degrees paths', after your "Hosh" zone, they considered to be semi-public. Generally, these spaces spread in the whole districts of the old city to improve privacy needs on urban scale.

Towards building units' scale, they trend to establish houses with courtyards. These courtyards achieved the interest of privacy and keep the family diversion and extraordinary exercise in urban and public zones, this open item in the house, designed for opened to other inner spaces (Itma, in press), gives visual privacy for resident and act as an outside living room, also its a space with plants, tree and fountains, like outside natural area but with privacy feelings (Picture 4). It encompassed by rooms on several levels up to two or three sometimes and in a few houses uncommonly the longest one, contains more than one courtyard, on different levels, one of them look at the lower courtyard (Qamhieh, 1992), (Figure 50).

Picture 4: The Courtyard of Al-Azem Palace in Hama, Syria (Alabidin, 2018)

Ground floor   First floor
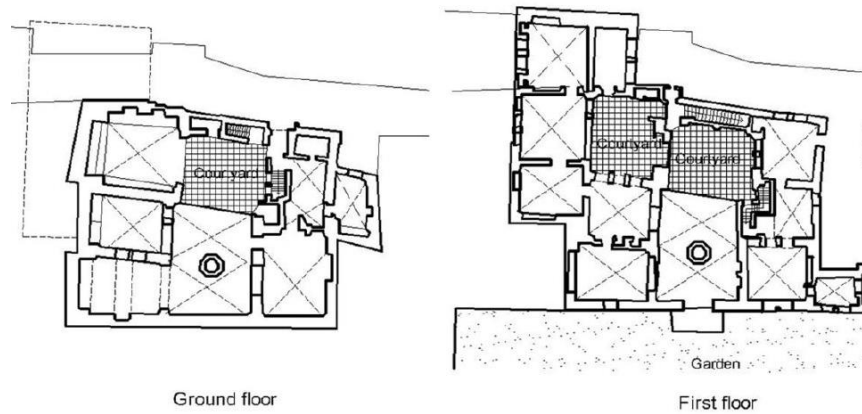
Figure 50: The ground and first floor plans for courtyard house (Itma, in press)

While dismantling and analyzing traditional residential homes of Muslims within the realm of achieving visual privacy particularly, lead to assorts of explicit or implicit components or approaches that have been exploited. The 'entrance' of houses, for instance, designing in a way to protect the inhabitant of the home from any outside strange gazing, the ways to design these entrances, set to prevent a direct view from the street into the interior of houses, it is very important as it is a way to separate the privacy zone of the house from the outside public spaces (Touqan & Abdelhamid, 2011), (Figure 51).
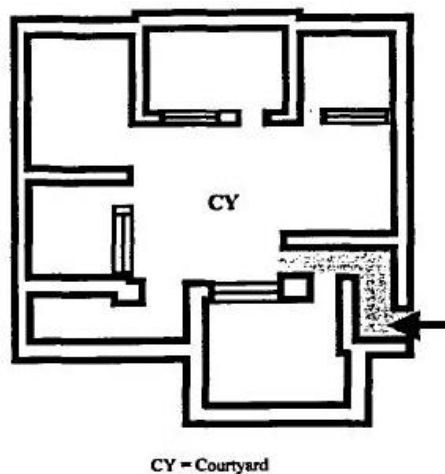
CY = Courtyard

Figure 51: Plan for conventional courtyard house\ the arrow indicates to the twisted entrances (Al kodmany, 1999)

Moreover, entrances represented a main item within house to face exterior sphere. Once it oriented in a wrong way, infiltration of visual privacy will occur. So, prescribed procedures and strategies have been executed, one of them; preventing designing opposite doors between neighbors to avoid direct looking's to the adjacent or opposite houses (Yousf, 2011), (Figure 52), Also, designing buffer zone between doors and inside the home, which is defined as 'hall of entrance' was an essential rule to shape whole entrances.
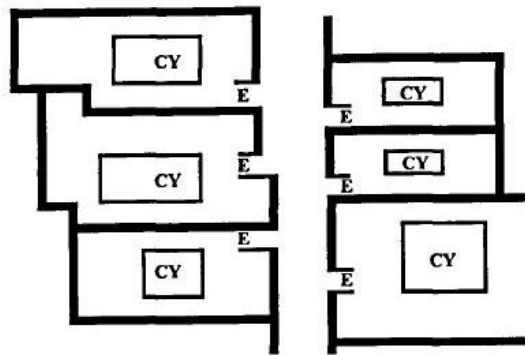
Figure 52: Avoid direct visual corridors by offsetting entrances\ E: entrance CY: courtyard, from (Al kodmany, 1999)

On upper scale, visual privacy has been attained within other procedures. To explain, entrance of hosh employed at least with one turn for two reasons, firstly to prevent people from seeing "the hosh, secondly to facilitate defense", so it is be possible to complete the privacy aspect (Canaan, 1933), as hosh is a space to provide privacy for social events and recreation spaces and each hosh has its only door to save the family and closed at night, it is semi private zone (Touqan & Abdelhamid, 2011), (Figure 53).

Figure 53: Picture shows the twisted entrance of Hosh 'Al-Atout' in the old city of Nablus, Palestine, from (Mustafa, 2010)

While on the paths within the old city fabric, there are another type of elements that have been used to improve visual privacy through entrances generally. It is shaped by arch with room above it sometimes, called qantara, it limits the height of entrances, so no strange people above horses or camels can enter specific zone (Touqan & Abdelhamid, 2011), it is formed by arched alone or by room above it related to neighboring houses, also represented as an entrance to separate zones between paths and prevent strangers from entering the semi-public zone, by its height (Picture 5).

Picture 5: Two types of qantara in the old city of Nablus- the arched one without room and the vaulted zone with room (Captured by author)

Openings of the residential structures arranged in many strategies. Beginning from the privileges of the use of courtyards, which minimize or prevent the needing for windows in the ground floor, also every inner zone opens to it and taking the appropriate winds and light through these open spaces, so windows of lower floors open to the courtyards while for upper storey open to street (Canaan, 1933), they have been set above the level of human view, no passengers in the street can see inside the house from them and be small. Generally, the façade demonstrates that the house opens toward courtyard and turn away from the street (Touqan & Abdelhamid, 2011), (Figure 54).
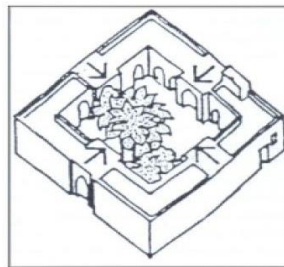
Figure 54: Sketch illustrated the inward direction of the house by courtyard
(Bemanian, Saremi, Ahmadnejad, & Ghadi, 2015)

Otherwise when upper windows needed, small openings were directed to roads. Also, if it is essential to make large opening in the façade or wide openings, the wood added to cover these spaces, this component named meshrabiya (Hadid, 2002), they used these wooden windows to provide high level of privacy, which can be defined as a method that used wood to cover windows. meashrabiya used to allow air circulation and protect the room from unwanted sun and reduce glare, it maintains privacy for inhabitant, looks like balcony at that time (El-Sayed , 1988), from it women can see what going outside, but no one can see them, due to the crossed wood shutters which formed this element, this element full fill the important of women for Muslims men (Figure 55).

71
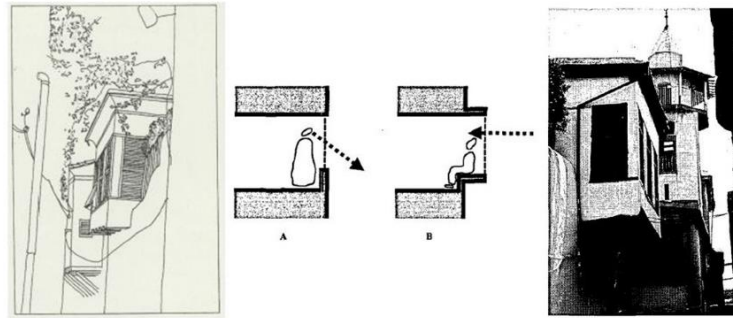
Figure 55: Al-Meshrabiya appearance in the traditional neighborhood (A): residents could look out without being observed (B): facilitates air movement and reduce glare (Inspired from (Al kodmany, 1999) & (Al-kodmany, 2000))

Over and above, rooms with windows toward street have been restricted to emphasize the concern of neighbor's visual privacy. Typically, all houses in old cities have not any direct connection toward public or semipublic zones, pedestrian within paths noticed the walls with small openings to manage visual privacy for residents (Bekleyen, 2011). While inside the house specific zones have been existed to conserve users' visual privacy and envelope their high level of hospitality. Thus, some guest zones appended to accomplish the privacy for the inhabitant of the house from stranger, these zones added and separated according to gender; for men, it be near the entrance and for women around the courtyard (Kanaan, 2010).

Moreover, the economic situation of the family affected the size of these zones. In big houses like palaces, they establish two guest rooms, one for men -Zelamlik, other for women-Heramlik, and found in two separate buildings (Touqan & Abdelhamid, 2011). While, in ordinary housing, spaces for men, were just a small room in the house or sometimes for poor families' father room built near the entrance, to use as a guest zone or reception when necessary (Figure 56). Commonly, spaces segregation regarded there, in the wealthy houses they establish two sections for men and women usage, alike this separation occurred in the entrances sometimes (Bekleyen, 2011).

In addition to that, sort of spaces for women that opened to a courtyard and completed the function of it in the rain or high sunshine, called iwan was arranged. which have been observed within traditional houses to enhance visual privacy too (Kanaan, 2010), (Figure 56). Usually, the biggest part set for women -Harem in Islamic expression- to emphasize their specific privacy, and the using of spaces by women are built around yards, separated from other men parts for guests (Touqan & Abdelhamid, 2011).
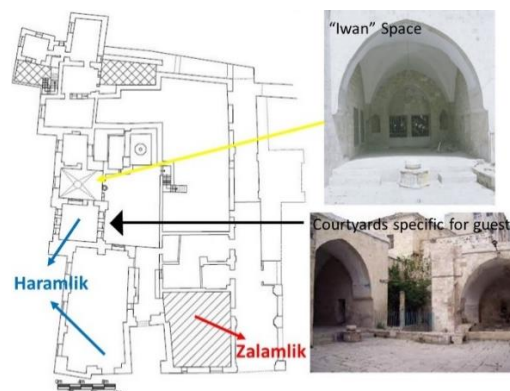
Figure 56: Ground floor plan and picture for a Palace in the old city of Nablus, Palestine: which represent the both haramlik and zalamlik zones within big houses and iwan; zone (Maps from Nablus municipality, photos and edited done by author)

The relation between neighbors assumes an essential part in regulating visual privacy. This aspect can be measured by dwellings' height. Through conventional Islamic cities, adjoining houses did not exceed two or three floors, from one's home the courtyard of the neighbors could not be detected from the upper openings, no one of the neighborhoods try to build more than specific level, to prevent exterior views (Braganca, Mateus, & Tawayha, 2015), over these approaches respecting visual privacy of neighbors formulated.

What's more by returning to Shariah, there are no specific height of the buildings. Otherwise, Quran and Sunnah are suggested to position height by mutual consent between residents and governors (Yousf, 2011). Thus, the visual privacy precisely and

privacy broadly have been considered in the interior spaces of houses to the exterior ones, in the ways of connecting all houses together (Figure 57). Even within residential architecture is exposed intensely, as Rapoport mentioned within Middle Eastern society residential privacy persisted with its importance (Al-kodmany, 2000). The whole architecture of traditional Arab was the palpable product of the values and beliefs of Muslims peoples, they composed effective spaces that promote connections and relationships within people and assisted individuals to grasp and articulate their identity over their correlation with these spaces.
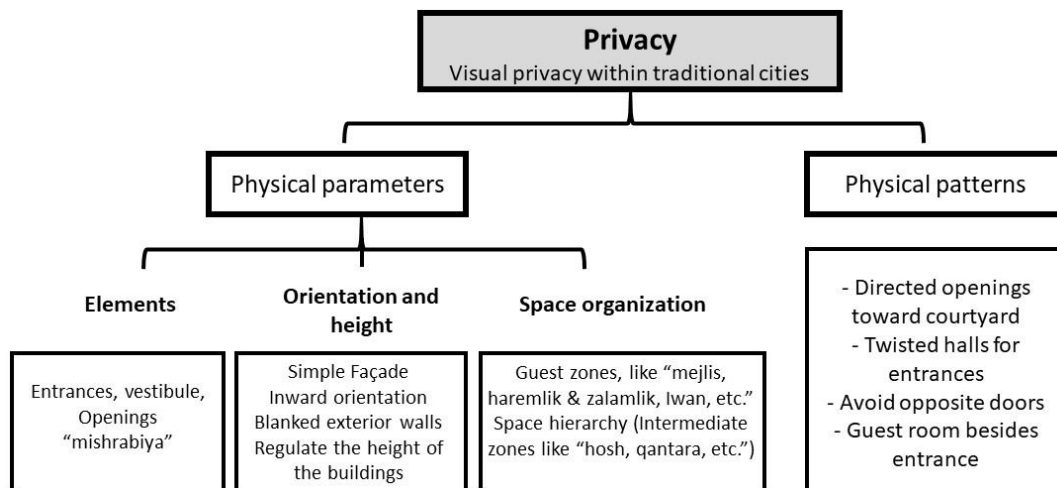
Figure 57: How to attain visual privacy in traditional dwellings of Islamic cities
(Created by author)

2.9.5 Visual Privacy in Contemporary Architecture

The architectural realm and forms in the preceding centuries have been affected by modernization. Various transformations in the cultural, social and physical aspects occurred in societies. Globally the conventional styles of buildings have been receded; in western societies new styles in a shape of complex apartments in high-rise buildings have been emanated, for economic reasons there. On Eastern societies sequentially, due to the changing in the structures of the families, openness and vulnerability to the

Western world, economic issues, and urgent demand for existing housings designer and governs applied these new styles to their environment without any concerning for the social values of societies like visual privacy in particular. So, shrinkage in the traditional houses and exclusion of courtyard ensued, since the common styles acclimated to be apartments (Shabani, et al., 2010). The architectural patterns differed from the 19th century until now, which forced to rise various conflicts between traditional styles and contemporary one, in the realm of satisfying users' demands mainly.

Within privacy issue and visual type specifically, the new contemporary styles neglected from these values generally. It composed in western societies which estimated privacy from different point of views then stratified within Islamic culture, which conserved visual privacy deeply, scrutinized segregation between sexes, and regulated visual sights in the residential environment in the traditional styles (Al-Kodmany, 1999). The unusual small flats with restricted spaces could not apply the multi functionality which have been offered previously to achieve visual privacy (Shabani, et al., 2010), thus new houses provided with lower degree of visual privacy (Touman & Al-Ajmi, 2017).

By focusing on the styles of houses. In the old cities normally, the inward-looking type established like one floor courtyard houses or low rise, then the outward looking style appeared, it begins with medium rise to be high rise apartments complex at the end, these progress developments occurred to fulfill the increased desired for housing (Shabani, et al., 2010), but neglected to consider the main values of culture. On other hand, a minority of researchers argued that these new styles have been accepted in societies as inhabitants conceded of the restricted traditions, norms and moral requests,

so new uncertainty society appeared. Within architectural realm, the built environment and different houses have been changed their privacy attributes (Touman & Al-Ajmi, 2017).

Visual privacy within residential architecture is characterized in various matters. It is observed as the capacity to prevent any kind of observations from outside neighbors or passerby when the home's ordinary activities have been conducted by users (Al kodmany, 1999). This definition has been attained previously in Islamic societies, but nowadays according to the trend of inspiring new styles from western countries, that did not consider visual privacy any more (Touman & Al-Ajmi, 2017), the problem of obtaining the demanded level of visual privacy demolished. To emphasize, the outwardly houses in contemporary architecture afford less degree of visual privacy in comparison to the conventional inwardly dwellings. Likewise, establishing two contrast buildings in the height beside each other will led to exposure the privacy of the low rise from the upper rise buildings (Abbasoglu & Dagli, 2005) (Figure 58).
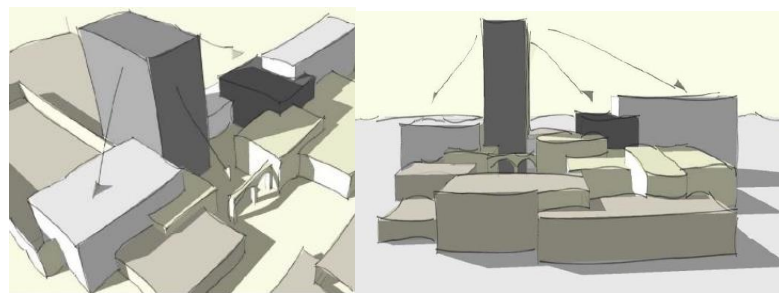
Figure 58: 3d-model showing the negative effect of high-rise buildings (Braganca, Mateus, & Tawayha, 2015)

While visual privacy still seen as a significant social value in the Muslim societies. These societies which all shared commonly the problem of the absence of privacy and visual privacy within contemporary architecture in various degrees (Heydraipour,

Behmaneshnia, Talebian, & Shahi, 2017), as a result of considering the civilization and architecture of western societies as an ideal of modernism. The desire for visual privacy left to be secondary in the contemporary architecture although it is still fundamental social need for the majority of the inhabitants. It is being noticeable that the segregation between men and women have been demolished in the new houses, likewise in public zones and workplace (Touman & Al-Ajmi, 2017).

Over literature the significant of this matter has been emphasized through the discussions and results which schemed the desired for visual privacy in residential contemporary architecture. Commonly, there are main five types of privacy within housing study, visual sort one of them, which manages the visibility and sights between member of family and outsiders (Heydraipour, Behmaneshnia, Talebian, & Shahi, 2017). This clarification raises within Islamic regions; according to research done by the contemporary architecture in housing realm specifically do not adduce sensible level of visual privacy or propose measures to accomplish, by explaining how in the past whole aspects in life avoid any sort of visual harm, in contrast nowadays the previous consideration have been neglected although the necessity still existed (Al-Boukhari, 2015).

While other researches focus on the visual privacy according to women desire particularly. They have been emphasized that this desire still be demanded deeply in the contemporary neighbor in Damascus, Syria, through the behavioral and physical mechanism of women there (Al kodmany, 1999). In particular, women in both traditional and modern neighborhood required privacy "very much", to emphasize 88% in traditional compared to 82% in modern district (Al-kodmany, 2000). Additionally, similar results raised in Famagusta, North Cyprus, as women in the

comfortable modern houses faced less privacy in comparison to the traditional ones. Therefore, visual privacy considerations have been contemplated and understood probably by conventional designers (Abbasoglu & Dagli, 2005).

The meaning of visual privacy within residential architecture various between cultures in contemporary period too. In the U.S.A for instance, the demanded privacy depended on the nature of the relations with neighbors, as the needing for privacy decreased when there are some comfortable ties with neighbors, while in contrast if the ties with them are not good enough the desire of privacy and visual side specifically increased, these issues have been demonstrated by Pedersen. However, in Brazil the visual privacy inside dwellings has been exposed to be achieved through housing design by research done by (Reis & Lay, 2004).

Furthermore, inside one culture people on various regions varied in the level of visual privacy they have required. As in the modern neighborhoods in Syria the multi native citizens, especially whose came from village, be more restricted to privacy value. Hence privacy will be demanded in the modern designed district by various degrees, as it depends on the users' thoughts and beliefs (Al-kodmany, 2000). According to the two sorts of cultural values, core and peripheral which classified by Rapaport (1983), privacy seen through Islamic region specifically as a core one (Figure 59), since its demanded strictly and one of the important value in composing culture and society, as a result of the research done by Al Kodmany (1999).
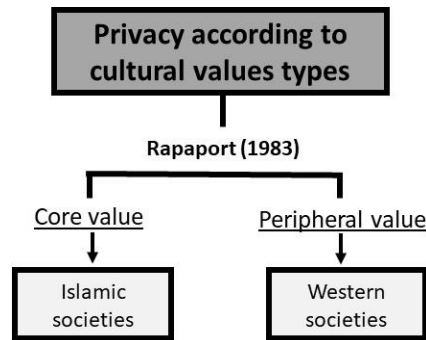
Figure 59: The main sorts of cultural values according to Rapaport (Adapted from (Rapoport, 1969), edited by author)

The situation of visual privacy in the residential contemporary architecture is appeared as an essential issue in the Middle East region, in comparison to other districts in the world. Various considerations, conflicting and ways of balance that required to achieve 'reasonable levels of visual privacy'. For architects it is a way of defiance to augment views and outlook with preventing exposure visual privacy (Barton, 2012). Spaces like balconies and terraces represent the tool for these conflicts between openness or privacy, thence the proper design attained to satisfy degree of visual privacy with reasonable degree of openness.

Users modification to achieve privacy: The satisfactory living environment is estimated according to how it adapts to human's cultural values. Each culture owns diverse particular factors that will impact the shape of spaces, the usage of those spaces is not homologous amid cultures, which emphasized the importance of having elements to suit appearance of the housing according to its culture (Abu-Gazzeh, 1996). On other hand, modern architecture nowadays is neglected from those considerations of cultural needs, although most of the residents still require privacy, security and clam, which formulate as essential components to boost their homes and living environment (Abdul Ghani, 2004).

In the Muslims societies definitely, these values have been sanctified from past to present. This discrepancy occurred because in precedent designers, architects and governors obtain it within residential architecture deeply, on contrast recently owning to global modern movements, styles and designing did not envelope these values. As a result, occupants of dwellings actuated to attain these issues through various elements and approaches.

In designing residential architecture, cultural considerations which holds privacy and visual privacy particularly are composed crucial factors to be realized. The notion of privacy contradicted between western and eastern communities (Hashim, Ali, & Abu Samah, 2009). Amidst homes, craving for visual privacy still existing even if modernism has not comprehended its desired. In Middle Eastern society nowadays, there are two contradictory issues that are coexisting; tendency to modernism and nostalgia for the traditionalism in residential designing to attain visual privacy (Al kodmany, 1999). In modern neighborhood, inhabitants usually adapted their original or existed homes designing to improve the degree of visual privacy, specifically women, as they be more attention to privacy aspect from men (Pinsly, Gewirtzman, & Burt, 2007). To adjust the requested visual privacy, dwellers manipulated, rearranged and coordinated the context in diverse methods.

Designers provided residences with assumed and intended usage and organization but dwellers did not anticipate them without modifications. These alterations arise to fulfill the desired visual privacy in comparison with the little degree of actual visual privacy (Othman, Buys, & Aird, 2014). By reason of exposure the spaces from neighbors' or passersby gazes evidently when they used. Accordingly, users begun to underuse balconies or yards and other opened spaces, due to their evident concern for visual

privacy (Al-kodmany, 2000). Simultaneously, special architectural components have been exploited to regulate visual privacy mechanisms and prevent any unacceptable visual accessibility, such as, set up fences, adding curtains to windows and openings and establishing walls sometimes. Thence there are strong interaction between space using's and achieved visual privacy.

Within exposure spaces inhabitants try to promote visual privacy through various approaches. Balconies, are common intruder space to the residential architecture which against conventional courtyard, thus occupants exposed a huge difference in the utilization of balconies according to the status of achieved visual privacy and if neighbors or passerby could observe it. Certainly, there are evident correlation between space usage and the provided percentage of visual privacy (Al-Kodmany, 1996). Remarkably, balconies which faced backyards were appreciated more exalted amount of visual privacy, in that capacity, a more elevated amount of utilization. Generally, emphatically negative responded appeared from individuals against using balconies, due to the absence of privacy in them. Numerous inhabitants sealed up their balconies, while others have just never utilized them or adjusted them for other usages (Bahammam, 1987), (Figure 60).
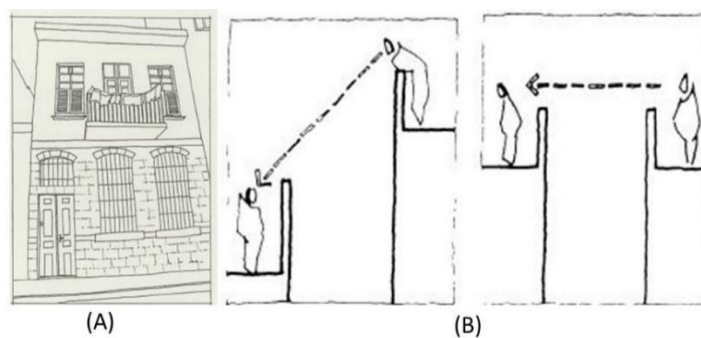
Figure 60: The shape of Balconies from street and the line of sight of the users from it (Al-kodmany, 2000) & (Bemanian, Saremi, Ahmadnejad, & Ghadi, 2015)

Residential privacy is still being demanded from citizen despite the existence of modern neighborhoods which against traditional district. To improve visual privacy, dwellers modified their houses design and used physical technics through spaces that represented decreased level of visual privacy. Over openings sort of curtains, shutters, blinds or dense greenery have been employed when privacy within a space is not satisfied, according to survey done by (Al kodmany, 1999), it is noticeable that within various residences in some modern neighborhoods, owners of the houses appended curtains on most of the home zones, such as, guest rooms, kitchens, and bedrooms.

While others try to prevent any direct vision from outside by designing kind of windows with colorful glasses and geometric patterns, but this trend is scarce. In addition to that, entrances location another issue that related to visual privacy (Bemanian, Saremi, Ahmadnejad, & Ghadi, 2015). Inhabitants complained about the immediate situating of front doors which confronting neighbors, against conventional entrances through old cities which featured with its twisted corridors to enhance visual privacy. Along these lines, users in contemporary houses inserted some wooden screen in front of their doors, conserved front doors rotation to secure inside spaces and they avoid using wide door instead they preferred to use two narrow ones (Al kodmany, 1999). Moreover, sometimes they added the entrances hall if it was not provided from the original design through wooden decoration.

Through built environment scale dwellers modified the initial design too. Constructing sort of fences have been observed over homes to hinder visual access from outsiders they formulated from mental, wooden, and concrete to block any unacceptable sights toward enclosed areas. According to some inhabitants' opinions through a survey done by (Al kodmany, 1999), it has been seen deeply one of the most effective methods in

this issue and without fences, any passers might observe all the activities in yards. In the same realm, when yards were screened they used efficiently more than unprotected ones. Another way to enhance visual privacy planting over rooftops inside yards, so views from adjacent neighbors decreased (Al-kodmany, 2000).

Eventually, desired privacy of Islamic people is not corresponding with actual privacy within visual aspect particularly. This issue is somehow noticeable through the actions of residents in modern district, by their usage of spaces and inserting physical components to attain their desired visual privacy. In contrast, dwellers in old cities are not suffering from this matter, the situation match their desired visual privacy.

2.10 Summary

Privacy commonly a major way to adapt relationships between individuals in various communities. Through the preceding explanations from literature and publishers in the field of the meaning of privacy, through its regulations, functions and effects besides many various definitions of this term, the common significance of it manifested. The degree to accomplish it differ from one person into another one, as it depends on many issues one of them fundamentally is culture; privacy "cannot be understood independently from society", conversely "without society there would be no need for privacy" so it is an integrative process (Solove, 2006)

Through environment, privacy feelings with social interaction both are two components from the semantic items in environment. So, in addition to its main effect on the social side of the people, privacy can be read through the built environment, it has both behavioral or environmental mechanisms (Alitajern & Nojoumi, 2016), (Figure 61). As the physical instructions achieved the desired privacy and at the same

time give its semantics, because the physical environment around people assume as a vital part in forming and reflecting their life and needs (Fallah, Khalili, & Rasdi, 2015).
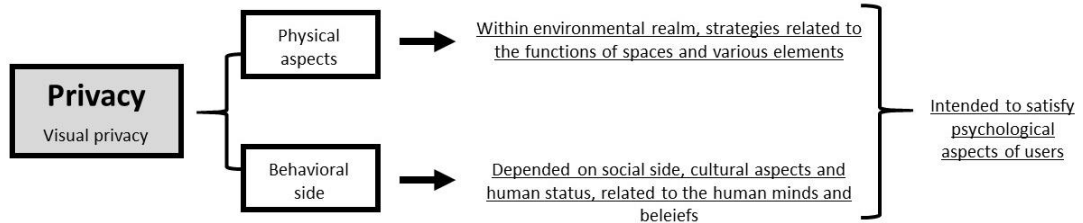
Figure 61: The main two sides of privacy from literature (Created by author)

Privacy item in relation to other components like, personal space, territorial behavior in small scale or crowding in bigger one, influence the level of quality and convenience of environment. These variables of spatial behavior cover spatial plus social connotations under the needs of privacy, as personal spaces and territoriality deals with the relationships between others, while overload, unwanted relationships overlay under crowding expression. So spatial behavior variables, are the reactions and behaviors of the people in relation to build environment.

Under these explanation and issues, which related to privacy in general or privacy through the built environment in particular, the importance of it is illustrated. The role of the architect or designer come into view, as they should try to balance between the desires of the inhabitant and the given situations and values of the culture and the environment, to establish some proper physical results, which designed to be utilized by user nor client, against the unacceptable trend of modernity nowadays. Specifically, in the developing countries, some cities in the middle eastern world like Palestine for instance, they shifted from the prior eras to add type of buildings inspired from western culture without modified it through their own cultural values or privacy issues specifically, hence a gap between what is excited and what is need accomplished.

The desire for privacy varied between cultures, usage of spaces or privacy regulators considered as one of the mechanisms that distinguished cultures. In order to control privacy and satisfy psychological desires, both behavioral and architectural variables within built environment are needed to be considered. As privacy generally associated mainly with psychological aspects which represented and noticed within people's environments and using of their spaces. The architectural side and its issues within the environment have been picked particularly in this study.

One of the main issues in the environment is the residential architecture. In this realm according to Vaziritabar (1990) he arranged main five types of privacy; started from personal privacy to family, intra family and neighbor privacy amid visual privacy. The last type impacts design features, it simply transacts with the ability to view members of family from the outsiders (Heydraipour, Behmaneshnia, Talebian, & Shahi, 2017). In order to be able to deal with visual privacy particularly, you need to follow the strategies and definitions that hold by various scholars and authors in privacy aspects generally.

In the houses designing, visual privacy set as one of the most fundamental attitudes of privacy within specific dwelling or built environment scale. This desire attained by architectural mechanisms from small to large scale; Besim (1986) illustrated that buildings location and windows placements contribute to achieve this need. Furthermore, other strategies like space segregation according to gender, age, relations and functions, the hierarchy of space between private and public domains and relations between buildings through their heights, all of them are influencing visual privacy and some physical parameters that utilized to define territories like fences, walls, setbacks and plants.

Likewise, within building scale various elements employ to achieve visual privacy. Such as define boundaries and spaces, orienting openings and annex type of yards, while assorted methods appropriated too (Figure 62). These architectural strategies and components have been utilized in traditional cities in proper ways to enhance visual privacy, specifically in the old Islam cities, so in Figure 62 & Figure 63 some criteria equipped to be a base for the further discussion in the upcoming chapters. Moreover in Figure 64 the whole prior discussion summarized briefly to extract indicators for the upcoming chapters under the aspects of attaining visual privacy in residential architecture.

Figure 62: Achieving visual privacy beyond architectural aspects (Created by author)

Figure 63: Achieving visual privacy beyond Behavioral aspects (Created by author)

The right for privacy

Dispositional behavior

Regulations of privacy → Overlapping with proxemic variables

Degrees of proximity

Altman (1976)
- Close distance (personal space)
- Medium distance (territories)
- Large distance (culture & crowding)

Hall (1966)
- Intimate distance (non-verbal\verbal communications)
- Personal distance (organism maintains between others)
- Social distance (psychological distance)
- Public distance (human relationships)

Functions\ types of privacy →

Westine(1967)
- Solitude
- Intimacy
- Anonymity
- Reserve

&

Marshall(1974)
Pedersen(1987)
- Seclusion
- Isolation (not neighboring)

Factors affecting privacy

Psychological factors → Human values → Westine (1967)
- Personal autonomy
- Emotional release
- Self evaluation
- Limit & protect of communication

Human senses → Parts affecting privacy
- Proximity
- Visibility
- Acoustic
- Olfactory
- Accessibility

Psychological aspects of users affected by

Social factors
- Norms and traditions   - Culture
- Religion   - Political rules
- Customs   - Environment

Architectural factors → Overlapping between some elements and human senses
- Boundaries ↔ Proximity
- Entryways ↔ Accessibility
- Openings ↔ Visibility \acoustics\ olfactory

Physical aspects — Over Dwellings or environmental scales

Visual privacy

Related Notions
- Preserving outlooks
- Controlling surveillance
- Managing clusters of spaces
- Visual exposure

Affected by
- Psychological side (related to self, belief, etc.)
- Social merits (norms, culture, traditions, economy, etc.)
- Physical issues (spaces, environment, etc.)

Attained by
Define environments → - Instructions (space organizations)
- Physical components (boundaries)

Achieve support environment → According to Witte (2003)
- Behavioral procedures
- Connection between others

Tools of boundary to regulate privacy

Physical parameters → Define territory, fences, walls, etc.

Spatial organization → Add arrangements or intermediate, use semi public and private spaces

Communications → Personal spaces, human body, mind, etc.

Applied visual privacy on residential architecture
Affected by:

Human statues   Influential elements
Social beliefs   Cultural value

Psychological & social factors

Architectural aspects

Over Dwellings/ environmental scales

Socio-cultural variables

Beliefs
Mind thoughts
Gender
Activities
Religions
Social connotations and merits

Human values and senses

Dynamic process of interaction between individuals
Relations with others
Beliefs
Mind thoughts
Covered spatial connotations

Physical parameters

Building elements
- Openings, court/front yards
- Entrances
- Various spaces
- Boundaries
- Entrances hall
- Vestibule
- Fences, walls plants

Orientations & height
- Relations & height between buildings, neighbors, etc.
- Site plan issues
- Treatments of façade
- Orienting Houses (inward\outward) Positioning houses
- Openings locations

Spatial organization
- Space segregation or arrangements (Gender, function of space, directions, etc.)
- Space hierarchy
- Annexing zones for guests, strangers

Physical patterns
- Regulating Line of sight between neighbors
- Establish multi storey floors or regulate them
- Transformations inside spaces
- Manage distances
- Arrange specific buildings styles

Figure 64: Summary of Chapter 2 (Created by author)

Chapter3

VISUAL PRIVACY IN NABLUS CASE STUDY

3.1 Introduction

All aspects of our life have been affected by modern concepts, particularly in the field of architecture. In this thesis, the concentration will occur on privacy aspect, which has been almost vanished in current cities nowadays in comparison to the antiquated urban communities. Although it is one of the main socio-cultural values which identified the society (Olatunde, 2018). Moreover, it is one of the fundamental social incentives in way of life for human generally, and Arab inhabitants specifically. In the case study of Nablus in Palestine same attitudes happened which lead to shape random situations over residential districts and whole architecture appearance in the city.

This situation resulted as the builders and architects started to house citizens in various styles against to their traditional housing, like high-raised buildings outside the old city district. These new buildings are far away from considering original components and methods in the domain of visual privacy in the residential areas. So major problems have been resulted in many stages from every-day life of inhabitants to the general view of the whole city, thus these issues need to be focused deeply to prevent it from continuing.

In this chapter, it is essential to analyze and explain the elements and concepts of the residential design in the old city, which serve visual privacy aspects in residential

complexes specifically. According to the forthcoming analyzing on main ten cases within the old city of Nablus, various characters or issues will be determined. So, the prior mechanisms and several indicators will be illustrated at the end of this analysis section. To compose a base for suggesting some future directions to be taken into account from the designers or architects under visual privacy realm in residential buildings.

3.2 General information About Nablus City

 Nablus city one of the main cities in the north locale of Palestine, while Palestine is one of the countries that form the Levant in the Middle East. The city of Nablus has been seen as a platform for the controlling and ruling of different civilizations within centuries and over quite a long time (Arafat, 2012). It is the second large city, comes after Jerusalem in its importance, the great prominence and presence of the city come from its amazing site (Qamhieh, 1992), it connected the north of Palestine and west bank with the south (Mustafa, 2010), (Figure 65). Also, from the ancient time it can be seen as a junction for the trade too, especially between east and west of the wholistic region, through connecting valley of Jordan in the east with Egypt in the west, additionally linking the north with south, Damascus with Jerusalem (Correia & Taher, 2015).
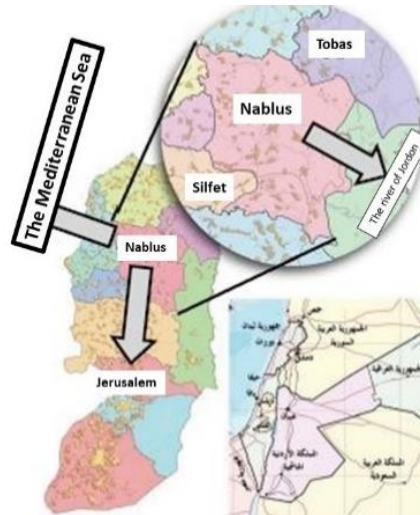
Figure 65: The site of Nablus City (Mustafa, 2010)

Various regions and districts composed the whole city, which is around 2,000 years of age. Generally, a linear development formed the shape of the city as it is located in a cramped valley, encompassed by two main mountains in the North of Palestine; Jerzeem and Ebal (Musmar, 2012). Historically, the initial location of the city in the Canaanite Period (4500 B.C.), was on the east of the current old city, it called "Shechem". Then the settlement shifted to the location of the existing old city nowadays (Touqan & Abdelhamid, 2011). Which has been founded at the beginning by Canaanites in 2500-3000 B.C, then in 72 CE it rebuilt by Romans, about one mile (two kilometers) from the city of Shechem (Map 1), (Mustafa, 2010).
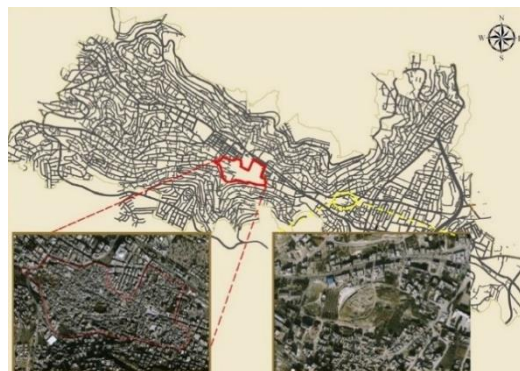
Map 1: The location of Nablus among eras; left: The site of the existence old city (in red) Right: Old Shechem (in yellow) (Map and aerial photograph from Nablus municipality and edited by author)

3.2.1 Development of the City of Nablus

The present old city performed an ideal case of a veritable genetic center inside the modern city, within all other districts of the city this Old district still the core of them. Anciently, various civilizations considered Nablus as a cradle for their achievements by dint of its obvious importance. Initially, Romans planed the city and called it 'Flavian Neapolis' (63- 324 C.E), then Byzantine took the control between (324- 636 C.E), before the earlier Islamic period begun from 636 to 1099 C.E, as within this period Muslims changed the Roman name of it to the current one 'Nablus' (Correia & Taher, 2015).

Later Crusaders and Mongols broke the control of Muslims in a little period between 1099 to 1187 C.E. Until the Muslims Ayyubids, Mamluks, and Ottoman particularly restored the control of the city again from 1187 C.E until the 19th century (Buranich, 2015). Then after the collapse of Ottoman, the city occupied by British in 1918, then Jordanian and later by the Israelis and Palestinian administration until nowadays. These various civilizations and periods affected the whole aspects of the life specifically the architectural realm within the old city and the other regions over times.

Varied transformation over various historical periods have been affected the urban fabric besides the architectural aspects of the old city of Nablus. Within Roman era for instance, several establishments have been attached to its urban structure, like baths, hippodrome, basilica and theatre (Correia & Taher, 2015). Moreover, the consistent grid of streets that has been detected until now returning to the Roman era, side by side with few places and buildings that exposed some Roman portions (Permanent Delegation of Palestine , 2012), (Figure 66 and Picture 6).

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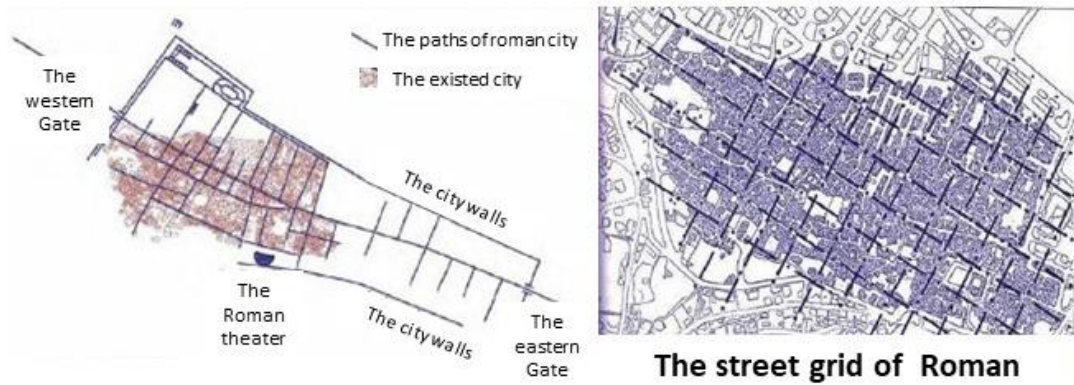
Figure 66: Dropping the Roman grid of the streets on the existed old city (From (Touqan & Abdelhamid, 2011), edited by author)

Picture 6: Existed ruins of the roman theater in Nablus old city (Captured by author)

Each epoch of Crusaders, Mongols, Mamluks, and other eras have made an exceptional advancement to the urban architectural complex. While various earthquakes and diverse wars and controls over years affected also the urban fabric. Which lead eventually to the existence and the dominion architectural style of Ottoman era particularly over its fabric nowadays (Buranich, 2015).

Overtimes and so far, an architectural boom has been noticed because it is the destination for the surrounded cities. By many it has been recognized to be one of the most alluring cities after Jerusalem in the West bank region (Qamhieh, 1992). Back to the early of Islam period in 636 C.E. Nablus was prevailed as an imperative political, trade and exchange center, it was nicknamed as 'little Damascus' by Al-Muqaddasi

Arab geographer. Due to its importance and the diverse of rulers on it, the inhabitants of Nablus were Muslims, Christian and Samaritan, from that time until nowadays. Over years diverse changing within architectural or urban style resulted over main eras of Canaanite, Roman and Ottoman besides minor periods within them (Permanent Delegation of Palestine , 2012), (Map 2).
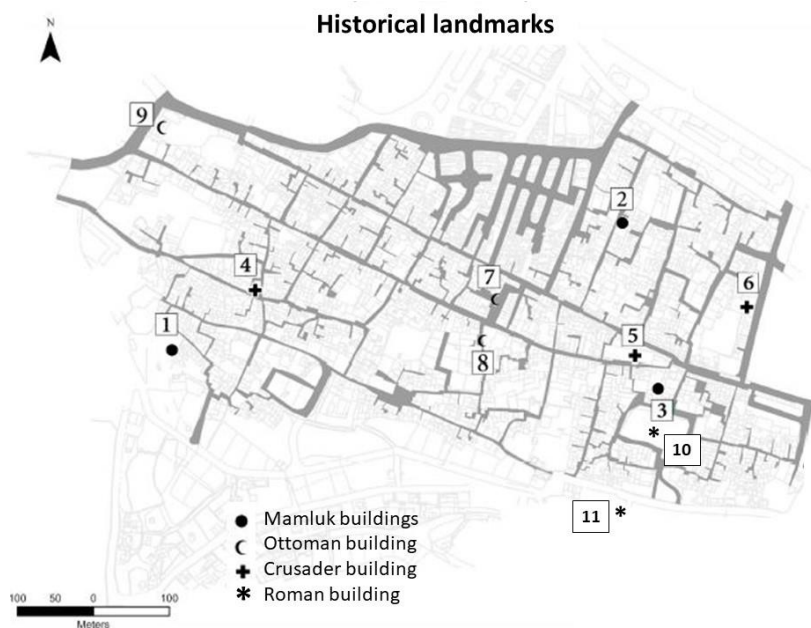
Map 2: The main existed Historical landmarks in the old city of Nablus (Map from Nablus municipality and edited by author)

Within years the city developed, from small valuable region 'Shechem' to the new Nablus 'Flavian Neapolis' then the existed old city then the huge city of today. Until the 18th century, the city was confined inside the wall, but after the mid of the 18th century, rare buildings started to appear outside the wall of the old city (Permanent Delegation of Palestine , 2012). While after the collapsing of Ottoman empire, a massive earthquake occasioned, which damaged diverse regions in the old city, as a result some inhabitants initiated the trend to build outside the old city, they lead the upcoming booming expansion (Correia & Taher, 2015). Within Ottoman era

specifically, all aspects of life within the city have been revived, there were some noticeable urban activities within the Ottoman era, to illustrate; the houses utilized the stone in the construction, the number of the houses inside and outside the old city were almost 2,400 houses from carved stone.

After this prosperity the British Mandate begun in 1918. Due to their restricted building regulation, the linkage of the lands and the increasing of population, the citizens started to build outside the wall over the two mountains slopes; these buildings established in the flatlands near to the old city, mostly in a kind of single houses that surrounded by land. So, in that period the architectural style of dwellings started to be closer to the European side nor the Islamic style, specifically after 1944, while after 1945 vertical expanding begun in the slope of the city mounts (Touqan & Abdelhamid, 2011). In addition to that political or commercial reasons, various several institutions established and influenced the whole improvement.

Moreover, after 1948, especially in 1950 the Jordanian government took the control. So, the city development continues to be observed in this era and the effect of the architects who studied in western societies raised too. The modern techniques started to manifest globally, and in Palestine and Nablus in particular begun to be utilized, such as employing concrete in the building construction, broadening opening in the dwellings, and ignoring social values of societies (Awad, 1999).

Additionally, after the Israeli occupations in 1967, these expanding enhanced outside the boundaries of the city or above the existed buildings. Because the occupation was preventing any kind of new establishments over the empty lands, this period was called

as 'construction with caution' (Touqan & Abdelhamid, 2011). While from the end of the 1980s until the Palestinian National Authority took the control in 1993, the expanding was very restricted as a result of the first intifada struggle and the bad commercial situation of the people. Through Map 3 the whole expanding of the city until 1996 have been illustrated.
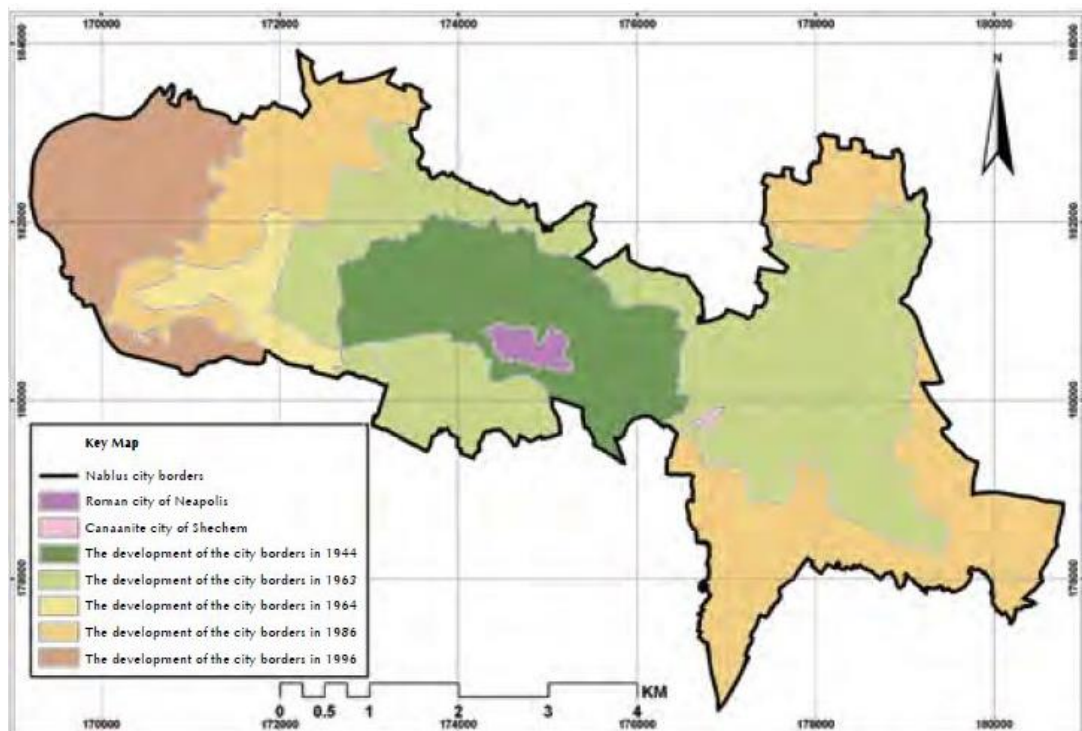
Map 3: The development of the boundaries of the city of Nablus until 1996 (Touqan & Abdelhamid, 2011)

While within the period between two Intifadas, which is mid of the 1990s and the beginning of 2000s, the city has been developed and became dense and congested. As both social and economic aspects of life have been more advanced and stable (Hadid, 2002). However, the development continued after the second Intifada, after 2005, but the building constructions become random in contrast to the previous years, as economic situation was bad, the governments could not control everything, contractors commenced a kind of economical establishments to fulfill the high desire for dwellings

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with the lowest cost, besides the absent of the restricted rules, the urban planning of the city demolished, visual privacy between neighbors disappeared tragically (Map 4), the changing of the City density demonstrated.

(A) Nablus city in 1944 (Atlas of Palestine- Arij)

(B): Nablus city in 2000 (google earth 2000)

(c) Nablus city in 2018 (google earth 2018)

Map 4: Nablus Satellite maps from 1944, 2000 and 2018, the high population and the density of dwellings represented (From (AL Hudhud, 2007), edited by author)

A period of chaos occurred until nowadays, affecting from modern design concepts. They used the apartments housing heavily, the percentage of high rise buildings inside Nablus city site is very high (Itma, in press). These alien types of housing did not consider the socio-cultural factors of the society and exposed the visual privacy between neighbors. In this city, the demand for dwellings increased too because Nablus is being a destination within all the Palestinian cities. For instance, in 1989 it has a density of 150 m2 \capita, this value compounded into 78m2 \capita (AL Hudhud, 2007).

3.2.2 Architectural Ottoman Era Over the City of Nablus (1517-1922)

Focusing on the occasion of social values like privacy in the environment of dwellings varies from past to present. Inside the residential zones visual privacy exceptionally has a momentous meaning, because in Arab culture there is a particular interest in domestic life (Rapoport, 1969). In the traditional cities like Nablus old city, all the urban tendencies or physical parameters within the old city have been utilized to enhance these values and visual privacy specifically, as the existed and remained urban fabric have been affected by the Ottoman empire and others Muslims periods.

Specifically, amid the Ottoman era which extended for almost 400 years in Palestine, Nablus was a noteworthy City where the Ottomans built vigorously. While over the whole urban life mechanism, rights for visual privacy and obligations to acquire it had illustrated on both urban or dwellings scale within the Ottoman architecture in the city (Tütüncü & Remadlia, 2012), which restricted to be among the existed old city or some surrounded zones until the end of their era (Sipahi, 2016).

The Ottoman empire influenced all aspects of life in cities which are located under its control. To enhance their effectiveness in inheriting and evolving the Islamic notion of privacy within the residential architecture through various regulations, parameters and patterns (Schriwer, 2002). Pointedly, in the old city of Nablus, the compact urban fabric was noticed heavily, in the construction of the dwellings they used the 'cells style', that allowed the whole urban fabric to be connected as a single unity and interspersed with the arteries of the movement. Likewise, the exterior façades were purely from stone with tiny openings when it is necessary, the twisted entrances for the private spaces, employing courtyards inside the house or between adjacent buildings, besides the inward openness toward yards not to the outward and space

hierarchy on building or urban scales, all are some of the main regulations to attain visual privacy inside Nablus old city or Islamic cities generally (Ahmad, 2008).

Commonly, the relations between buildings and numbers, size and directions of windows in the facades of buildings are set as one of the major matters. This lighted within the regime of visual privacy in the Ottoman architecture in various countries (Sipahi, 2016). These regimes of privacy were regulating the relevance of visibility rules and built environment to shape the policy of urban fabric. Moreover, various traditional or architectural legacy has been presented through each city that have been admired by Ottoman Empire. In the case of Palestine, Nablus city, it had been one of the main city for them, so over the structure of this city, assorted of patterns and elements have been utilized to represent their Islamic social values like privacy and visual privacy (Musmar, 2012).

3.2.3 The Beginning of The Contemporary Era (1922- Until now)

On contrast, after the end of the Ottoman empire the situation of the city changed extremely. As modern styles are affected whole of the world, new forms appeared world-widely, so architects in Palestine especially in Nablus start to build high-raised buildings, without consider the importance of social value like privacy in our Islamic society, plus the effects of political issues and conflicts in this region, all of these lead people to build randomly, so the result nowadays far away from privacy, farther from our old cities directions in considering visual privacy.

The conventional values of "hospitality, social interaction, seeking for privacy and separation by gender" have been demolished within contemporary housing style. Specifically, the dominant style was becoming high-raised buildings in Nablus city

particularly and in Palestine generally; approximately 53% of the Palestinian inhabitants are dwelling in apartments (PCBS, 2010). Although this style is intruder to our conventional urban fabric and social values (Picture 7).

Picture 7: A general view for one of the contemporary region in Nablus city
(Captured by author)

Eventually, social, commercial and political aspects are factors that affected the architectural styles. In the case of Nablus city after 1948, the graduate break occurred, while in the last fifteen years the extreme boom in architectural situation manifested. Resulting from the common political occasion in Palestine, it was unstable, thus the life of the inhabitants, economic status, social values, etc. have been affected, thus the whole situation generated from that time until now (Hadid, 2002). Notwithstanding those social relationships are very important issues within Islamic societies. They have been reflected through designing concepts and elements, in the old city of Nablus for instance but now they are neglected gradually, thence the gap evidenced.

3.3 Extract the Evaluation Method

Commonly, the desire for privacy and visual privacy vary between cultures, depending on both physical or social factors for each community. For instance, the consideration of these sorts of values arose in the Islamic societies rather than western ones, the explanation and denotations of these aspects differed too. Through the built environment generally, privacy can be interpreted on both behavioral or environmental mechanisms (Altman, 1975). By referring to the prior chapter these affairs have been demonstrated deeply, those explanations have been occurred for the general situation and for Islamic societies in some specific matters.

While within the Nablus community particularly, its commonly known as a conservation society from past until now. Although it is the second large city in Palestine, that sheltering numerous people from the north of the west bank, it considered to be one of the developed zones in whole Palestine (Al-Bishawi, Ghadban, & Jorgensen, 2017), levels of socio-culture values still being inherited from previous ancestors, but with a lower degree of commitment nowadays.

Generally, the psychological factors and social components affected the life of people in Nablus extremely. The conventional community of Nablus was popular with its social values and community habits that reflect the deep relationships between individuals, the family was the core of the society. As it is a Muslims society, the ties of descent, kinship and neighboring composed high standards must be observed, which are affected the morphology of the whole city and the visual privacy realm specifically.

Human values are formed according to the teachings of religion too. In Nablus city religious coexistence is high, because the three Divine religions consisted the inhabitants of Nablus through the majority of Muslims (99.1%), Christian (0.8%) and Samaritan's Jewish (0.1%) (Al-Bishawi, Ghadban, & Jorgensen, 2017). Hence the beliefs of the majority of the inhabitants have been influenced by the Islamic teachings particularly, as the plurality of the citizens are conservative and very cohesive.

In contrast after the beginning of the twentieth centuries, the community in Nablus city kicked off to be more liberal and advanced on various aspects. To emphasize, in the past the society was characterized as men community but nowadays women can be seen in all quarters, therefore women have become involved with men in various areas of life and share burdens with them. Moreover, the general fabric of the society has been changed for various reasons, but in contrast the visual privacy within all these enhancements still being one of the main social value in Nablus city, although it has been neglected from the contemporary housing or environment designing from the supplier, while citizen-initiated to modify their environment to attain visual privacy.

On the contrary, the privacy matters have been treated previously within the whole built environment, as the physical realm merged with the psychological plus social issues. This is what can be discerned once an area within the boundaries of the old town of Nablus might be analyzed. By returning to (Figure 64, P.87), the literature review parts have been compiled through it and the results might apply toward the traditional districts in the case study of Nablus on both urban or buildings scale, to be able to extract the original regulations of visual privacy.

However, in order to limit the analysis part, the evaluation method on the upcoming chapters will be on both physical patterns and physical parameters. These aspects returned to the architectural side, not considering the human values and senses besides socio-cultural variables of the inhabitants, that set under the psychological and social factors as shown in (Figure 64, P.87). Defiantly the architectural aspects covered different issues which can be noticed within the old city parts or the contemporary regions inside the city. The elements of buildings, height and orientations and spatial organization composed the parameters categories, while the relations between elements on both dwellings or environment scale, the styles matter and the line of sight are set to be under the physical patterns section. So, the methodology for the analysis part and discussion section have been regulated.

3.3.1 Identify the Issue

Visual privacy aspects are very essential previously, especially in Islamic cites. Nowadays according to the modernity trend, buildings have been established generally without focusing on this part of social values. Same as what happened in Nablus city in Palestine, one of the main cities in the north of the west bank, Palestine (Wikipedia, 2018). These trends against visual privacy have prompted main problems, from damaging the whole view of the city to touch the everyday life of individuals, since it is known that the cultural bounds affected the Palestinian society deeply, especially in religious sides (Stevenson & Ball, 1998).

New designing units' and strategies currently noticed. They are far away from considering the rights between neighborhood and rules of separation, ignoring the strict social beliefs in Palestinian culture, that means somehow avoiding blend amongst men and women in daily social life (Al-Tawayha, 2011), and disregarded Palestinian

fundamental ties "families", with high value of hospitality and respecting neighborhood (Tawayha, Braganca, & Mateis, 2015). They related to the characteristics of modernity, which represented dismissal of acquired socio-cultural values that constrained the effect of privacy and opening social spaces to outside (Al-Thahab, Mushatat, & Abdelmonem, 2014).

These issues mainly do not relate to social Arab nature, as persons are deprived of life. If they refuse involving with others in some places, they "don't like to be alone" mentioned by (Hall, 1966). In Nablus, the new regions are Against the old city strategies. It has considered more than spatial aspects which rose the social connections and interaction between family members, similar to the traditional societies.

In this section the customary methods and elements in the old city of Nablus, as a case study, will be clarified in the field of visual privacy through some examples. To extract the proper tendency toward achieving visual privacy in residential buildings, to be able to suggest various patterns for the contemporary dwellings in order to lessen the terrible situation, as shown in Picture 8, and to control the distributing of these patterns then propose some modern concept driven from traditional ways.

Picture 8: General view of Nablus City (Captured by author)

3.3.2 Selection of Region

For the purpose of analyzing the visual privacy matters over years in the case study of Nablus city, its essential to border specific regions to attain the objectives of this thesis. Generally, there are main three parts composed the morphology of Nablus city; primarily the district of the old city which referred to the Ottoman era with few ruins from ancient periods like Roman, then the contemporary regions which protruded on various levels and periods after the British mandate in 1917 around the old city and mountains, eventually the refigure camps districts which have been established after the 1948 (Al-Bishawi, Ghadban, & Jorgensen, 2017), (Map 5). Through this thesis the analyzing will be occurred over the old city regions and selected case studies there.

Map 5: Locate the three zones among the City of Nablus, old city district and the other main three refugee camps (Map from GIS, edited by author)

In Nablus, the old city has been established by Roman initially then Muslims redeveloped it according to their strategies and values. Thence it was designed similar to the Islamic cities, it is one of the main examples of a good traditional cities in Palestine (Awad, 1999), assorted of techniques in design can be noticed. The whole

old city contained six main neighborhoods, Al-Gharb, Al-Qaryoun, Al-Aqaba, Al-Yasmineh, Al-Qaisariyya, and Al-Hableh Quarters (Map 6).
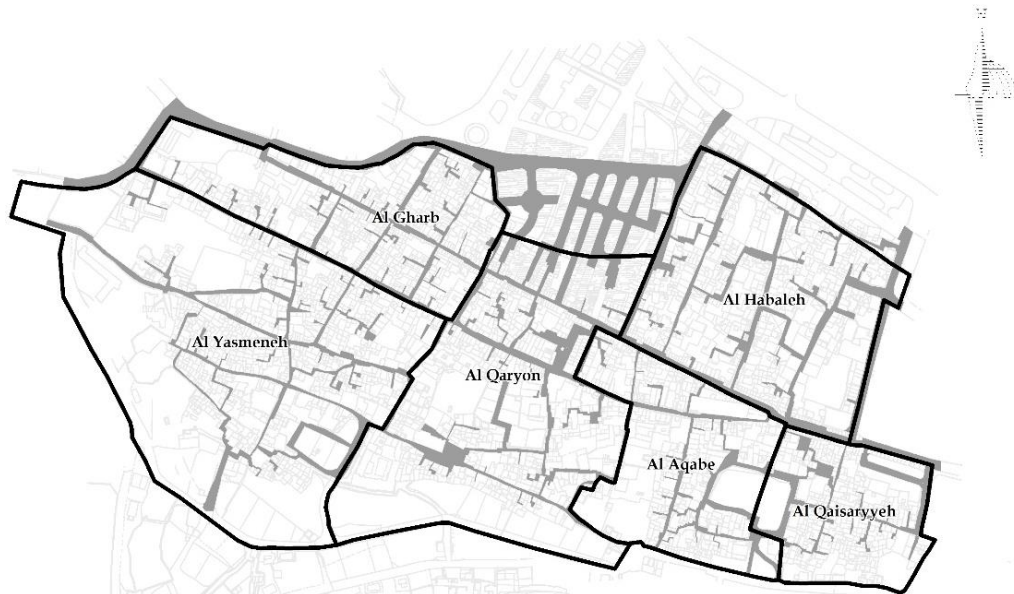
Map 6: The boundaries of the six quarters within the old city of Nablus (Map from Nablus municipality, edited by author)

Within these quarters various features appeared since each one of them demonstrated specific characters. According to these merits within the whole old city, specifically on how the visual privacy have been achieved by various architectural patterns or parameters, the impending discussion and analyzing will be on different cases, half of them arranged in Al-Qaryoun neighborhood, while other cases have been chosen from other districts in this old city to enhance a proper analysis process.

Al-Qaryoun has been adopted for many reasons. Mainly among this district there are different researches, rehabilitation projects have been achieved there, hence the data and maps of it were almost available in comparison to other neighborhoods. Additionally, through Al-Qaryoun neighborhood the aspects of visual privacy can be observed heavily, moreover it includes vital zones, two main Ottoman palaces, Toqan

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and Abdelhadi, which are referred to be the most two fundamental palaces in the whole old city (Touqan & Abdelhamid, 2011). All the types of houses, zones and spaces which graduating from the most private to the public ones are noticed there too (Map 7). Moreover, it comprised various Ottoman elements and establishment, with good conditions of historical buildings (Map 8).

Map 7: Al-Qaryon neighborhood with main squares and good historical building
(Map from (Al-Hanbali, 2005), edited by author)
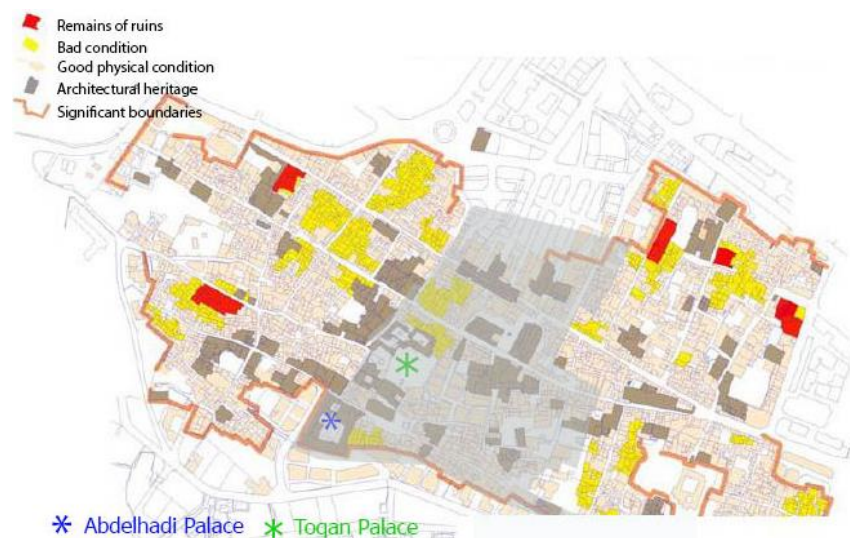
Map 8: The condition of the buildings within the old city of Nablus and locating the main two palaces in Al-Qaryon quarter (Map from (Al-Hanbali, 2005), edited by author)

Additionally, this valuable value of Al- Qaryoun has been demonstrated from ancient time, from the Roman era, as it was considered to be dwelled by eminent employees and nobles. Consequently, it composed high level of the historical and valuable buildings within the old city of Nablus (Al-Hanbali, 2005). On other hand, for the purpose of securing data for ten case studies, in order to be able to attain the objectives of this study, additional buildings have been considered in the analyzing part from other neighborhoods.

3.3.3 The General Morphology of the Old City of Nablus

The urban fabric of the old city of Nablus, similar to any Arab Islamic cities, and characterized by specific elements. Generally, Mosques, public squares, open spaces which gradient from public to semi- public then private and traditional houses with courtyards in large or small buildings formed the urban fabric there. The traditional houses stretch on all sides among the commercial axis and any various zones to shape several neighborhoods, within each of them they composed homogeneous social groups with the same career, like Al-Qaisariyya quarter for example. Besides that, the income levels in each category varied and affected the type of dwellings.

Each neighborhood in the old city has comprehended specific characteristics that inspired distinct personalities and models for them, which might be identified through the old city. These features are corresponding with the main merits of the Islamic old cities; adjacent buildings beside each other's, narrow streets and winding road pattern, space hierarchy, low rise building, emptying blocks of buildings, communities by tribe, ethnicity or religion and distribute region according to the function like clustered the covered markets around the city center.

Generally, the urban fabric of the old city is also distinguished by a system of passable roads, wherever they are fundamental, secondary or closed at the end (alley). Which are varied in their width to suit the human movements or animals depending on the location, to enhance privacy and visual protection particularly (Al-Hanbali, 2005).

While the building fabric has been identified there as a compact structure of historical buildings that are insistent on survival. The most important components are the blocks with residential use. Additionally, in each quarter or near to the main central square, various zones have been established for public used like mosques, baths, manufacture of soaps, palaces of feudalism, schools etc. which are owned by private proprietors. While these buildings distributed in Agency (AL-Khan), neighborhoods, Souqs (commercial center), (Map 9).
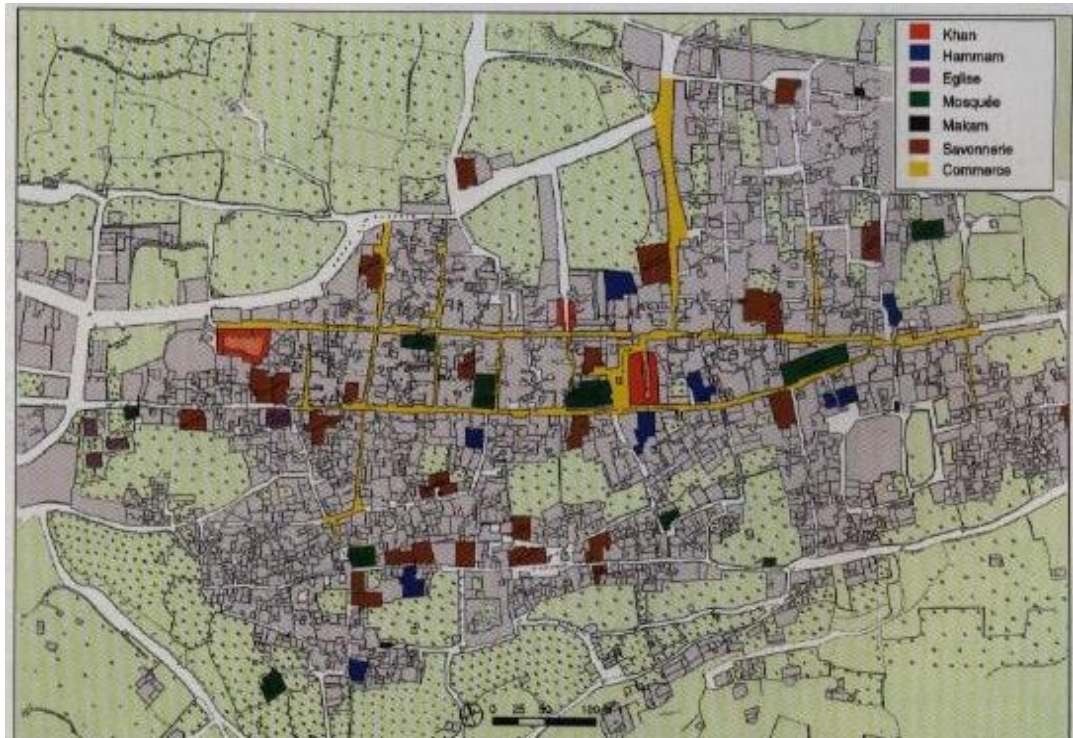
Map 9: The types of the most important buildings and their usage (Al-Hanbali, 2005)

The buildings of the old town composed a compact fabric that was divided into residential neighborhoods, in each one of them, a group of a population has been gathered with specific characteristics. They are also caused by natural and organic growth to reflect the social situation, customs, and traditions of its inhabitant and their notions and beliefs. Their patterns varied according to the economic or social situation of their owners, although most of them are sharing a central courtyard that surrounded with rooms, open the buildings to the interior, but they are varying in size and architectural detail, they might be classified into four main types; Palaces, mansions, houses, and the residential "Ahwash" (Abu-Hantash, 2007).

Each one of these types featured specific characters and set for a particular class in the society. They share approximately similar buildings parameters or pattern that respecting the Islamic cities regulation and attaining visual privacy specifically. To enhance, the palaces have been possessed by the families that ruled the city such as the family of Toukan, Abdul Hadi and Al-Nemer, they amounted about 5% of the building percentage within the old cities. While the mansions are owned by families of high income or prestigious status such as Al Nabulsi, Hashim, etc. However, single houses or houses that shaped with the residential "Ahwash" composed the majority of the urban fabric of the old city, they are often belonging to common inhabitants, as each "hawsh" was belong to a specific ordinary family, because the extended families were the dominant pattern. In Figure 67 the percentage of these types of dwellings have been illustrated according to a prior questionnaire.
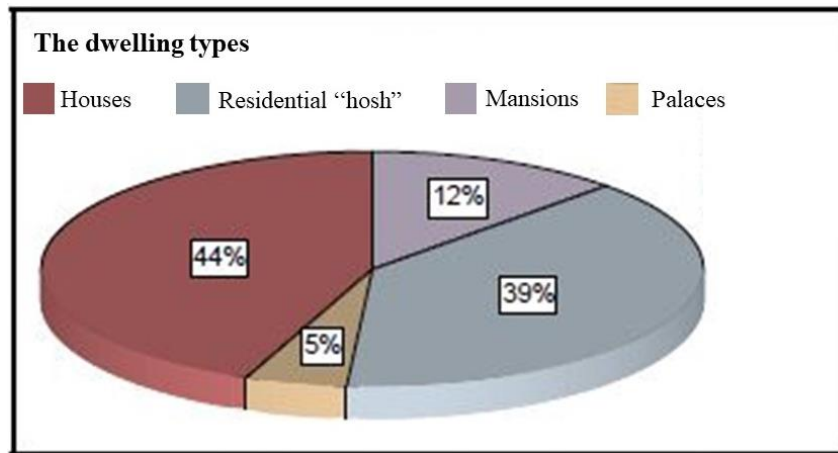
Figure 67: The percentage of residential buildings types' in Nablus old city (Abu-Hantash, 2007)

Broadly the design of residential buildings has been attached to the social, cultural and prevailing thoughts. This seemed to be achieved through opening the houses to the inside which means closed it toward outside, with the reduction of the external openings, especially on the ground floor, conversely orienting it to the inside courtyard, and restoring meshrabiya to the wide openings to attain visual privacy, according to the common culture of the inhabitants (Witte, 2003).

Dwellings represented a model for dealing with or adapting to the surrounding social values. So, the extracted patterns or parameters from the prior literature survey on this issue, will be illustrated through a region and ten case studies in the old city of Nablus. As the main purpose for the dwellings in the Islamic cities strategies to provide a comfortable environment for the inhabitants, in terms of orientation and dimensions of each element inside the house or between neighbors.

3.4 Selecting the Cases

By returning to the residential environment in the old city of Nablus, the connection between the architectural characteristics of the dwellings and the nature of the human being are compatible. Various expressions have been employed, they were reflecting

cultural and social determinants, religious beliefs, customs and traditions, which all belongs to the inhabitants (Taha, 2010). Particularly, the visual privacy matters have been attained earnestly within all regions and types of dwellings there. Commonly, regarding the area of the house which depends on the income of the owner, the orientation of openings, the elements on different size, the height and relation between neighbors and other techniques have been utilized to acquire visual privacy in addition to other social values.

The social strata have been reflected on housing and its planning in general. Hence the differences between the dwellings of the middle and poor class are more evident than the disparities between the homes of the rich and the middle class. These variations have been noticed in the areas and in the size of spaces but the major parameters to attain visual privacy have been considered on all types within various scales and shapes. In the old city of Nablus, the palaces have been returned to feudal families, they distinguished according to their significance, position, and design. So, they have gained this importance across the various periods of time and their contemporized to several historical periods, which affected the nature of design and distinguish them, to appear as prominent architectural features within other types. Until now they are three, but in the further section, the analysis will rise to Tokan palace in Al-Qaryoun neighborhood only.

In addition to that, the majority of the urban fabric within the old city consists from different sizes of houses around residential complexes called 'Al-Ahwash', several significant mansions and single houses. Commonly "Al-Ahwash" is predominant, while the eminent families in the city were able to establish big dwellings, they

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comprised their houses with private courtyards or central lounge in the preceding eras, like Hachim mansion, in Map 10 the other chosen examples are determined.

Whereas other common inhabitants could be adequate to own ordinary houses that have been set separately or directed toward 'Alhowsh'. Commonly, "Al-Ahwash" consisted from mutual spaces that classified as semi-private zones, allotted between individuals for the extended families, they could be simple or complicated like, Al-Naser howsh and Al-jitan howash etc. While the fourth type is single houses which referred to the middle-class people such as Shamot house (Map 10). A detailed explanation for each one of the ten cases will be encountered within the upcoming section.
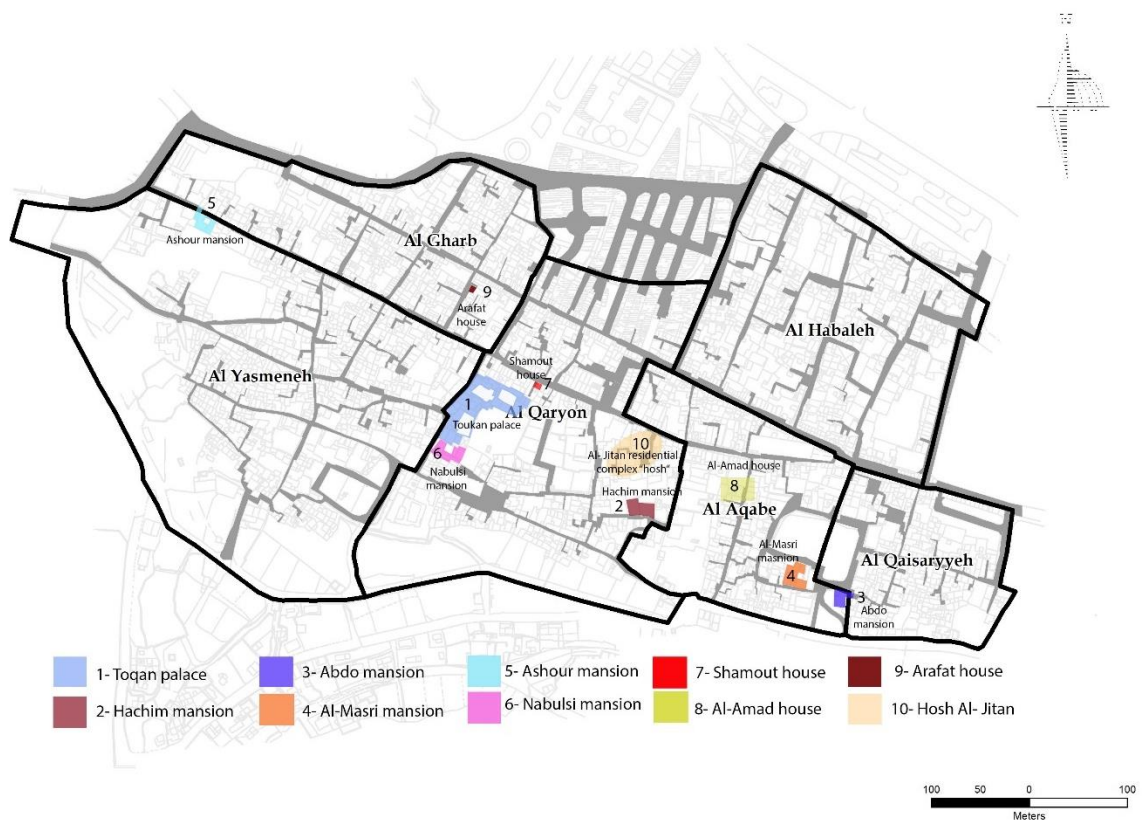
Map 10: Orienting the case studies in this thesis among the old city of Nablus
(Created by author)

Significantly, it has been notable that the majority of the cases have been elected from Al-Qaryoun neighborhood. Initially this quarter has been picked to be analyzed because it is one of the main six neighborhoods in the old city of Nablus, it is intermediated the old city, it has prestigious historical values. Anciently, Al-qaryoun district was the third region which has been erected to be built for the new "Niapols". Over the Mamluks era, they built the most beautiful construction in the old city in the Qaryoun area. Some of the Mamluk buildings still exist and have inscriptions that are still visible on the thresholds of the doors and inside the buildings.

This leads to the fact that the Qaryoun neighborhood maintained its survival. Particularly in Ottoman era, the first palaces of families like Toukan, Abdel hadi, and Hashim, have been established there, it contains many architectural styles form various eras and the Islamic one is the prominent now. So, for those aspects, it has been elected to be analyzed on how the physical patterns lead to achieve visual privacy there, while for the parameters, main five case studies have been chosen from it, but in order to leverage the analyzing part various cases from other neighborhoods have been favored (Map 10, P.112).

3.5 Evaluating Physical Parameters

For the purpose of extracting the main parameters to attain visual privacy, ten examples have been nominated in the old city of Nablus. These cases might be classified according to their architectural types. To complete the analyzing section properly examples from each type, of the four categories of the residential buildings in the old city, have been embraced to be examined, so one palace, five mansions, three houses and one residential complex have been adopted.

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Furthermore, the majority of the residential buildings are existed in Al qaryoun neighborhood. As half of these ten examples are established in this district, to prepare and complete the analysis process at the urban level of this region in the ensuing part. While every example has been inspected and analyzed to determine which specific classification of each main of physical parameters categories have been observed, as they were three by referring to the prior results in (Figure 64, P.87), the building elements, height and orientation, and spatial organization.

3.5.1 Toukan Palace

One of the main palaces through the old city, it has been appointed in Al-Qaryoun neighborhoods. Similar to the general Palestinian residential palaces, these constructions emulated the socio-economic and political status of its owners, the Feudalists families. The main Islamic instructions to attain visual privacy particularly have been predestined within it, in trends which are suitable for social status and in a way that distinguishes it from common ordinary houses, to enhance it is significant between whole residential architecture.

The palace locates on the western edge of Al-Qaryoun neighborhood, which is Intermediated the old city of Nablus. It is bordered to the north by Al-Naser Street and Al-Baik Mosque, while from the west by Al-Baik road and Abdulhadi palace from the south. The construction of this Palace dates back to the 19th century. It belongs to the Toukan, a feudal family in the city of Nablus in previous historical periods.

The palace consists mainly of three parts that built among varying intervals: the northern part, the southern part, and the north-eastern part, with main entrance toward the north part which is the most ancient section, and connects between the other two

parts, from the adjacent street in the west, besides that another private secondary entrance toward the residential sections, after some stairs from the same street. Although the palace was composed several sections and parts, the social value of the inhabitants under visual privacy matter has been accomplished accurately (Figure 68).

3.5.1.1 Building Elements

Entrances: The main entrance has been arranged for the public users' functions after small vaulted entrance, that faced the adjacent street and directed only toward the ground floor, which almost separated from the other private sections to enhance visual privacy for the dwellers. While the second entrance utilized by the palace inhabitant's, it has been arranged in a very long twisted path with stairs before reaching the entrance zone of the palace suite, to complete the visual privacy matter. Moreover, the entrances of each part of the palace on the upper two floors, have been disposed in a twisted way with halls too, while inside the part, the "haremlik" rooms on the second floor have been arranged after small halls too.

Courtyard: The functions of each part of the four sections have been positioned around a specific courtyard, so the palace composed four big courtyards. Moreover, the king suite on the main section of the palace, each room is arranged with a specific frontcourt for it.

Spaces: Various spaces have been observed in this palace to be used for hosting purpose through visual privacy protection; among the ground floor sorts of public functions are arranged for men usage such as iwan spaces that directly opened toward the court in this section and room for guarding. Each part on the first floor, iwan and diwan have been detected there, where the iwan was opening toward the court directly

while the diwan was restricted by small entrance, to be used by men generally within preserving the visual privacy for the users in this palace. Moreover, two qantara rooms have been observed above the main entrance to determine this entrance with protecting the visual privacy of its user.

Opening elements: Commonly, the exterior façades of the palace were almost blanked except for some very small openings called talakat, they were used to enhance guarding functions. There are some small and high openings among the main façade toward the street, in contrast the palace where open toward the main courtyard and small courts, through inner wide or small openings depending on the function of them.

Boundaries and fences: The building fabric of the parts of this palace has been composed the boundaries of it from three directions, while big garden in this palace separated between this zone and other public or surrounding neighbors, hence the visual privacy of the users has been accomplished deeply (Figure 69).

3.5.1.2 Height and Orientation

Height of buildings: The rooms in each part are interconnected and vary between one or two floors from the level of the main courtyards, which are located on the first-floor level from the street, which means that all the palace is between two or three floors height, to complement high level of visual privacy there.

Openings location: The exterior façades were almost blanked, while the main western exterior elevation has consisted from several types of openings usually be small except some double windows on a very high level, by virtue of their location above the human height and not opposing any neighbor openings visual privacy matters have been

enhanced. Otherwise, inside the palace parts the location of the majority of the openings were toward the main courtyards and small frontcourts, they were big for the hosting or living functions and restricted and small for the sleeping rooms or services, never be opposite to each other.

Orienting the dwellings: The whole three parts and the public section in the ground floor are all directed toward separate big courtyards, without any direction toward the exterior environment except some little orientation in the purpose of guarding or ventilation toward the street.

Relation with other: The relation toward the exterior environment were almost prevented through the closed façade and the huge garden, while inside the palace environment, each part was regulated as a separate building with modified entrances between them, any sight from other parts toward one specific section had been prevented and regulated. Hence the relation between those sections has been utilized in achieving the desired visual privacy degree.

Treatment of façade: The façades were blanked from all direction and thicker from the street side, specifically within the retinue suite, as it has some restricted openings toward the street but through regulating the thickness and the height no visual privacy exposure could appear, as the passengers line of sights could not penetrate them (Figure 70).

3.5.1.3 Spatial Organization

Space segregation: The segregation to attain visual privacy is occurred vertically, as the ground floor set for public use while the residential zones set on the upper floor,

as one hidden stairs with paths, hall, and doors have been utilized to connect the upper private zones with the public section. Another long-twisted path with stairs is composed the second entrance toward the residential zones. Moreover, segregation through gender have been observed by arranging hosting spaces for men called zalamlik on the ground floor, and spaces for women called haremlik on the upper floors. Additionally, the opening directions of the spaces toward each specific courtyard-through each part had enhanced the segregation and orientation to promote visual privacy generally. Moreover, the users of the spaces promote the segregation to provide three parts for the palace; the guest, retinue, king and his wife, while the ordinary people use other section toward the street level.

Hierarchy of space: Various size of halls have been utilized within the palace after each entrance, throgh the main two entrances and other zones in each part. The hierarchy of space has been accomplished to attain visual privacy. Also, this progression has been arranged within stairs.

Distributing functions: Mainly the public functions are arranged on the ground floor, while the residential and room for hosting separated over the three parts. Particularly in each part, service, living and hosting zones have been arranged around the courtyard while the sleeping side distributed on the second floor by various stairs from the courts toward them.

Annexing zone: Various spaces for hosting have been distributing in each part like iwan and diwan. Also, near to the two entrances, some zones for guarding have been arranged too. While a whole part has been established for the hosting of the palace.

Also, erected the zalamlik section on the ground floor and the haremlik on the second floor of each part (Figure 71 and Figure 72).

After all that analysis this significant palace from ancient time has been attained visual privacy consideration although it is huge and big in comparison to other buildings within the old city. Unfortunately, nowadays the two parts of the palace and its retinue are not in a good situation due to several episodes. While the hosting suite is almost good as it is now dwelling from various family.

Site plan

Ground floor plan

First Floor plan

First floor plan

Second floor plan

N

N

Court of Palace Suite

Court of Retinue Suite

Court of entrance

The garden

Court of Guest Suite

King Suite

"Haramlik" Suite

Guest Suite

Toukan Palace — Al Baik Street

Al Baik Mosque ···· Al Nasser Street

The surrounded street — Part from abdulhadi palace

(1) The southern part — The public main entrance

(2) The northern part

(3) The north-eastern par — The second semi-private entrance

Iwan — Courtyard — Hatch that indicate the palace section

Diwan — Movement space — Hatch that indicate the retinue section

Room — Kitchen — Hatch that indicate the Guest section

Service — Guard room — Secondary entrance

Main entrance — Stable room

Figure 68: The location and maps with zoning for Toukan palace (Maps from Nablus municipality, editing drawing by author)

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Analyzing the building elements

(P1) Main entrance **(P2) Secondary entrance**

(P3) Qntara room **(P4) Entrance hall**

(P6) The main Palace suite court

(P7) The retinue suite court

(P5) The guest suite court **(P8) The entrance suite court**

| | In front court | | Entrance hall | - - - | Long and twisted path for the second entrance | - - - | Long and twisted path between parts | ✕ | "Diwan" space | ◯ | "Qantara" room | ◌ | "Iwan" space |
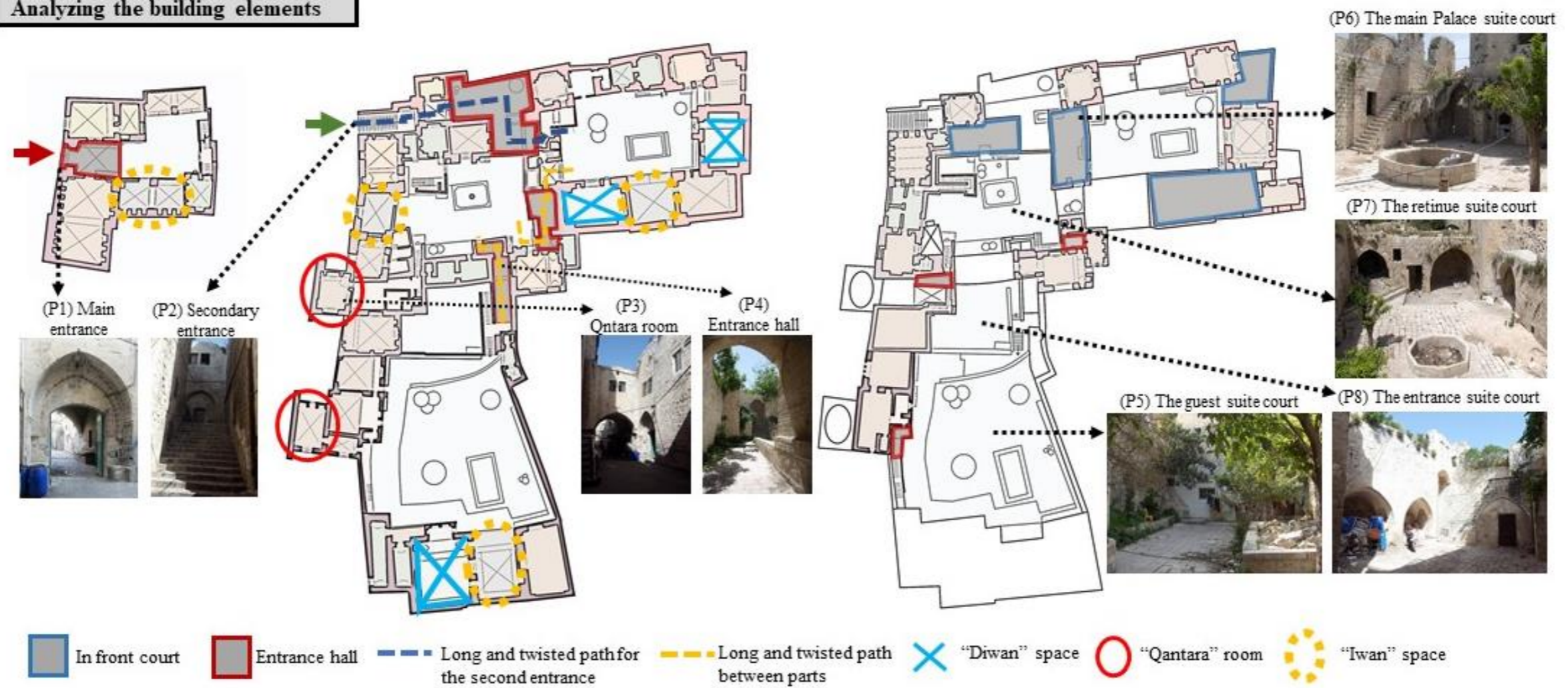
Shots for the exterior facades

(P9) **(P10)**

◯ Small-high window

◯ Very small openings "Talakat"

Types of openings around the court of the palace suite

(P11) **(P12)** **(P13)**

Iwan opening   Service opening
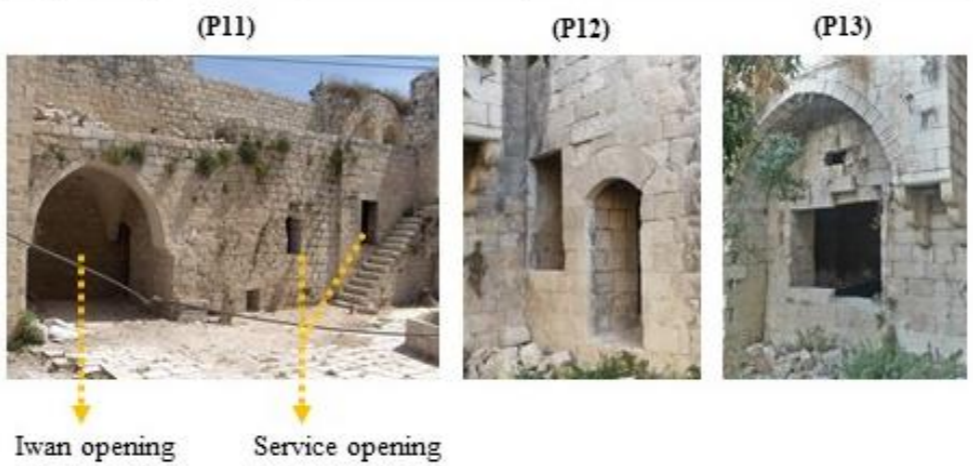
The palace and boundaries

(P14)

The view from the garden

■ The Palace buildings   ■ Surrounded street and paths

■ The surrounded buildings   ■ The garden
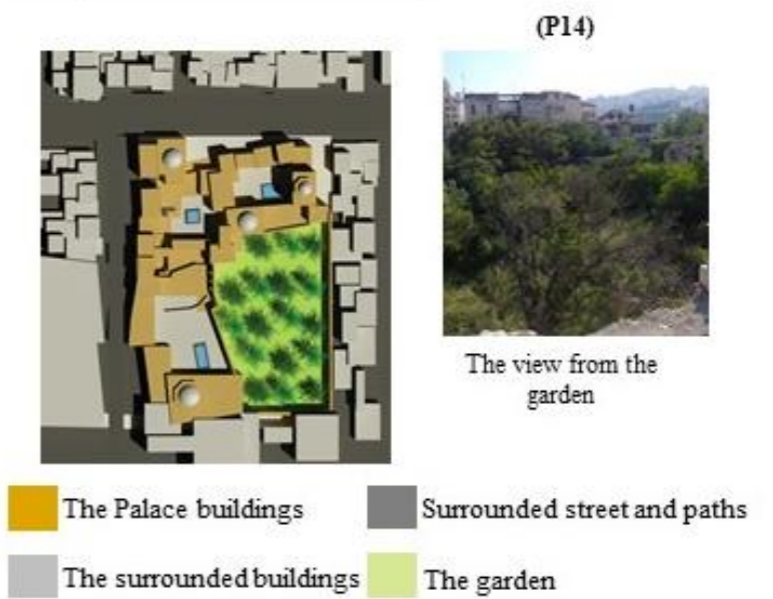
Figure 69: Analyzing the building elements category among Toukan palace (Maps from Nablus municipality, capturing the pictures and editing the drawings by author)

Analyzing the orientation and height

The main western elevation

Section cross the north and south elevations

Toward the courtyard

Walled Fence beside the garden

Toward the courtyard

The retinue suite and court

The main public entrance court

The guest suite and court
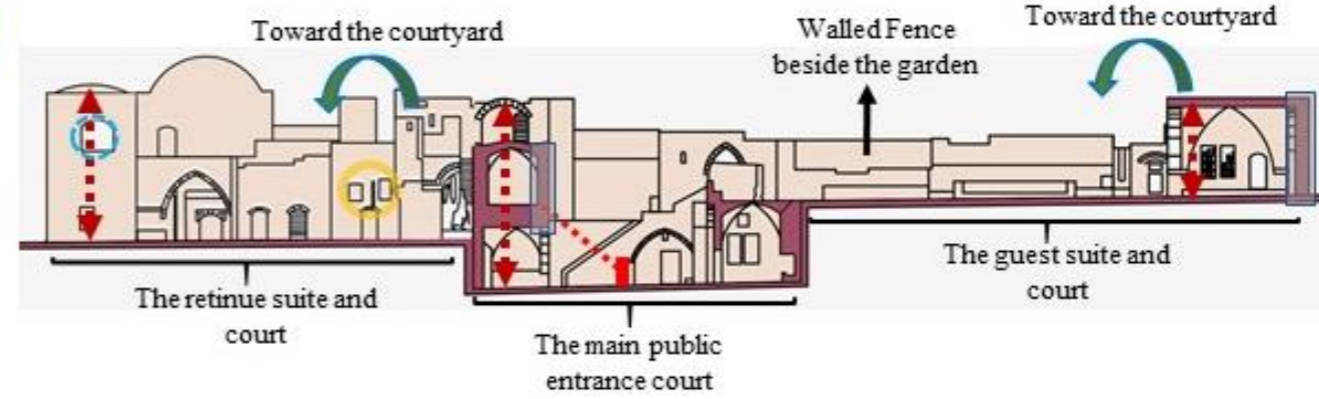
The interior western elevation- among the palace suite
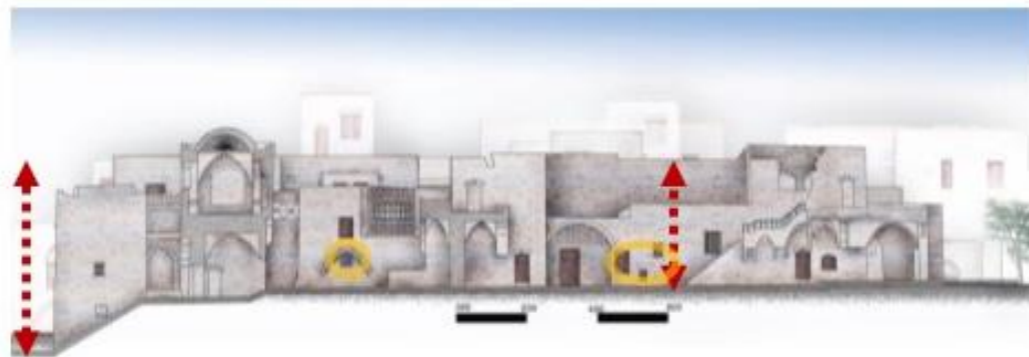
Section cross the west and east elevations

Toward the courtyard

Toward the in front court

The main palace suite and court

Connecting entrance

The retinue suite and court
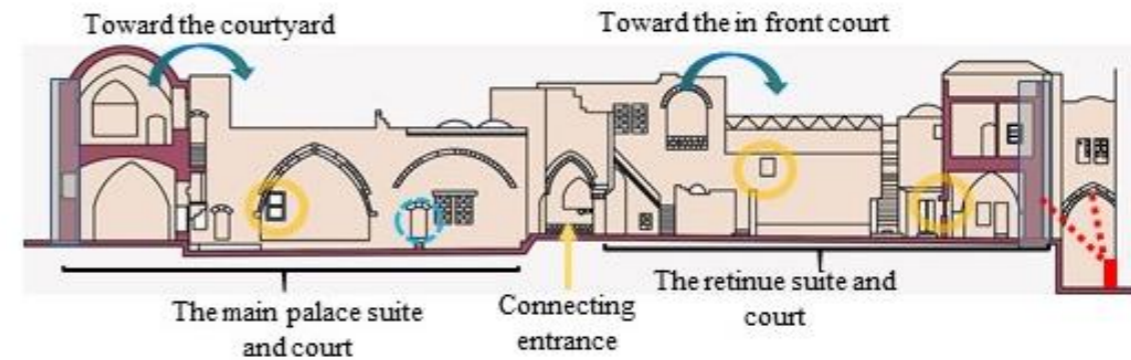
Very small openings "Talakat"   Small window   Double window   The height   Wide opening   line of sight couldn't penetrating the house   The human scale   Closed and thick facade

Shots for openings among exterior and interior facades

(P1)   **(P2)**   **(P3)**   **(P4)**

Not opposite

Wide opening for "Iwan"

Small opening for services

Wide opening for stable service
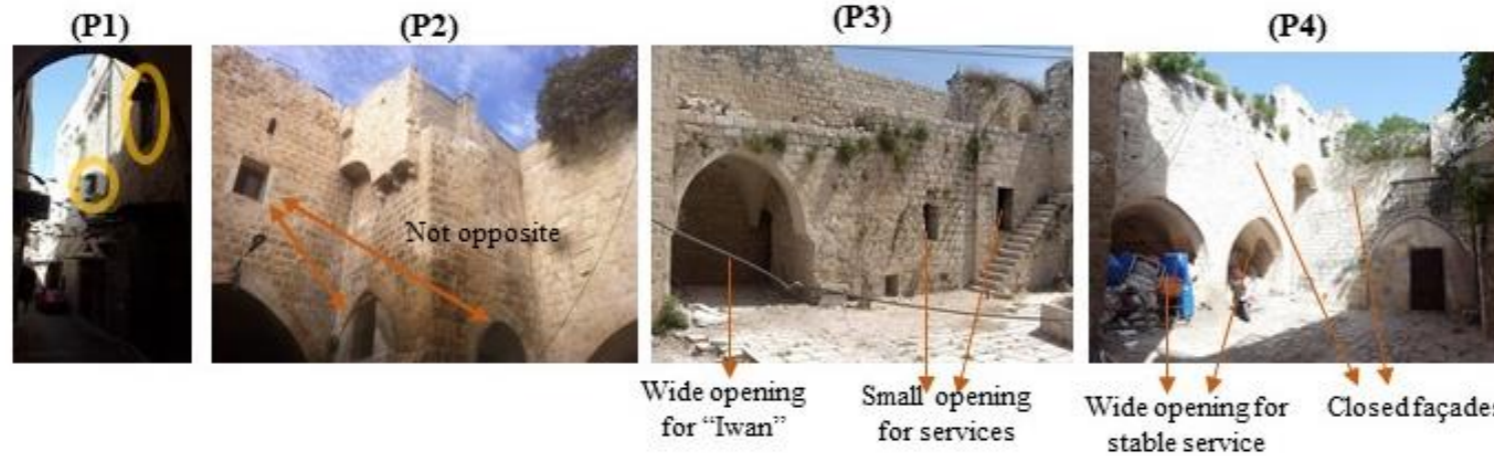
Closed façades

(P1) The exterior façade and how the openings are high and above the human line of sight
(P2) avoid set opposite openings around the courtyards
(P30 the living or gusting opening is wide while for the services or room are small
(P4) the closed façade around the public courtyard in the ground floor

Figure 70: Analyzing the height and orientation category among Toukan palace (Maps from Nablus municipality & architecture department at An-Najah national University, capturing the pictures and editing the drawings by author)

Analyzing the spatial organization

Space segregation

Palace and king part

Segregation and connection through Stairs

Retinue part

Guest part

Entrance and public part

Segregation from street through Stairs

Hierarchy of space

Private zones

Retinue then king part

Guest part

Semi-private entrance hall

Semi-private hall

Semi-Public entrance path

Public and semi-public court and spaces for men

Public street

Public street

Distributing functions

Guest part

Palace and king part

Retinue part

Haramlik zone (rooms for guesting)

Haramlik zone & inner courts

Haramlik zone & inner courts

Living & Guesting zone

Living, services and courtyard, second entrance

Living, services and courtyard,

Courtyard

Public usage for men guest or people (Zalamlik)

Figure 71: Analyzing the spatial organization category among Toukan palace (Maps from Nablus municipality, editing by author)

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Visual Privacy in architectural aspect

Building elements	Main role in attaining visual privacy	Number of figure	Spatial organization	Main role in attaining visual privacy	Number of figure
Entrance	• Vaulted hall in front the main entrance • Long and twisted path in the second entrance • Path and Hall between parts • Halls in front of entrances or rooms	(1) (2) (3) (4)	Space segregation	Utilized long path, stairs for entrances Erected "haremlik" and "zalamlik" for gender and function segregation Provide 4 parts for the palace depending on users	(2, 11, 12)
Courtyard	• There four courtyard for each part, beside some inner courts	(5)	Hierarchy of space	From public street toward private parts of the palace In each palace hierarchy utilized to reach the most upper private rooms	(12)
Spaces	Utlized spacese for living like "diwan" & "Iwan" beside "qantra" rooms above the entrance	(4 & 5)	Distributing functions	• dwellings on the first and second floor • Public function on the ground floor • Each user dwell in different part of the palace (king, retinue, guest)	(11 & 12)
Opening elements	• "Talakat" openings on the fences • Blanked façade with some small or double and high openings in the main elevation	(7) (8)			
			Annexing zones	Main courts, "diwan", "zalamlik & Haramlik	(6 & 11)
Boundaries and fences	The building fabric of neighbors and palace beside fences around the garden	(9)			

Height and orientation	Main role in attaining visual privacy	Number of figure
Height of buildings	From one until three floors around the courts and street	(10)
Openings location	Inside the palace: toward main court and inner courts never opposite Outside: blanked façades or small & high windows	(10)
Orienting the dwelling	Each part toward its court	(10)
Relation with other	Prevent connection through garden and closed elevation, and regulate the line of sight from street	(10)
Treatment of façade	Control the thickness of the wall beside being almost blanked	(10)

Court (1)
Court (2)
Court (3)
Court (4)
Inner courts

Figure (1)   Figure (2)   Figure (3)   Figure (4)

Figure (5)

Building fabric as boundaries

"Diwan" space
"Qantara" room
"Iwan" space

Single or double high opening

"Talakat" openings on the fences

Walled Fences for garden

Figure (6)   Figure (7)   Figure (8)   Figure (9)

"Haramlik" section
King and his retinue section
"Zalamlik" for public people

Guesting section
Residential (private)
Reception (public)

Figure (11)

Street (public)
Reception (semi-public)
Semi-private connection stairs and hall
Private parts

Figure (12)

Toward the courtyard
Toward the in front court
Closed and thick façade
Small openings inside the courts too
The main palace suite and court
Connecting entrance
The retinue suite and court

Figure (10)

Figure 72: Main architectural aspects among Toukan palace- in achieving visual privacy (Created by author)

3.5.2 Hachim Mansion

Hashim mansion is an example of the houses that have a massive military appearance from the outside, due to its location, appearance and vertical structure, as its traditional rooms are located above one another. The building generally consisted of two parts and arched vaulted ceiling rewaq in the corner between them, the first part is considered as the main section of the house that consists of two floors and one main room on the third floor, while the other part it is just one floor and could be reached from separate entrances, one toward the street other from a path in the edge of the garden.

The house represented L shape amalgamated with sacrificial L shape of a surrounded private garden. Around the house from three sides, there are green districts, which dissociated between the dwelling environment and the near public mosque zone "Al-tina Mosque" and other neighbors, while the fourth side is directed to the pedestrian street. The privacy issues here have been attained in various aspects particularly in the main part rather than another one.

The criteria for visual privacy in the Old Town were explicitly highlighted within various physical parameters in this house. The extreme location of the house on the border of Al-Qaryoun neighborhood equipped the chance to be surrounded with empty spaces commonly. Specifically, the elevation of it was modified in a way that preserved the visual privacy of the inhabitant (Figure 73).

3.5.2.1 Building Elements

Entrances: The consideration of creating entrance hall has been achieved within this house. On the first part, there is small vestibule with one turn, while on the second part

you will face long path beside the private garden in order to reach the main entrance with a small turned hall. Hence in the main part, the twisting of the entrance hall has been observed more than the entry for the other part, as it is directly connected to the public street while the second part initially connected to the private garden.

Courtyards: The main courtyard has been erected on the first floor and has been utilized as a central space for daily activities with high level of visual privacy, a tool for regulating the inward orientation in the main part of the house and intermediary to attain the movement for other private rooms through preserving visual privacy.

Various spaces: Utilizing specific spaces like rewaq has been positioned in the house; on the ground floor, between the two sides of the buildings, this space provided a shaded area that cannot be detected from outside by virtue of the level of lighting differences and the surrounded greenery zones, thus visual privacy in this semi-private zone has been enhanced, because this contradiction in the level of lighting will diminish visual detection of rewaq users' and prohibited any vision from strangers' passengers. While to improve the visual privacy on the first floor, another small rewaq set in front of the rooms there, to prevent any kind of penetration from the surrounded far neighbors.

Openings elements: Among the main elevation there was a usage of meshrabiya element but it has been diminished over years and now it has been replaced by Aluminum covered. Besides that, other types of covering components over the low openings in the main elevation have been utilized to acquire visual privacy.

Fences and boundaries: Utilizing fences and boundaries have been achieved to enhance visual privacy aspects. The existence of the greenery fences with a low solid wall around the house has been appointed. In the same matter boundaries around the courtyard have been deemed; from three sides it encompassed with rooms while the forth side established to arrange the staircase, thence from any far location no one can permeate the court or private zones of the house, due to these fences and boundaries (Figure 74).

3.5.2.2 Height and Orientation

Height of the building: The height of the house was about three floors, which allows setting openings above human-scale. The last level consisted of one partition of the most and main private room. Although this mansion is higher than the surrounded environment, the visual privacy matters have been fixed, through the buffer zone of the private garden between neighbors from two sides and the modified façade toward the street from the remain other sides.

Openings location: Openings in the exterior facades distributed to be small towards the outside and little wider toward the private garden and the courtyard. Among the west elevation and the inner ones specifically, the wider openings have been arranged. Also obviated sort of windows on the remained elevations, were small and high with exceptions of some proper covering openings in the main south elevation.

Orienting of the dwelling: The mansion is directed mainly toward the inner courtyard in the main part, while the other part was directed toward the private garden, no stranger sight could penetrate the private zone of the house.

Relations with other: The width of the surrounded street regulates the amount of the openings through the passengers' line of sight, in this case as the pedestrian street on the south direction is almost narrow, from the most far point of the path, any stranger could not pick up any look. In contrast, when the street becomes wider, on the east side, the opportunity will be increased, hence the elevation divested from openings.

Treatment of façade: The thickness of the wall assisted to prevent any sight and obviated any openings location less than the human line of sight scale, to emphasize the walls that adjacent to the street used to be thick in comparison to the walls around the courtyard.

Site plan issues: The site plan tended to enhance visual privacy by the surrounded greenery zones from all directions. Through any external-facing openings, the trees and plants prevent any kind of permeation of visual privacy from neighbors (Figure 75).

3.5.2.3 Spatial Organization

Space segregation: Segregation of spaces within the whole part of the house has been achieved. By Considering functions, in the main and oldest part the main residential zones with their services set on the first and second floor, while the ground floor, which is adjacent to the street, is suggested for the guest. According to gender, they arranged semi-private rewaq in front of the garden for men, completely separated through a path from the garden. Also, the visual privacy aspects have been attained in a vertical way among the main part from the pedestrian street until the most private zones on the highest floor.

Space hierarchy: The entrances halls on both parts have been utilized to enhance hierarchy of privacy to accomplish visual protection. Also, stairs employed to acquire hierarchy in the vertical direction.

Distributing function: The functions of the rooms that are closed to the street where almost for services, in contrast, the sleeping or living room are arranged on the north side, far away from the street. Also, Utilizing the courtyard on the first floor, not on the ground floor set to be a method to equip more private spaces above the human-scale level.

Annexing zones: Specific spaces like rewaq has been arranged to enhance visual privacy on both ground and first floor. In the ground floor set to be used be guests while on the courtyard level, is set to be used by private inhabitants for completing visual privacy for their daily activities (Figure 76 and Figure 77).

Eventually, various parameters have been utilized to attain visual privacy in this traditional house through all parts. Commonly from the general style of it as the courtyard set on above level, the existence of rewaq spaces, surrounded garden, and further physical parameters to attain supportive environment to the visual privacy desires of the inhabitants. As shown in Figure 77, the main issues under each category have been mentioned. In contrast to these valuable results, the current situation of this building is not too much good, as it has not been thoroughly restored the users of the house now consists from various families because the original owners lift the district. But it still combined valuable conventional consideration for the visual privacy matters.

Site plan

(P1) Google Earth map represented the surrounded environment of the house

(P2) Panorama view for the east corner

(1) First part (2) Second part (3) Rewaq section

- Beit Hachim
- Al-Tina Mosque
- Public zone
- Surrounded private Garden
- The surrounded street

Ground Floor plan

(2)

Room3 Room2

Room1

Guest room

Room3 Room2

Room1

(3) 0 1 2 3 4 5 (1)

(1) First part (2) Second part (3) Rewaq section

- Vaulted ceiling hall
- The "Rewaq" zone
- The entrance hall
- Stairs
- Entrance

First Floor plan

Room2

Room1

Services

(4) Room1 (5)

0 1 2 3 4 5

(4) First floor above "rewaq" section (5) first floor of first part

- The courtyard
- The "Rewaq" zone
- The steps toward second floor or second section (previously)
- Recent entrance

Shots For Elevations

(P1) (P2) (P3) (P4) (P5)

Part from the East Elevation

Part from the West Elevation

Part from the North Elevation

Parts from the South Elevation

Figure 73: The location and maps with zoning for Hachim mansion (Maps from Nablus municipality, capturing pictures and editing drawing by author)

Ground Floor plan
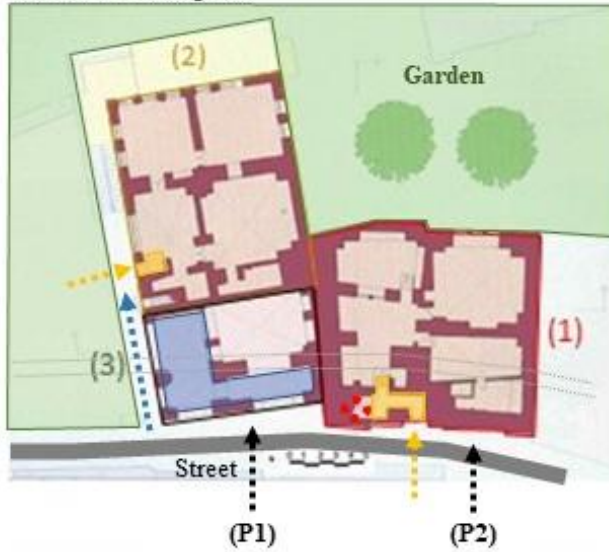
(P1): The place of conventional "meshrabyia" **(P2):** Types of covering openings

(P1)   **(P2)**
The Meshrabiya opening

The Rewaq opening

First Floor plan

Garden   Courtyard

(P3) The boundaries of the mansion courtyard and the whole building

Entrance   Path for entrance   The staircase

Entrance hall   Rewaq zone   The courtyard   Garden

(P4)   **(P5)**   **(P6)**   **(P7)**

(P4): Panorama view for the main elevation with the two entrances, represented the opening of the rewaq

(P5): The main entrance

(P6): The secondary entrance toward the garden

(P7): The courtyard view\ on the right: a part from the second rewaq

Figure 74: Analyzing the building elements category among Hachim mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

Analyzing the height and orientation of the mansion

1- Section cross the east and west elevations

Some opening toward the garden

Opening Toward the courtyard

Private garden

Wide street

2- Section across the north and south elevations, represent the main room on the second floor

Opening Toward the courtyard

Private garden

Narrow street

- ☐ Wide windows
- ☐ Modified windows
- ☐ Small windows
- ▮ Closed facade
- ↕ The height
- ┊ The line of sight
- ▮ The human scale

3- The south elevation

N1 N2 N3

N1

Fences   2nd Entrance   "Rewaq" Facade   Main Entrance

◗ The Rewaq opening   ◖ The Meshrabiya opening

N1: A shot show the openings of Meshrabiya and Rewaq
N2: Blanked elevation among the human scale
N3: The types of openings and how they have been covered to attain visual privacy

4- Various shots inside the mansion

(P1)   (P2)   (P3)

◌ Indicated to the width of the façade toward street   ┊ Indicated the heights

(P1): The visual privacy within openings has been achieved through their height (more than human scale) beside the thickness of the wall
(P2): The height of the openings where satisfied enough to add random space there
(P3): The wide opening toward the garden was completely attained visual privacy desire

5- The plan and locating some shots
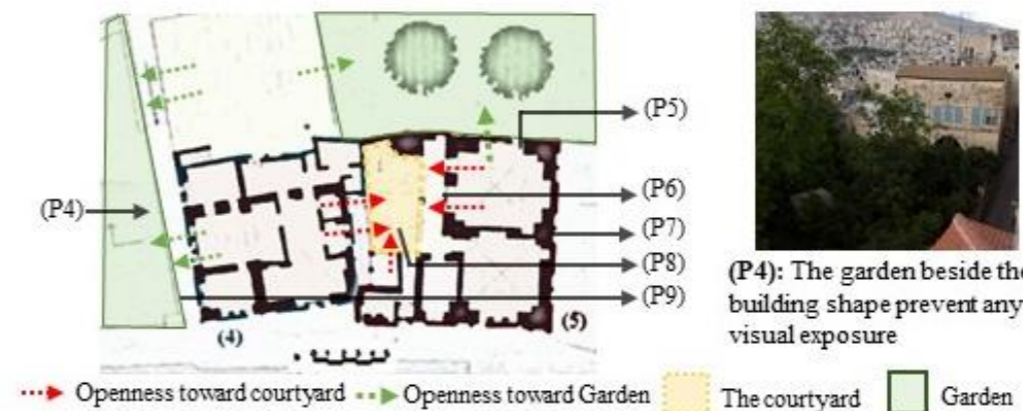
(P4)   (P5)   (P6)   (P7)   (P8)   (P9)

(P4): The garden beside the building shape prevent any visual exposure

┈▶ Openness toward courtyard   ┈▶ Openness toward Garden   ▨ The courtyard   ▢ Garden

(P5)   (P6)   (P7)   (P8)   (P9)

(P5): The view from the north elevation to the garden, through the only window in this elevation
(P6): The view of openings toward the courtyard
(P7): The openness toward the garden without being exposed
(P8): The closeness because the garden didn't preserve visual privacy
(P9): Surrounding the courtyard with the building part and wall to enhance visual privacy

Figure 75: Analyzing the height and orientation category among Hachim mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

Analyzing the spatial organization

Spaces segregation

Segregation into two parts

Segregation between zones through courtyard

(2)

(3)

(1)

(4)

(5)
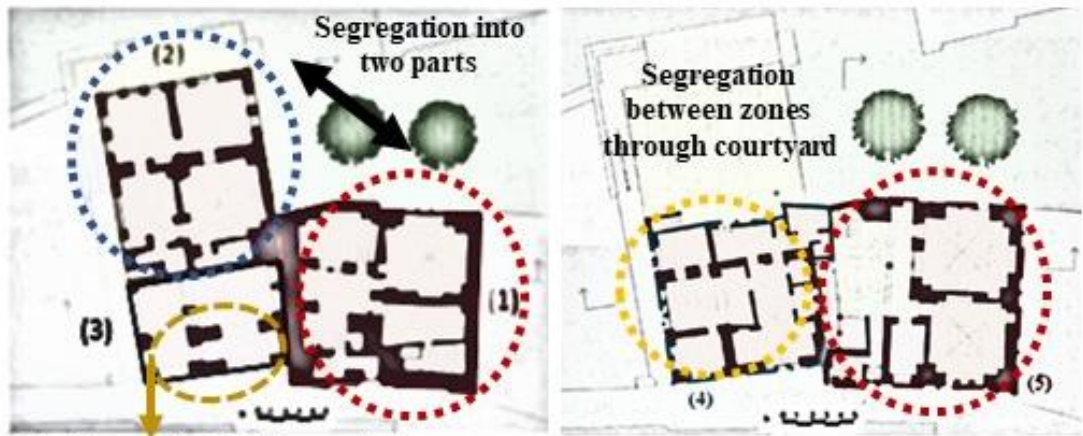
Set "rewaq", which is semi-private guest zone for men

Spaces hierarchy

(2)

Second part (private)

Entrance hall (semi private)

The path (semi-public)

The street (public)

(3)

(1)

Guesting rooms and services (private & semi private)

Entrance hall (semi public)

The street (public)

Private Sleeping rooms

Rooms for another part

Courtyard, Private rewaq, living rooms for women

Residential

Semi-private "rewaq"

Entrance hall, Guest room, services

Services and guesting
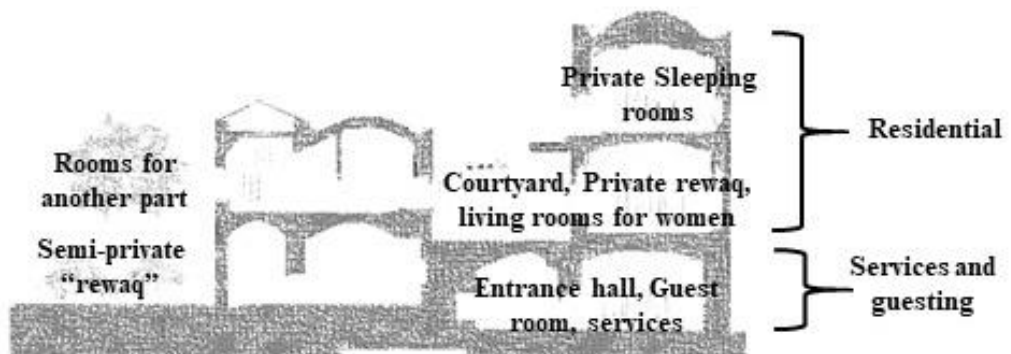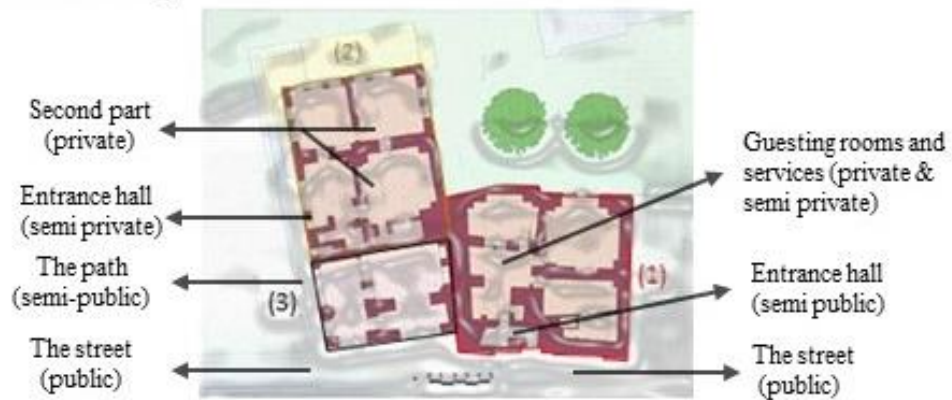
Distributing the functions vertically to attain privacy

Figure 76: Analyzing the spatial organization category among Hachim mansion
(Maps from (Rofo, Santelli, & Rochant, 2002), editing by author)

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Visual Privacy in architectural aspect		
Building elements	**Main role in attaining visual privacy**	**Number of figure**
Entrances	Small vestibule in both parts to prevent any direct sight from the street	(1)
Courtyard	Directed the openings toward it	(2)
Various spaces	Utlizing "Rewaq" as a semi-private gusting zone on both floors	(3)
Opening elements	Conventionally using wooden shutter like Mashrabiya	(5)
Fences and boundaries	Surrounded garden and raised walls or rooms around the court, to restricted any visual exposure	(4)
Height and orientation	**Main role in attaining visual privacy**	**Number of figure**
Height of the building	Three floor	(6 & 7)
Openings location	Above the human scale. Wide ones toward the courts or garden in low floor Small and modified ones toward the neighbors when it is necessary	(8)
Orienting of the dwelling	Toward the garden and the courtyard	(8)
Relations with other	Regulate the line of sight	(6 & 7)
Treatment of facade	Control the thickness of the wall, blanked exterior façade toward streets	(8)
Site plan issues	Surrounded by garden	(4)
Spatial organization	**Main role in attaining visual privacy**	**Number of figure**
Space segregation	Divided the house into parts by entrances and stairs Arrange Specific spaces for gender segregation	(10 & 11)
Hierarchy of space	From public street toward private rooms horizantly and vertically	(9)
Distributing functions	The ground floor for the guesting zones while the other tow for residence	(9)
Annexing zones	Utlized "rewaq" spaces	(3)

Figure (1) Figure (2) Figure (3)

Figure (4) Figure (5) Figure (6) Figure (7)

Figure (8) Figure (9)

Figure (10) Figure (11)
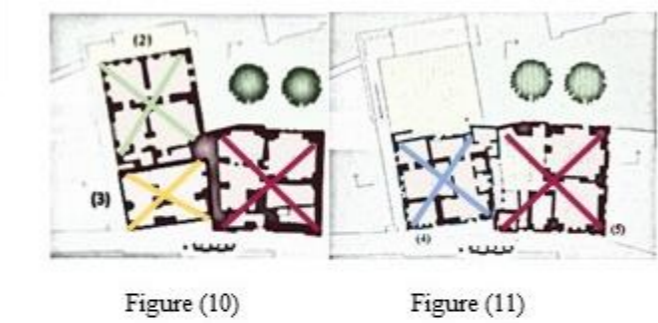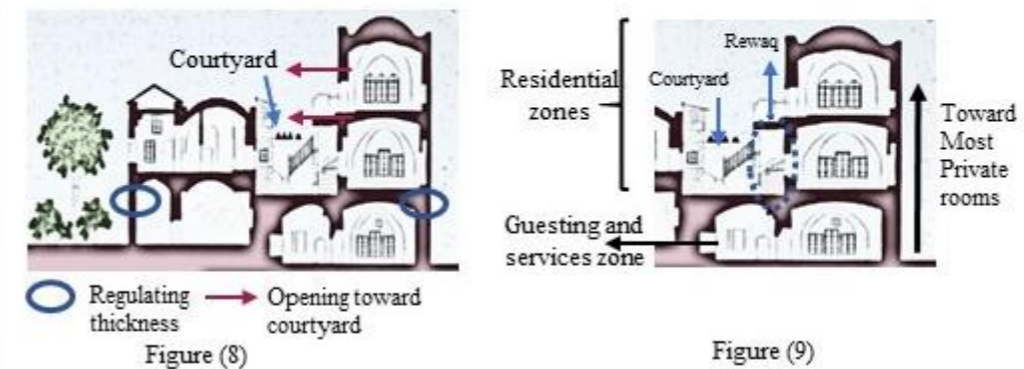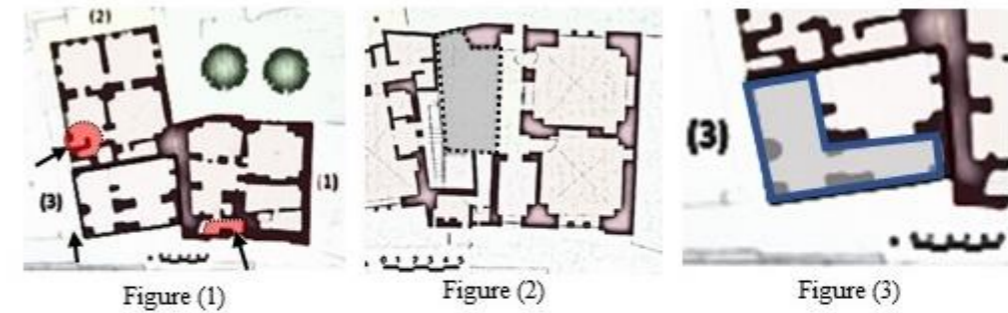
Figure 77: Main architectural aspects among Hachim mansion- in achieving visual privacy (Created by author)

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3.5.3 Abdo Mansion

This mansion is built on the borders of the old town, between Al-Qaisaryyeh and Al-Aqabe neighborhoods. Commonly, it consists of three levels, and main entrance from the street. Where the spaces distributed around a central vaulted space that is perpendicular to the street after the entrance to compose the ground floor. From it, you could reach the first floor through stairs lead you to a distributors hall and iwan that arranged the four rooms in the corner, then at the last floor the sleeping rooms arranged within frontcourt. In the past, the mansion was surrounded by a garden from the three directions while now various closed buildings have been annexed to it from the east and west while from the south the street had been expanded to be very close to the mansion (Figure 78).

3.5.3.1 Building Elements

Entrance: The only entrance to this mansion, was opened toward a hall initially then a vaulted space, which contains vertical stairs lead toward another distributor hall in the upper residential zones, although the entrance was perpendicular on the street due to some stairs before the entrance and the entrance hall after it the visual privacy of the user was preserved.

Courtyard: There is small back courtyard has been appended later after establishing the adjacent buildings and spaces, the original mansion has not contained central courtyard, but in the second floor there is in the frontcourt for the upper room, which utilized to enhance visual privacy for the rooms there.

Various spaces: The utilizing of diwan in the ground floor for the hosting purpose for men, and iwan space in the first floor to be used for the living function, so the visual privacy for the inhabitants of this mansion has been accomplished.

Opening elements: The majority of the openings were single, double or third, which are high to promote the visual privacy for the spaces using, specifically on the main north elevation that faces the street directly, also some wooden covers have been utilized above the openings to enhance visual privacy matters.

Fences and boundaries: The mansion was surrounded by garden to enhance the visual privacy matters, but later from both side various buildings and rooms have been annexed and the streets that faced the other directions have been expanded, Although the garden demolished gradually, the level of visual privacy did not affect by the reasons of other parameters (Figure 79).

3.5.3.2 Height and Orientation

Height of the building: The height is almost three level which enhanced to have ground floor for semi-public functions and lead to set the residential zone at a high level for promoting proper visual privacy degree.

Opening location: Commonly there are sorts of openings on the whole elevations but in the first-floor level or the second one, as the height and the surrounding environment prevent any kind of visual exposure.

Orienting the dwelling: The mansion usually is not oriented toward the exterior environment or central courtyard, except some restricted high openings toward the

prior garden, in contrast a vaulted hall in the center of each level is directed the opening doors of the rooms, additionally a kind of small iwan oriented toward the prior garden, which is now restricted to be the small backcourt. As well, the third floor oriented toward small in the frontcourt to enhance visual privacy for the user.

Relation with other: Although the mansion oriented toward the exterior garden, the height and the location of openings prevents any kind of visual privacy exposure, the majority of the opening still attain the proper protection of visual privacy due to other parameters, although there are various adjacent buildings in the existed situation.

Treatment of façade: The whole elevations were thick enough to prevent any sight from the exterior passengers, specifically the thick of the walls toward the street direction is more than the other.

Site plan issue: The garden in the site plan surrounded the three side of the building, hence the visual privacy matters have been obtained mainly by this parameter (Figure 80).

3.5.3.3 Spatial Organization

Space segregation: The stairs used to segregate the level of the mansion from the street initially then to separate the functions vertically, as spaces for hosting arranged in the ground floor while the residential zones set on the upper floor.

Space hierarchy: The entrance hall provides a semi-public zone before the semi-private stairs toward the residential zones. In each floor, there are vaulted zones used as semi-private distributors for private rooms.

Distributing functions: The hosting zone for men arranged on the ground floor, while the living, service and some room set in the first floor, then the most private room observed in the second floor.

Annexing zones: Arranging iwan space in the first floor for living purpose and enhancing visual privacy for the remained rooms, as well utilized vaulted zone after the stairs as distributors too (Figure 81 and Figure 82).
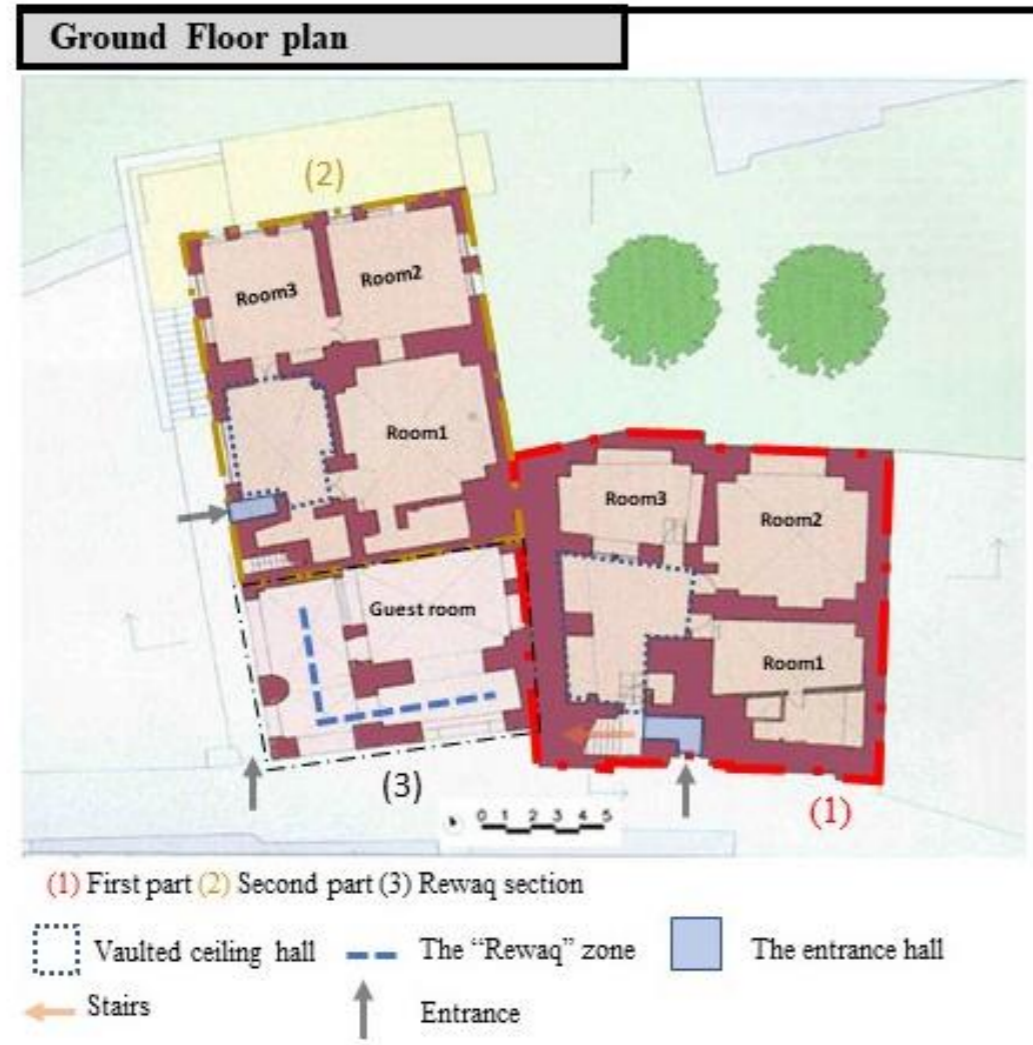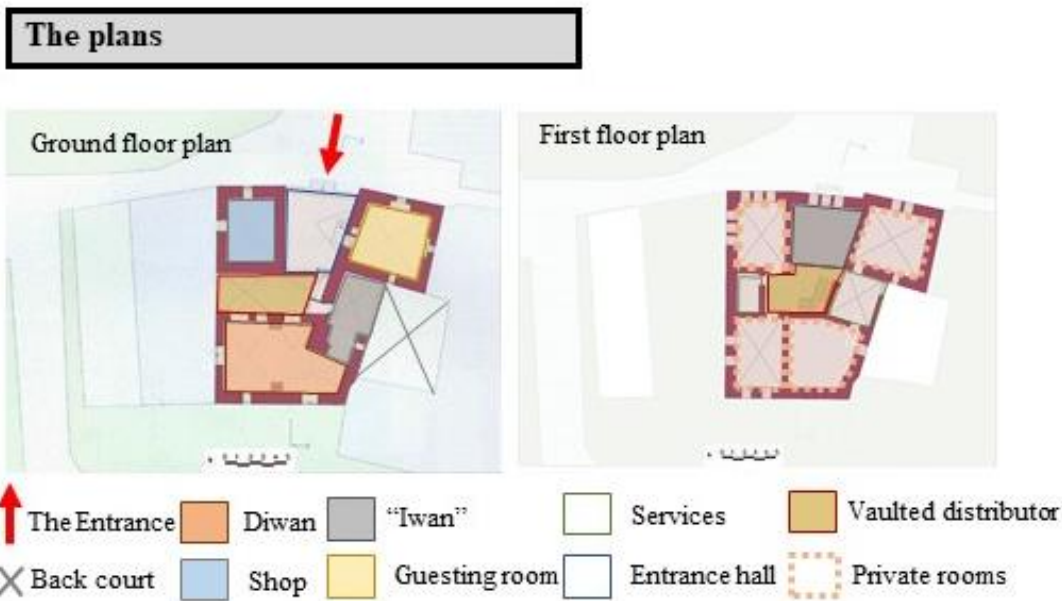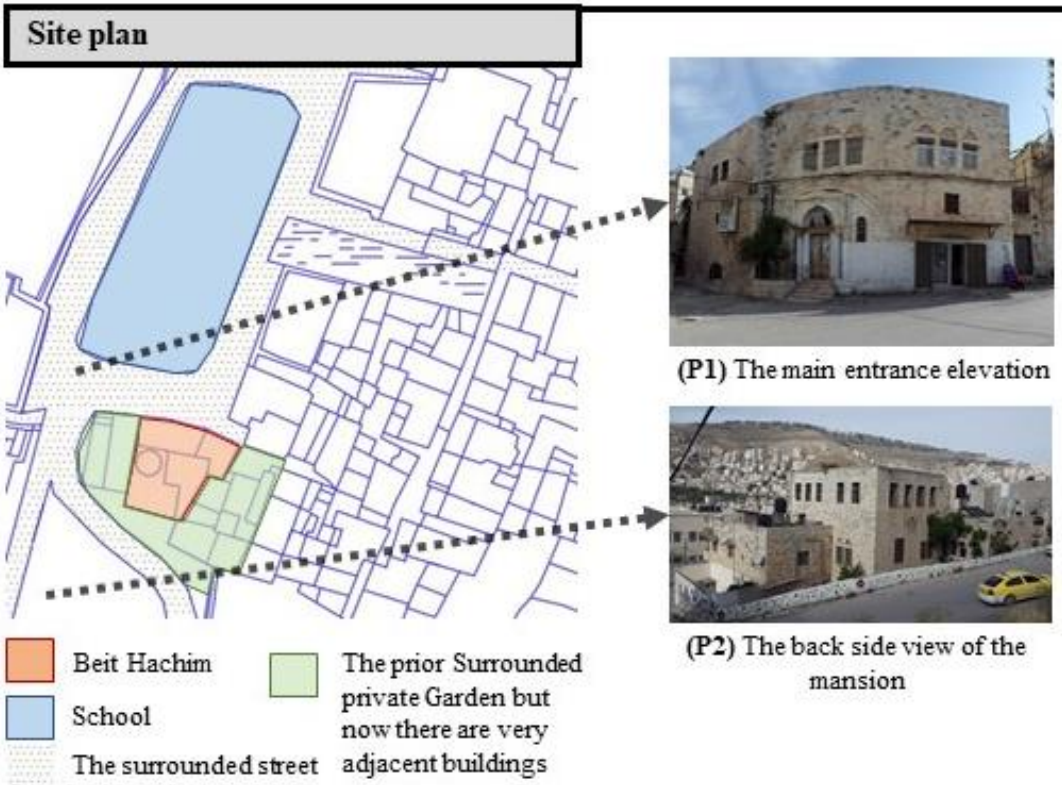
Figure 78: The location and maps with zoning for Abdo mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing pictures and editing drawing by author)

Analyzing the building elements

Ground floor plan

(P1) The main elevation

(P2) Panorama view for the "Diwan" space

↑ The Entrance ☐ Entrance hall ▦ Vaulted distributor ◌ Stairs ⬚ High openings

▦ Diwan ▦ "Iwan" ↕ The height ⬚ Back court ☐ The boundary of the prior garden

First floor plan

A part from a section to represent the court in the second floor

(P3) The courts

Vaulted hall

↖ The back courtyard
↘ The front courtyard

(P4) The south direction

(P5) The west direction

(P6) covering over windows

☐ The adjacent building over the conventional garden zone

Figure 79: Analyzing the building elements category among Abdo mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

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Analyzing the orientation and height

The north elevation

Section across the north and south elevations

Site plan

(P1) A part from the main elevation, the height and thickness prevent any visual exposure

Orienting toward the in front court

Restricted opening toward the exterior environment

The height

Small & low opening

High Opening

The human scale

line of sight couldn't penetrating the house

Indicate toward the thickness of the wall

The surrounded street

The mansion

Adjacent buildings

Remained zones from the prior garden

(P2) opening toward the back court

Figure 80: Analyzing the height and orientation category among Abdo mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

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Analyzing the spatial organization

Spaces segregation

The residential zones

The mansion guesting level

The street level

Spaces hierarchy

Street (public)

Entrance hall (semi-public)

Stairs (semi-private)

Vaulted space (semi-private)

"Diwan" (semi-private)

Residential zones (private)

Private rooms, in front court

Four rooms, services, Iwan, stairs, vaulted space

Residential

Stairs, entrance hall, Diwan, vaulted space, guesting room, small Iwan, back court

Services and guesting

Distributing the functions vertically to attain privacy

Figure 81: Analyzing the spatial organization category among Abdo mansion (Maps from (Rofo, Santelli, & Rochant, 2002), editing by author)

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Visual Privacy in architectural aspect		
Building elements	**Main role in attaining visual privacy**	**Number of figure**
Entrance	One main entrance with vaulted entrance hall and some stairs	(1)
Courtyard	No center courtyard, but in front one in the second level and one back side for services.	(2 & 3)
Spaces	Utlized spacese for living like "diwan" & "Iwan"	(4)
Opening elements	Wooden coverings over high openings	(5)
Boundaries and fences	Formerly garden but now adjacent buildings	(6)
Height and orientation	**Main role in attaining visual privacy**	**Number of figure**
Height of buildings	Around tow or three floors	(7)
Openings location	Located them on high level	(7)
Orienting the dwelling	No wide orienting just restricted openings toward the garden zones	(7)
Relation with other	Fixed the line of sight	(7)
Treatment of façade	Control the thickness of the wall, specifically from the street side	(8)
Site plan issues	Utilized surrounded garden	(6)
Spatial organization	**Main role in attaining visual privacy**	**Number of figure**
Space segregation	Utilized stairs for segregation	(9)
Hierarchy of space	From public street toward private parts of the mansion through entrance hall, vaulted space.	(1 & 10)
Distributing functions	Guesting and service on the ground floor, the residential functions on the first and second floor	(9)
Annexing zones	Utilizing Iwan and vaulted space	(4 & 10)

Figure (1) Figure (2) Figure (3) Figure (4)

Figure (5) Figure (6)

Figure (7) Figure (8)

Figure (9) Figure (10)

Figure 82: Main architectural aspects among Abdo mansion- in achieving visual privacy (Created by author)

3.5.4 Al-Masri Mansion

This mansion consisted from various residential units, which have been arranged around several sizes of courtyards. It was erected in the edge of Al-Aqaba neighborhood, at the end of the boundaries of the old town. Although the main entrance was adjacent directly toward a small buffer zone near the street, the considerations of visual privacy aspects have been attained deeply. Commonly, this building has been established in U shape, which was built around a central void consisting of a first courtyard with an iwan distribution in the ground floor, and other two courtyards on the first floor (Rofo, Santelli, & Rochant, 2002). While the facades of the mansion which overlooking the street and near neighbors are closed and relatively large, unlike the open interiors facades toward the courtyards. However, specifically, the visual privacy matters have been achieved through this mansion by various parameters (Figure 83).

3.5.4.1 Building Elements

Entrances: The mansion locating in the edge of the old city, the hall for the main entrance toward the ground floor was small and open directly to semi-private courtyard, while the entrance for the upper residential parts has been raised from the street level through stairs then long twisted two stairs paths lead you to each separate part. To enhance visual privacy, the hosting section in the ground floor was connected with another small entrance with some stairs from the other behind small street around the mansion.

Courtyards: In this mansion the utilizing of courts contributed significantly to the realization of visual privacy; in the ground floor the entrance opened toward the main courtyard which is lead to distribute the various functions, moreover in the first floor

each stair of the two parts has been directed toward courtyard too, these courts are utilized to distribute rooms and services around it too.

Various spaces: In each part opened iwan space has been erected toward the courtyard, to be used as living space with full visual privacy protection.

Openings elements: The types of the openings in the facades are usually single or double window on a high level, with some small openings parallel to the street level.

Fences and boundaries: The facade of the mansion composed the boundaries, they were almost blanked and high in comparison to the street and path scale (Figure 84).

3.5.4.2 Height and Orientation

Height of the building: The height of the mansion is around two floors in U shape around the courtyard, so any strange sight could not reveal the interior environment.

Openings location: Through the façade of this mansion the location of the wide openings was toward the courtyards while toward the street they were restricted and high in the upper floor, whereas small ones have been arranged in the level of the street when it possible, as the elevations were commonly blanked in the human-scale level.

Orienting of the dwelling: The mansion was oriented toward the courtyard to achieve visual privacy Significantly, with some orienting toward the opened environment in the case of the far rooms from courtyards.

Relation with other: For the purpose of acquiring visual privacy, the line of sight of the passengers on the surrounded street and path has been considered, hence the facades from the three directions were almost blanked through human level, while for the remain elevation the adjacent neighbors lead to restricting the openings for high level of visual privacy.

Treatment of the façade: Commonly the thickness of the elevation was almost wide from all direction to enhance visual privacy within the openings, the elevations toward the street are almost blanked (Figure 85).

3.5.4.3 Spatial Organization

Space segregation: Mainly in this mansion the stairs used in the segregation process to complete the privacy of each part of the dwelling or between the building and the exterior public street, also the courtyard zone has been utilized to segregate between part. Moreover, a separation between functions vertically has been contributed to attaining a high degree of visual privacy.

Space hierarchy: The stairs utilized to promote zones for progression in privacy from the street level until private rooms. Moreover, due to dividing the mansion into various residential parts the hierarchy in spaces to acquire visual privacy for each region has been observed by courtyards, stairs, vaulted paths.

Distributing functions: This parameter is one of the main aspects that lead to classifying the functions in progression way; the hosting zones were adjacent to the main elevation that faced the street while other residential parts arranged in the far parts or upstairs, to emphasize the main elevation of the mansion border the circulation

stairs and guest zones to promote high level of visual privacy for the other private rooms.

Annexing zones: Different size of iwan spaces have been arranged to enhance achieving visual privacy in this mansion, these spaces in each part in front of the courtyard used as a living space and distributors in some cases for other rooms. Additionally, arranged vaulted path on the ground floor to separate between hosting and residential parts (Figure 86 and Figure 87).

Ultimately, several methods in arranging several architectural parameters have been detected in this historical mansion, although the current situation of it nowadays not too much like the original mansion as various random addition have been appended to this place from the existed inhabitants whose are not the original owners. In contrast, to extract the valuable architectural consideration for achieving visual privacy you must examine the place without them.

Site plan

School zone · The mansion boundary
The surrounded street · Buffer zone

(P1) The north elevation

(P2) The main entrance elevation

The plans

Ground floor plan · First floor plan

Residential part 1 · Residential part 2 · Residential part 3

Guesting part

"Iwan" · Vaulted path · Guesting entrance · Main entrance

Shots for the elevation

(P3) The south elevation · (P4) The west elevation · (P5) The adjacent path of the south side

Figure 83: The location and maps with zoning for Al-Masri mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing pictures and editing drawing by author)

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Analyzing the building elements

Ground floor plan

Buffer area between mansion and street
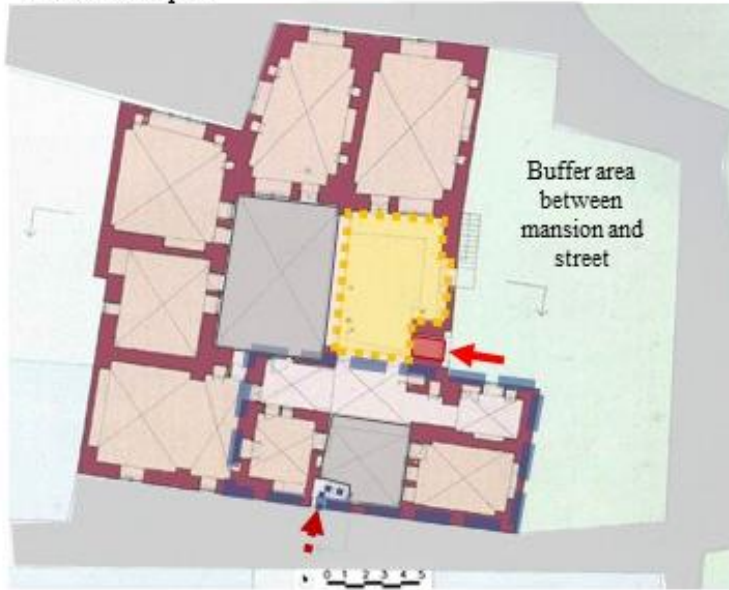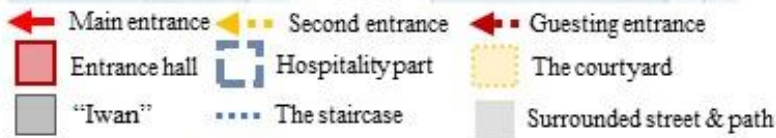
(P1) The two entrances in the main elevation

(P2) The entrance for the guesting zone

First floor plan

(P3) Openings on a Part from the main elevation

→ Main entrance ◄··· Second entrance ◄·· Guesting entrance
▢ Entrance hall ▢ Hospitality part ▢ The courtyard
▢ "Iwan" ···· The staircase ▢ Surrounded street & path

(P4) Openings on a part from the north elevation

(P5)   (P6)

▢ Restricted high opening

▢ Small low opening

(P5 & 6) The elevation of the mansion represent its boundaries

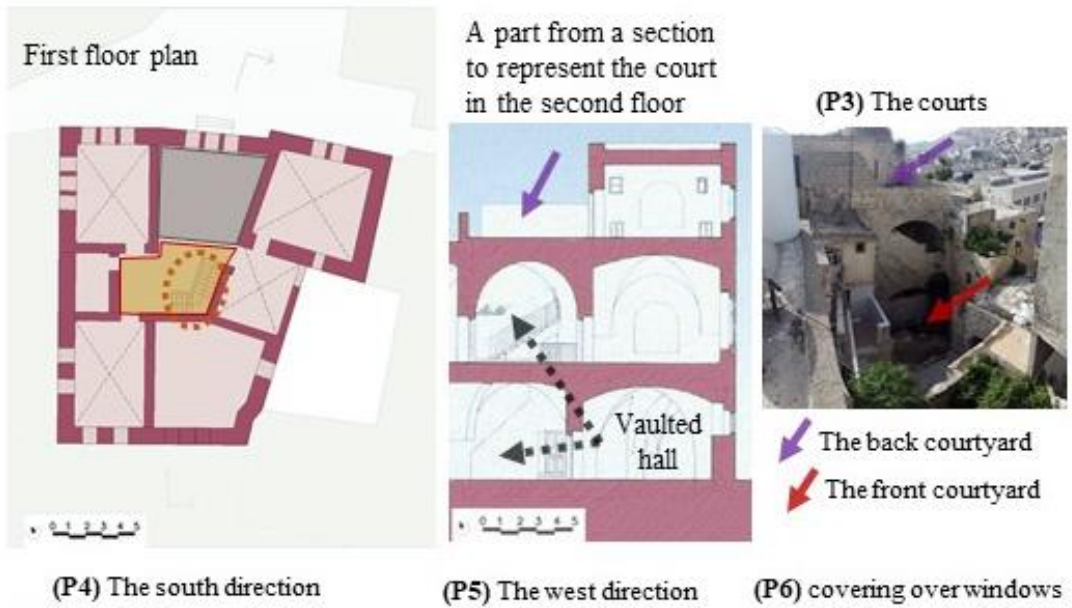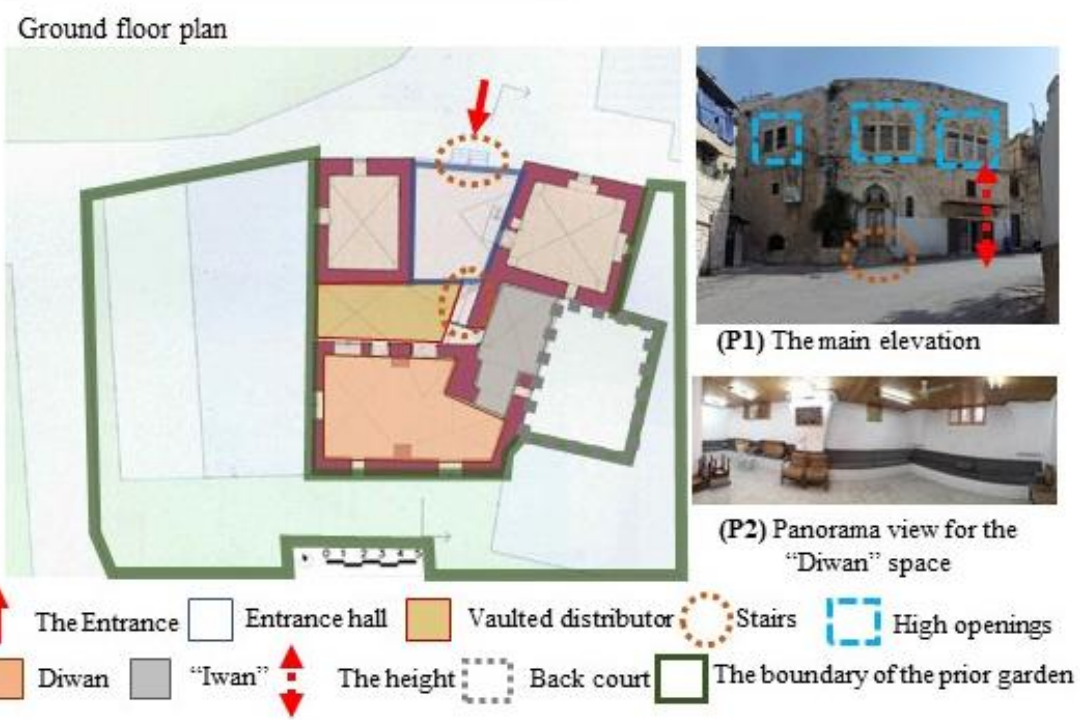Figure 84: Analyzing the building elements category among Al-Masri mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

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Analyzing the height and orientation

1- Section cross the east and west elevation
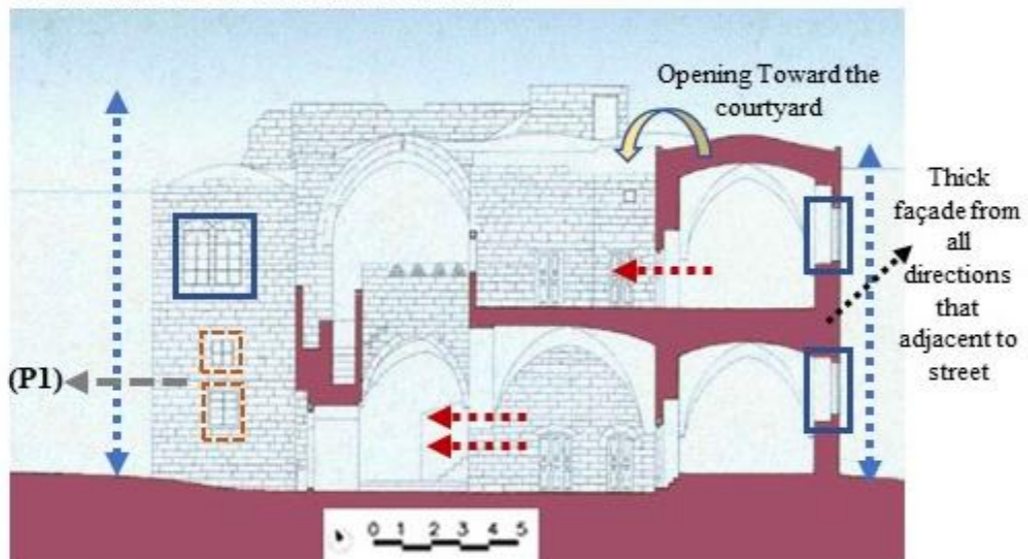
Opening Toward the courtyard

Thick façade from all directions that adjacent to street

(P1)

2- Section across the north and south elevation

Opening Toward the courtyard

(P3)

Thick façade from all directions that adjacent to street

0 1 2 3 4 5
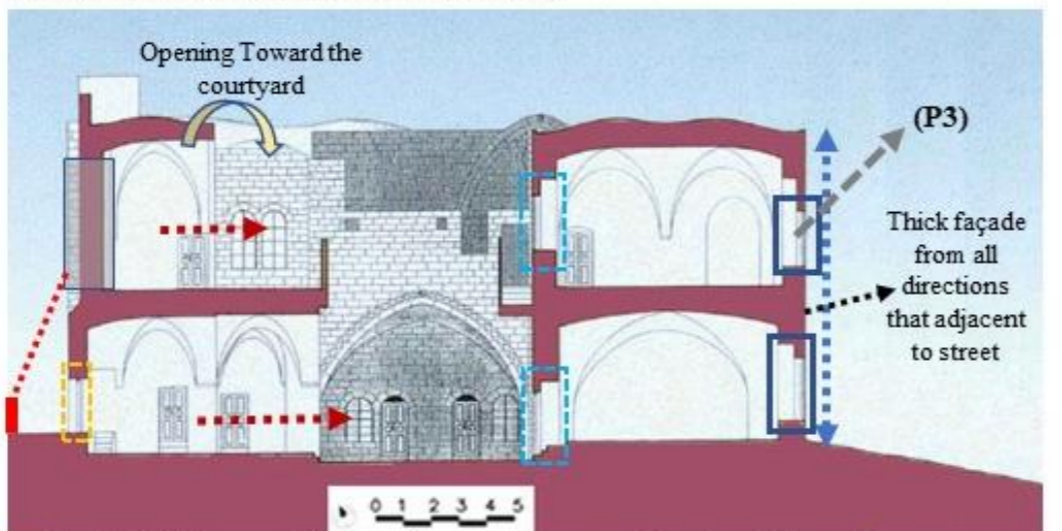
☐ Restricted high opening
☐ Wide openings toward the courtyard
◄·· Orienting the Iwan toward the courtyard
↕ The height

☐ Small low opening
☐ Doors
▨ Closed facade
┆ The line of sight
▌ The human scale

Various shots

(P1): The location of the opening inside the mansion

(P2): The location of the opening among the ground floor in the mansion

(P3): The shape of the opening from the inside

(P4 & 5): The exterior shape smaller than the inside opening to attain visual privacy

(P6): The opening of the Iwan toward the courtyard

(P6): The orientation toward the courtyard through Iwan opening
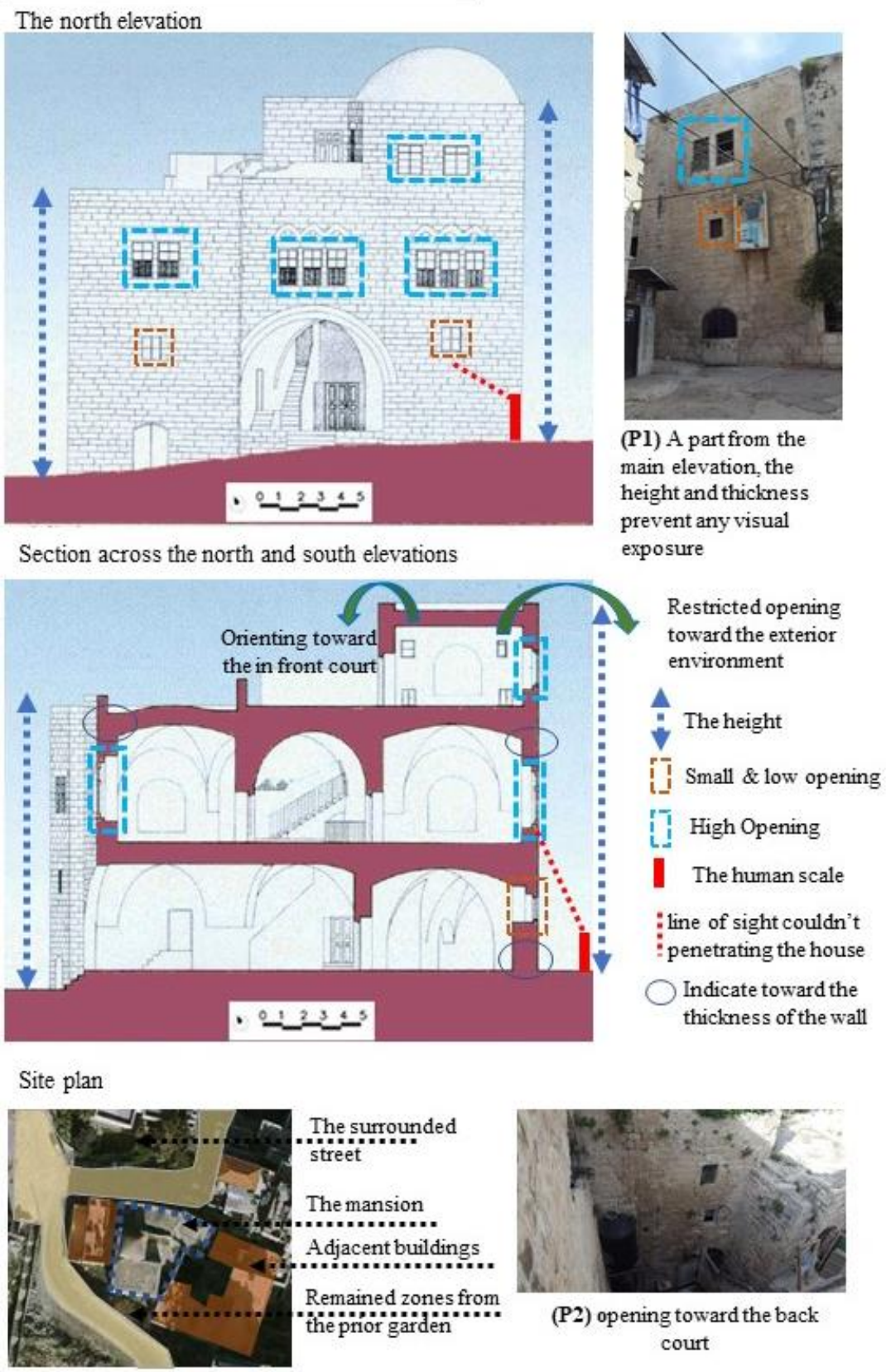
Various shots for elevation
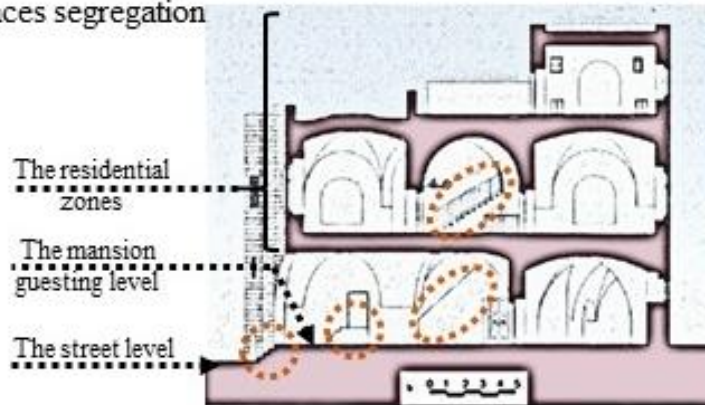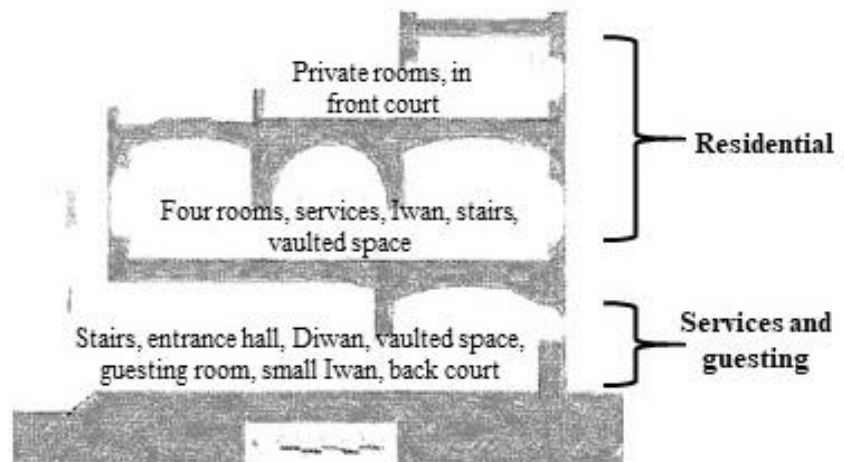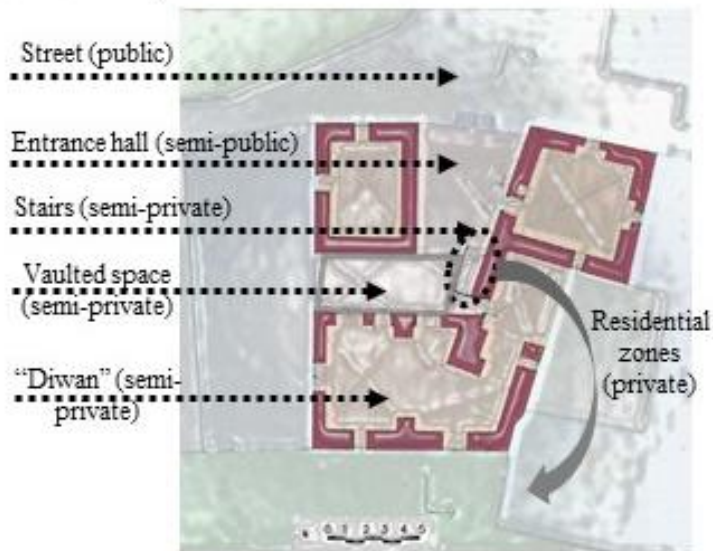
(P1) (P1) (P1) (P1)

Figure 85: Analyzing the height and orientation category among Al-Masri mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

Analyzing the spatial organization

Spaces segregation

Utilizing the courtyards to separate between parts

Employ stairs to segregated between street level and residential zones

Spaces hierarchy

Vaulted path (between court and rooms)

Guesting rooms (private)

Stairs (semi-private)

Small Entrance hall (semi-public)

Path (public)

Rooms (private)

Courtyard (semi-private)

Entrance hall (semi-public)

Buffer zone (public)

The street (public)

Courtyard, iwan, rooms, services

Stairs for connections

Small Entrance hall, stairs, guest rooms, services, vaulted path

Courtyard, iwan, rooms, services

Courtyard, iwan, rooms, services

Residential

Services and guesting beside residential part on the back

Distributing the functions vertically to attain privacy

Figure 86: Analyzing the spatial organization category among Al-Masri mansion
(Maps from (Rofo, Santelli, & Rochant, 2002), editing by author)

Visual Privacy in architectural aspect

Building elements	Main role in attaining visual privacy	Number of figure
Entrance	First one contain small hall Second and third one set after stairs	(1)
Courtyard	There three courts for each part	(2)
Spaces	Utilized spaces for living like "Iwan" beside vaulted path	(3)
Opening elements	Single or double windows on high level beside small on low level	(4)
Boundaries and fences	The elevations of the mansion are the boundaries	(5)
Height and orientation	**Main role in attaining visual privacy**	**Number of figure**
Height of buildings	Around two floors	(7)
Openings location	Located the wide type toward the courtyards or Iwan, restricted ones on high level beside small one in the ground level	(7 & 9)
Orienting the dwelling	Toward the courtyards beside some orienting toward the opened environment	(7 & 8)
Relation with other	Fixed the opening toward street and path by regulating the line of sight of passengers, prevent any opening toward the neighbors	(8)
Treatment of façade	Control the thickness of the wall from all direction,	(7)
Spatial organization	**Main role in attaining visual privacy**	**Number of figure**
Space segregation	Utilized stairs for segregation beside courtyards between the parts	(1 & 2 &10)
Hierarchy of space	From public street toward private parts of the mansion through entrance hall, stairs and vaulted space.	(11)
Distributing functions	Guesting, services and residential part on the ground floor beside other residential parts on the first floor	(11)
Annexing zones	Utilizing Iwan and vaulted space	(3)

Figure (1)   Figure (2)   Figure (3)

Figure (4)   Figure (5)   Figure (6)

Figure (7)   Figure (8)
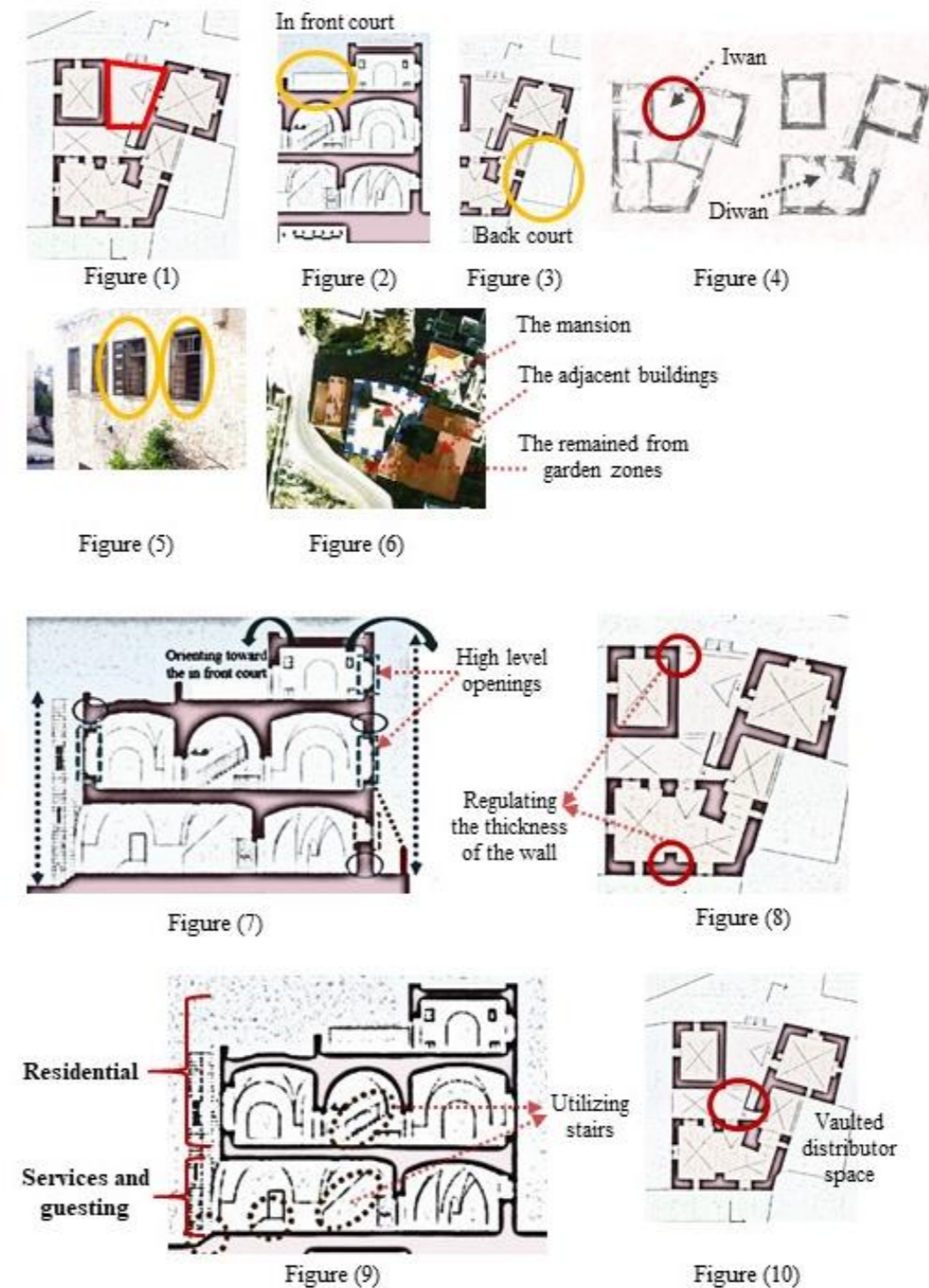
Figure (9)   Figure (10)

Figure (11)

Figure 87: Main architectural aspects among Al-Masri mansion- in achieving visual privacy (Created by author)

3.5.5 Achour Mansion

This mansion is one of the most attractive buildings in the old city, it is located in the eastern side in Al-Yasmeneh neighborhood, opened directly toward Al-Nasser street, the main commercial path in the old city. Commonly the mansion consisted from one main courtyard surrounded by functions among three floors, various rooms and sections that were erected little far from the direct boundaries of the court. The main elevation of it arranged parallel to Al-Nasser street while the opposite one opened toward a semi-private garden, owned by the adjacent mosque to the palace, Al-Khader. Regarding this attractive location, the mansion has been attained the visual privacy matters deeply (Figure 88).

3.5.5.1 Building Elements

Entrances: The main entrance is directly faced Al-Naseer street, so for the purpose of enhancing visual privacy for the mansion inhabitants, twisted rectangular hall with low dome has been applied before reach the main courtyard. Each stair toward the main residential part has been arranged with a small hall and twisted path when it is necessary.

Courtyards: There is one main courtyard has been coordinated in this mansion to arrange various function around it with high level of visual privacy protection. Moreover, on the first floor there is a small courtyard referred for one of the mansion section.

Various spaces: One big iwan has been observed in front of the courtyard in the ground floor. Also, small rewaq path has been erected in the first floor beside the small court there, to promote living or movement spaces which high level of visual privacy. Moreover, there is a qantara room above Al-Nasser street, it looks like configure an

entry for the old city from the west side, that utilized to open the room of it toward the street with a high protection of visual privacy.

Openings elements: There is meshrabiya openings over the south façade in the second floor, which is opened toward the adjacent garden. As well several single, double, or third restricted and high openings' have been observed.

Fences and boundaries: The mansion has been expanded toward the near neighborhoods, as various rooms have been appended for the mansion environment, while the surrounded building fabric represented the boundaries of this mansion from the opposite directions beside the street level and the semi-private garden from the other ones (Figure 89).

3.5.5.2 Height and Orientation

Height of the building: The mansion is about three floors that surrounded the main courtyards from all direction to enhance visual privacy for the user and prevent any strange sight toward the inner environment as there is a mountainous terrain in the adjacent region.

Openings location: There are abundant openings toward the otter environment due to the location, however they were arranged in a high level never opposite any near openings and usually directed toward the semi-private garden or the street in a proper way, besides that the majority of the openings were toward the courtyards inside the mansion to enhance visual privacy considerations.

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Orienting of the dwelling: Precisely, the mansion has been directed toward the inner courtyards by wide openings, likewise some orienting between the first and second floor toward the adjacent street or garden within restricted openings.

Relations with other: The adjacent public street affected the design of the mansion to be oriented inwardly, with high attention toward the line of sight of the passengers in that street, some restricted openings on the upper level had observed, where nobody could penetrate their inner spaces, depending on various parameters too.

Treatment of façade: from the street direction the façade almost was blanked with thick walls if there is any need for specific openings, while toward the adjacent garden the thickness of the wall has been regulated to prevent any sight from the users there (Figure 90).

3.5.5.3 Spatial Organization

Space segregation: The function of spaces is utilized as a regulator in the segregation process, to promote a high level of visual privacy the spaces. Parts of the mansion have been classified and segregated stairs and floors mainly, through the fundamental courtyard and the high iwan space, which have been arranged the several functions of the mansion. Hence it has been observed that the living and gusting sections are set on the ground floor while the residential parts set in the upper floor.

Space hierarchy: The progression of privacy has been detected from the public street to the private residential rooms, within arranging semi-public entrance halls and semi-private courtyard and stairs on the ground floor.

Distributing function: Commonly to achieve a high degree of visual privacy the semi-public or private functions like guests' zones and services have been arranged among the ground floor plan, while the other residential and living sections have been distributed on various parts on the upper first and second floors.

Annexing zones: Huge iwan space have been erected in the ground floor opened toward the main courtyard while on the first-floor small rewaq path has been established and opened toward a small courtyard for one residential part there (Figure 91).

Ultimately, this valuable mansion consisted of several physical parameters that acquiring visual privacy matters for its inhabitant. Although the current situation not too much similar to the original one, but due to restoration operations that have been conducted on it, the original mansion had not been modified by random changing on its specific spaces like courtyard or iwan (Figure 92).

Site plan

(P1) The mosque and the qantara of the mansion

(P2) The south side of the mansion

The mansion boundary — Al Nasser Street
Semi-private Garden — Al-Khadeer Mosque
The surrounded street — The old city entrance

The plans

Ground floor plan

First floor plan

Residential part 1

Residential part 2

The Entrance   "Iwan"   Services

Shots for the elevation

(P3) The main elevation from the street

(P4) Qantara from the old city entrance

(P5) The south elevation from the garden

(P6) The north and qantra elevation from the street

Figure 88: The location and maps with zoning for Achour mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing pictures and editing drawing by author)

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Analyzing the building elements

Ground floor plan

Main entrance (P1)

(P2)

(P5)

Rue Al Nasr

Mosquée Al Khadr
مسجد الخضر

0 1 2 3 4 5

First floor plan

(P3 & 4)

0 1 2 3 4 5

■ Entrance hall   ⬤ Stairs   ⬤ Meshrabiya opening location
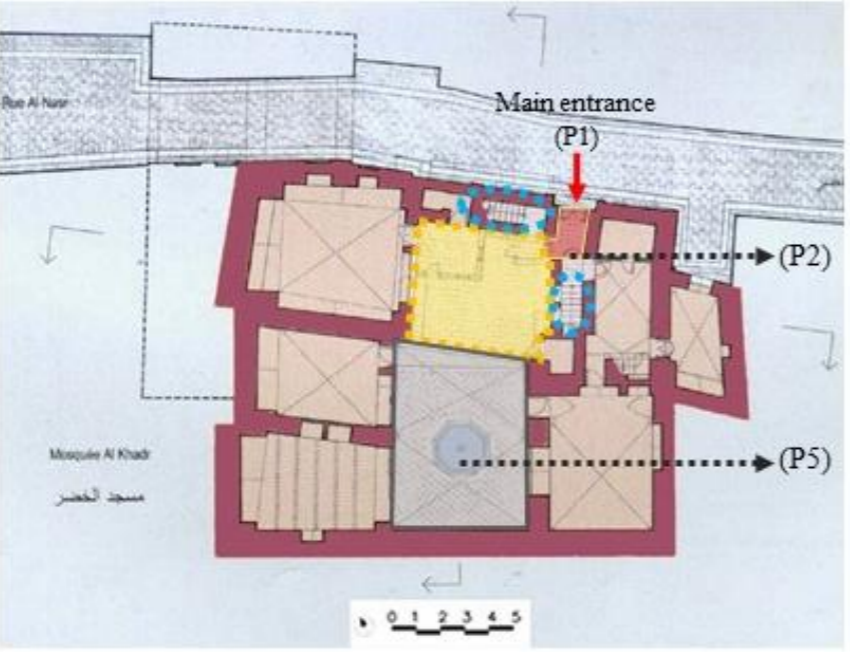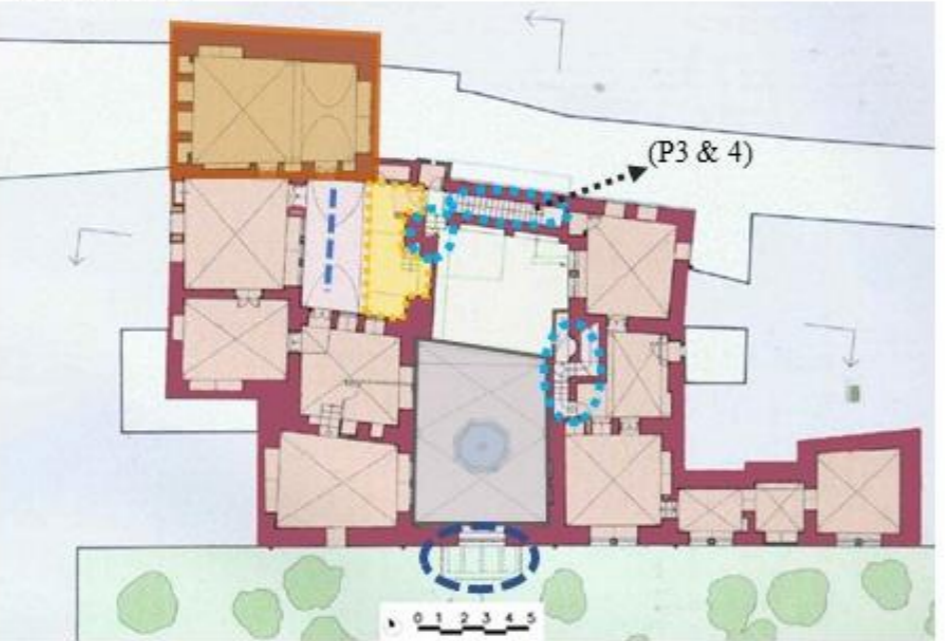
■ The courtyard   ■ "Iwan"

- - The "Rewaq" zone   ■ Qantara room

(P1): Twisted entrance hall from the street

(P2): Stairs toward upper floor

(P3 & 4): long stairs for the first floor

Two floors level height

Very high opening

(P5): Preserve visual privacy of Iwan space

□ Small low opening   □ Restricted high opening   → Main entrance

(P6) The type of openings among the main façade

(P7) The type of openings among the south façade

(P8) locate the entrance and the type of openings in the main façade

(P11)

(P10)

□ Mansion boundary

▨ Adjacent garden

(P9) The boundary of the mansion

(P10) The building elevation toward the eastern nighbors
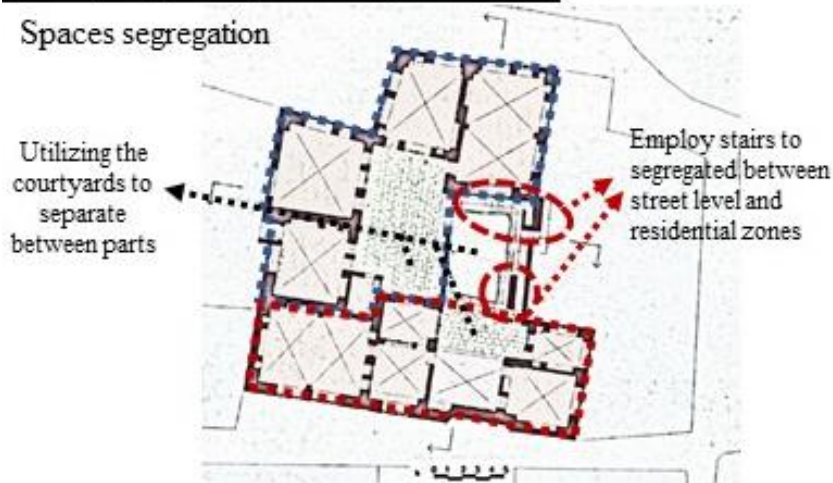
(P11) The building elevation toward the mosque side

Figure 89: Analyzing the building elements category among Achour mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

Section across the north and south elevation

Restricted openings toward the garden

Orienting toward the court
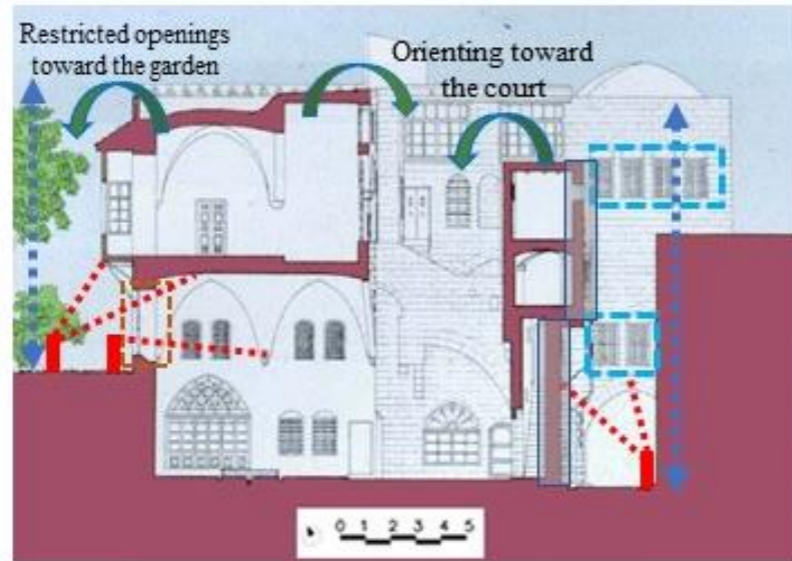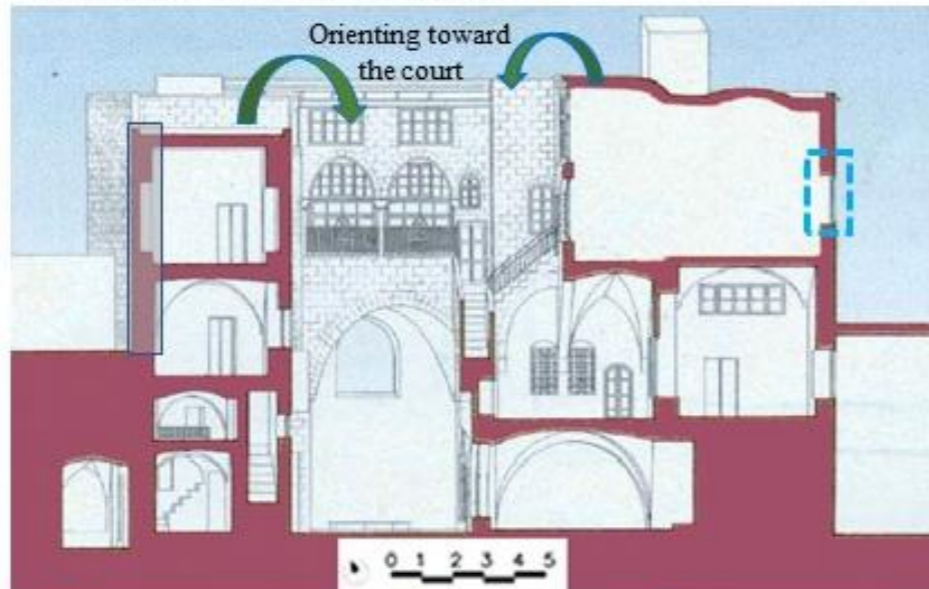
(P1) The exterior façade (north & east) toward the neighbors, street or adjacent building.

(P2) The details of one small openings toward the street (represent the thickness of the façade)

(P3) The tow sides of Qantara (part of east and west elevation)

Section cross the east and west elevation

Orienting toward the court

(P4) Blanked façade toward the street from outside (part of north elevation)

(P5) Blanked façade toward the street in the inner courtyard

(P6) Iwan opening toward the courtyard

(P7) wide opening toward the Iwan

(P8) High opening in the Iwan

☐ High opening   ☐ Closed facade   ┊ The line of sight

☐ Low & Small opening   ↕ The height   ▮ The human scale

(P9) Various openings toward the courtyard
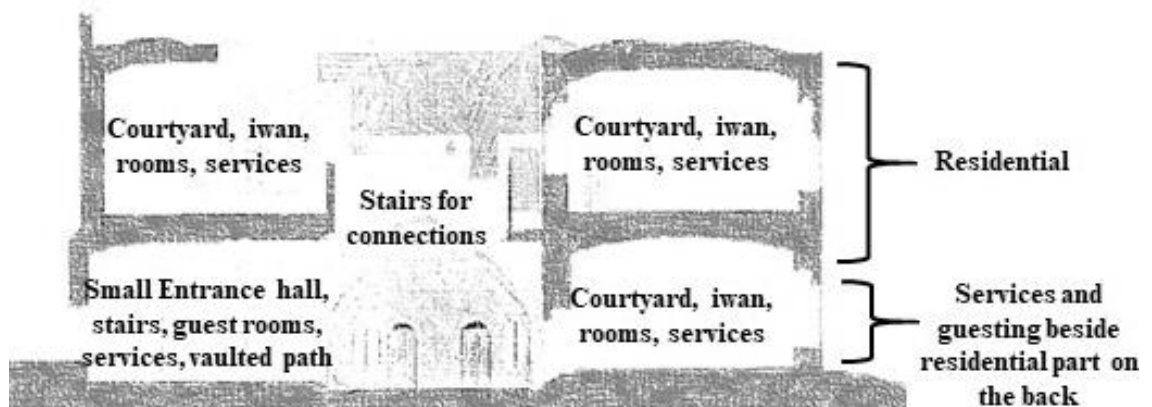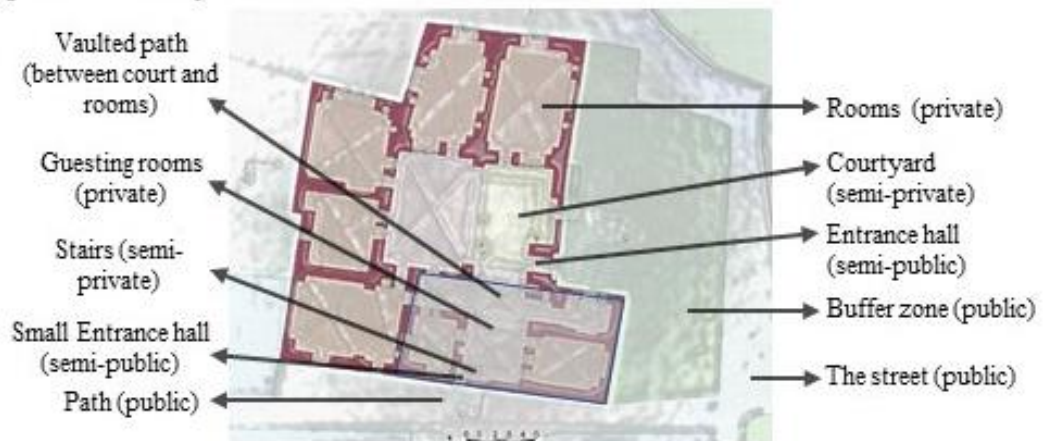
(P10) Wide openings toward the courtyard

Figure 90: Analyzing the height and orientation category among Achour mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

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Spaces segregation

Utilizing the courtyards to separate between parts

Hiegh Iwan separate between parts

Employ stairs to segregated between street level and residential zones

Spaces hierarchy

The street (public)

Entrance hall (semi-public)

Courtyard (semi-private)

services (private)

Iwan (private)

Distributing the functions vertically to attain privacy

Stairs for connections

Small courtyard, rewaq, rooms, services, qantra

Residential

Small Entrance hall, guest rooms, services, beside residential part on the back

Services and guesting beside residential part on the back

Courtyard, iwan,
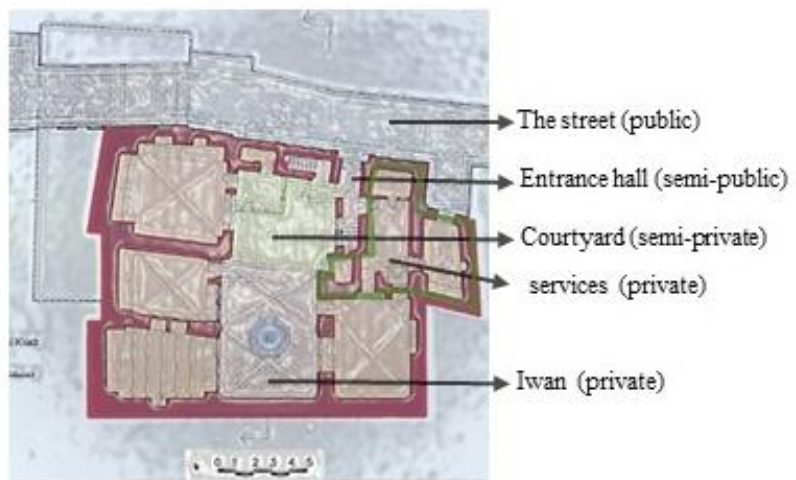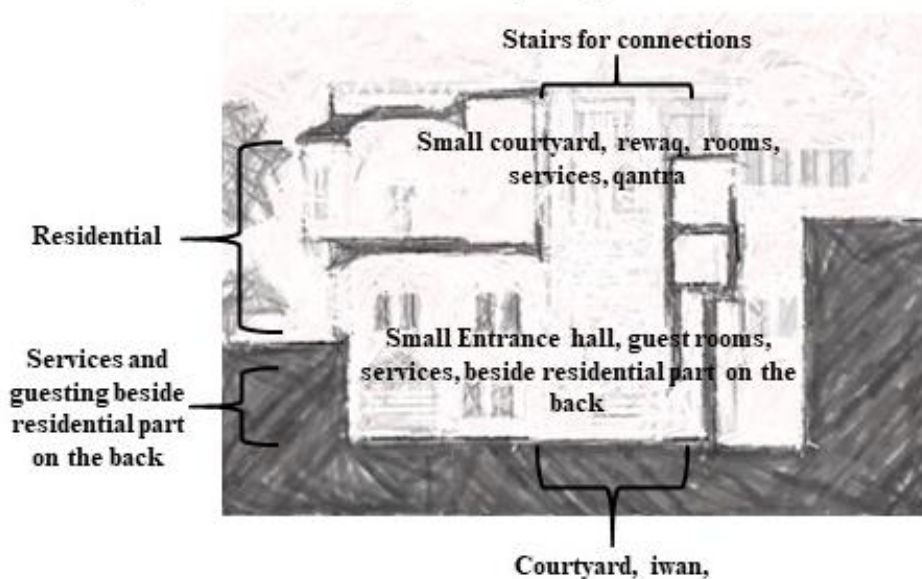
Figure 91: Analyzing the spatial organization category among Achour mansion (Maps from (Rofo, Santelli, & Rochant, 2002), editing drawings by author)

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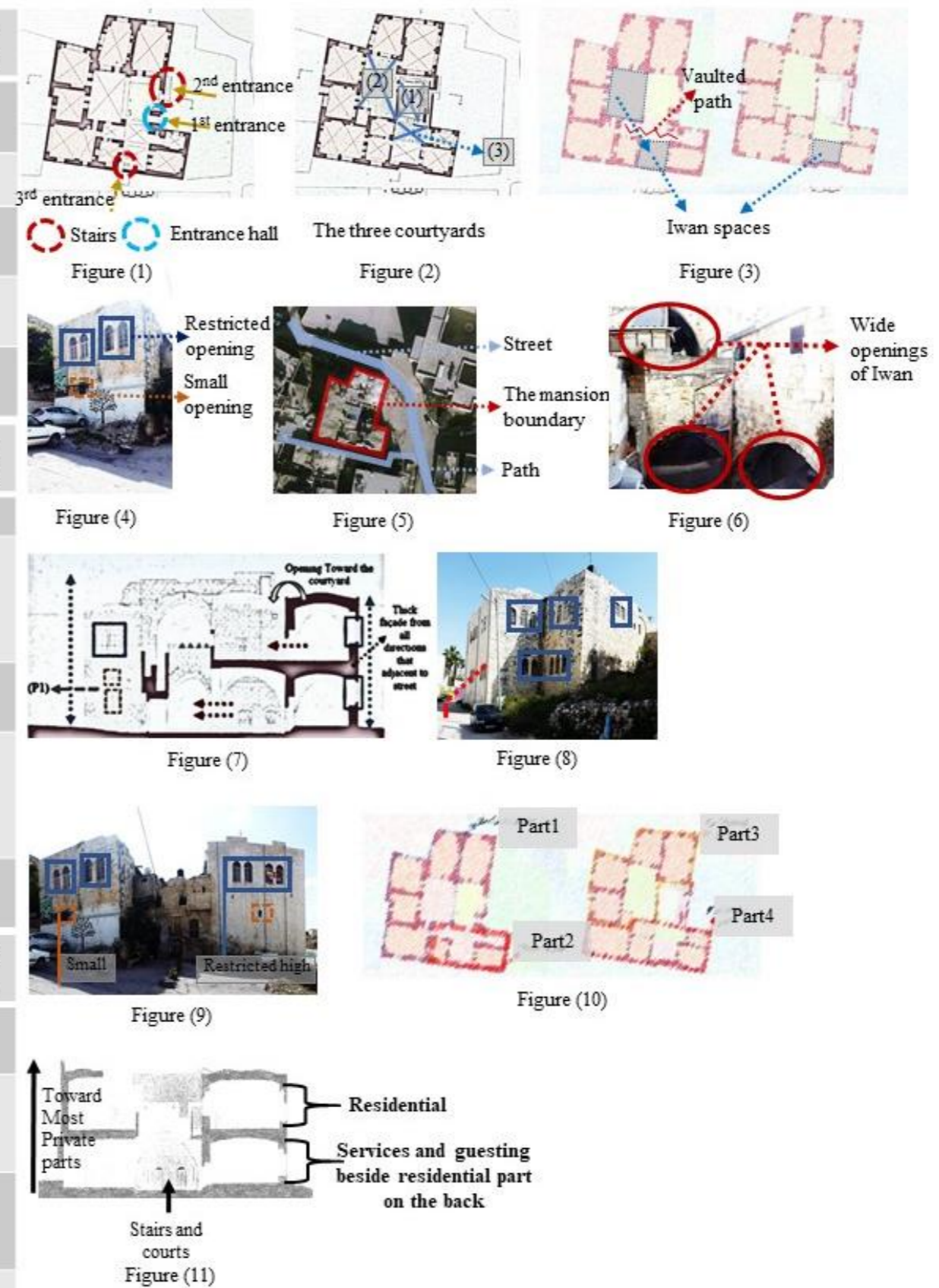| Visual Privacy in architectural aspect		
Building elements	**Main role in attaining visual privacy**	**Number of figure**
Entrance	Twisted small entrance hall Eash part has a long indirect stairs toward it	(1)
Courtyard	Main courtyard beside small one in the first floor	(2)
Spaces	Utilized spaces for living like "Iwan", rewaq, qantra	(3)
Opening elements	Single or double windows on high level beside small on low level and meshrabiya opening	(4)
Boundaries and fences	The elevations of the mansion are the boundaries beside semi-private garden	(5)
Height and orientation	**Main role in attaining visual privacy**	**Number of figure**
Height of buildings	Around three floors	(8)
Openings location	Located the wide type toward the courtyards or Iwan, restricted ones on high level beside small one in the ground level	(9)
Orienting the dwelling	Toward the courtyards beside some orienting toward the adjacent garden	(8)
Relation with other	Blanked façade toward the street, regulate the line of sight in qantra opening or the garden side.	(8)
Treatment of façade	Control the thickness of the wall from street and neighbors side	(8 & 9)
Spatial organization	**Main role in attaining visual privacy**	**Number of figure**
Space segregation	Utilized courtyard mainly beside stairs and Iwan space for segregation	(3&4&5 &12)
Hierarchy of space	From public street toward private parts of the mansion through entrance hall, courtyards, stairs.	(10 & 11& 12)
Distributing functions	Guesting, services and residential part on the ground floor beside other residential parts on upper levels.	(12)
Annexing zones	Utilizing Qantara, Iwan and rewaq	(3&5&4 &12)
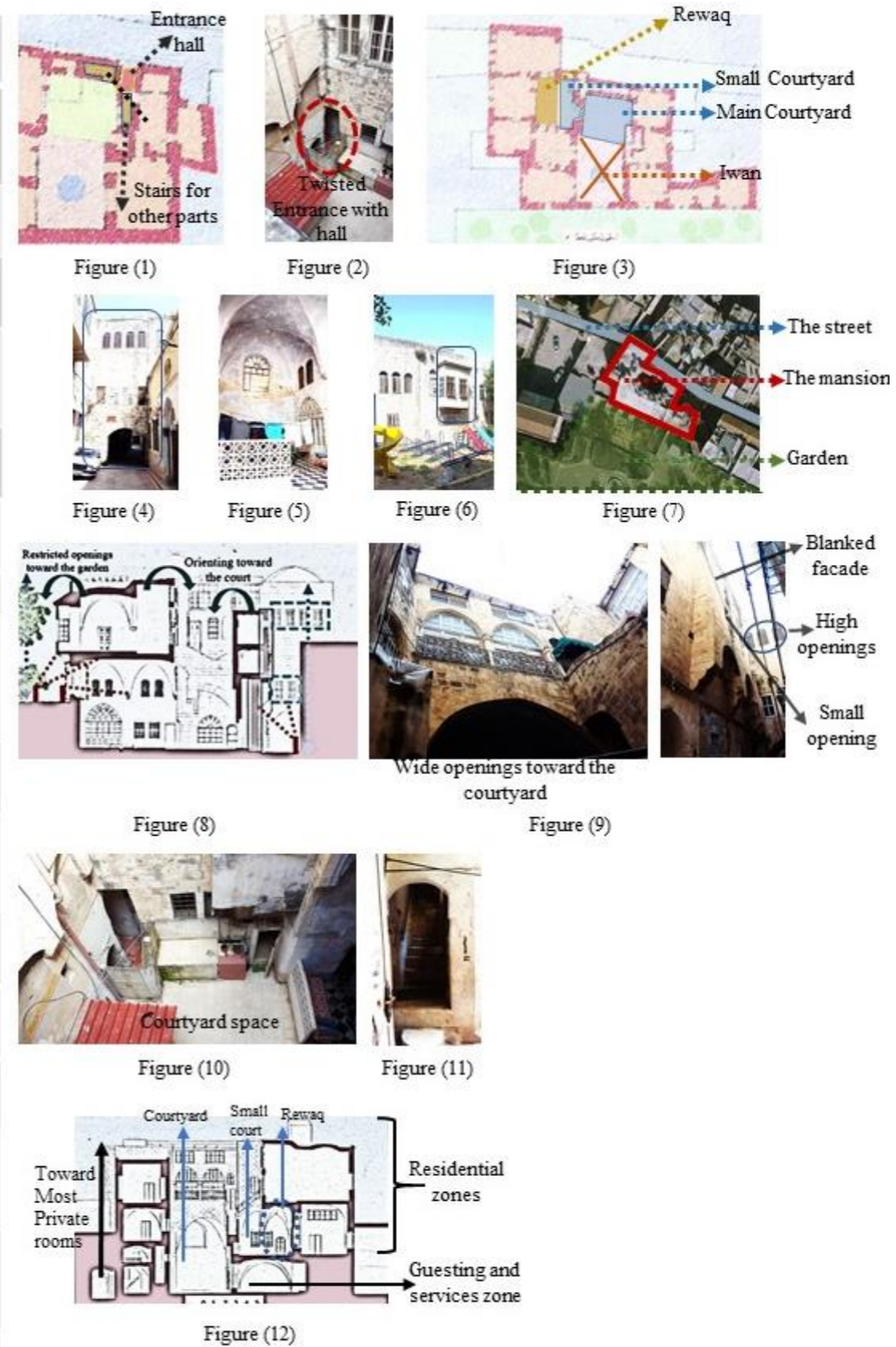
Figure 92: Main architectural aspects among Achour mansion- in achieving visual privacy (Created by author)

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3.5.6 Nabulsi Mansion

This mansion has been erected in Al-qaryoun neighborhood, beside Toqan palace, the main entrance has been directed toward Al-Baik street there. Commonly, the size of the mansion increased over time, from west to east and from the bottom to top, from the depth of its ground level which connected directly to the adjacent street. The organization of the mansion, therefore, has a large contrast between its old part which has been built around a large courtyard over two levels, and between its much later part, that located in the second floor and composed from a crusader iwan with four rooms in its corners. Toward the entire southern side, there is a wide entrance that ends with a staircase that allows you to ascend the floors. On another hand, the mansion represents sort of unity and harmony in spite of the diversity of the building ages. Specifically, the visual privacy matters and degree have been perceived through various parameters there. (Figure 93).

3.5.6.1 Building Elements

Entrances: The degree of privacy and visual attitudes have been perceived substantially through the main long-vaulted hall which connects the courtyard and other parts of the mansion with the main entrance door toward Al-Baik street. In addition to that from this hall, there is one separate twisted stair from the courtyard entrance that leads to the upper section of the mansion with a high level of visual privacy matters. While in the upper floor each section has existed after a small entrance hall or distributor zone and separate twisted stairs.

Courtyards: Through the ancient section the functions have been arranged around the main courtyard to enhance visual privacy aspects of the inhabitants, this space leads to provide privacy for the mansion.

Various spaces: The latest part on the upper floor has been erected mainly around mediate crusader iwan with various rooms and spaces around it, hence the living spaces on that parts have been utilized with full visual privacy considerations.

Openings elements: The openings in the exterior elevation were almost single or double and high, besides wide ones toward the courtyard or toward the inner halls or paths.

Fences and boundaries: The façade of the mansion beside neighbors, so the building fabric is formed the boundaries of this mansion commonly (Figure 94).

3.5.6.2 Height and Orientation

Height of the building: The whole height of this mansion diverse between two or three floors, they have been extended toward all the directions. This height promotes the preservation of the visual privacy matters of the inhabitants, to emphasize the surrounded building fabric decrease the intensity of this height to be around one or two floors in some parts, so the visual privacy for the neighbors preserved.

Openings location: The majority of the openings in this mansion have been observed toward the courtyard and the four elevation of the last floor, as the mansion has been adjoined the Tokan palace from one side, and other simple vaulted houses opened toward small path, where the sight from these openings could not exceed the domed roof of these neighbors' buildings or the palace private garden, hence the location of these windows preserve visual privacy for the users.

Orienting of the dwelling: The antique section of the mansion has been oriented principally toward the private courtyard, while the posterior parts on the upper floors have been directed toward the exterior environment in some elevations, however, the height and location of the mansion preserved the visual privacy of the inhabitants and surrounded neighbors.

Relations with other: The adjacent public street affected the design of the mansion façade toward it, to enhance visual privacy it was neglected from openings except for some small and high ones when it is necessary, also the various upper parts the relation with other surrounded neighbors have been adjusted through regulating the line of sight from the mansion openings, all of those opening were directed toward the palace garden or the doomed roofs on other side, to preserve visual privacy between the mansion and neighbors,.

Treatment of façade: Among the oldest section, the thickness of the façade has been adjusted to be wider than other directions, specifically in the main elevation that faces the street and the surrounded ones toward the small path. While the majority of the mansions' elevations were almost blanked in the lower levels and opened toward the courtyard, similar occurred in the first floor of the upper parts, they were almost blanked especially when they faced private neighbors' zones, in contrast, they were contained several high openings toward the closed roofs of the adjacent buildings or the garden of the near palace in the last floor (Figure 95).

3.5.6.3 Spatial Organization

Space segregation: Initially, the main entrance has been segregated by some stairs from the street level for more privacy. Then the separation between the two sections of the mansion has been observed through the segregated entrances of each one, the courtyard and stairs. while in each part some stairs, halls or small paths are used to segregate between zones too. Moreover, in each section the segregation according to the function have been observed, to promote a higher degree of visual privacy.

Space hierarchy: The long entrance hall is utilized to promote more level of privacy for the inhabitants, as the mansion is directly adjacent to Al-Baik public street. In addition to that each residential part of the second section has been arranged after some stairs and hall, to enhance more degree of visual protection, vertically the hierarchy of privacy has observed too, through utilizing various stairs and small entrances.

Distributing function: In the ground floor of the first section hosting, living and services zones have been observed while residential private rooms arranged in the upper floor. Similar distribution has been detected in the second section but the guest spaces and distributors have been organized on the first floor then the residential parts classified in a progressive way.

All things considered on the prior analysis emphasize that this mansion has composed diverse parameters to attain visual privacy, although its adjacent to the public street and very closed surrounded neighbors. On another hand, the current condition of this mansion is not too much bad in comparison to other examples, as the inhabitants of it did not annex any stranger addition to its environment. However, although it has been

expanded over years the visual privacy consideration was achieved among all of its

parts (Figure 96 and Figure 97).

Site plan

The mansion boundary — **Al Baik Street**
The garden of Tokan palace ···· **Al Nasser Street**
Tokan palace boundary — **Al Baik Mosque**
The surrounded street

(P1) The mansion from Tokan palace region

(P2) The mansion from the surrounded neighbors

Ground floor plan (1)
Toward the 1ˢᵗ floor of the courtyard part
Toward upper floors and parts
Toward courtyard part

(P3) Shot for east and south elevation

First floor plan (2) (3)
Toward the second floor

(P4) Shot for south elevation

Second floor plan (4) (5)

(P5) Shot for main entrance in the west elevation

(1) courtyard part (2) first floor of courtyard part
(3) Second part (4) first section in the second part
(5) Second section in the second part
↑ The Entrance

Figure 93: The location and maps with zoning for Nabulsi mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing pictures and editing drawing by author)

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Ground floor plan

First floor plan

Second floor plan

(P1): The main entrance and the surrounded path entry

(P2): The main entrance hall for the mansion

Guesting room entrance

(P3): The courtyard of the mansion

(P4): Openings over the south elevation

(P5 & 6): Openings toward the courtyard

(P7): The boundaries of the mansion

Tokan palace and its garden

The closed building fabric
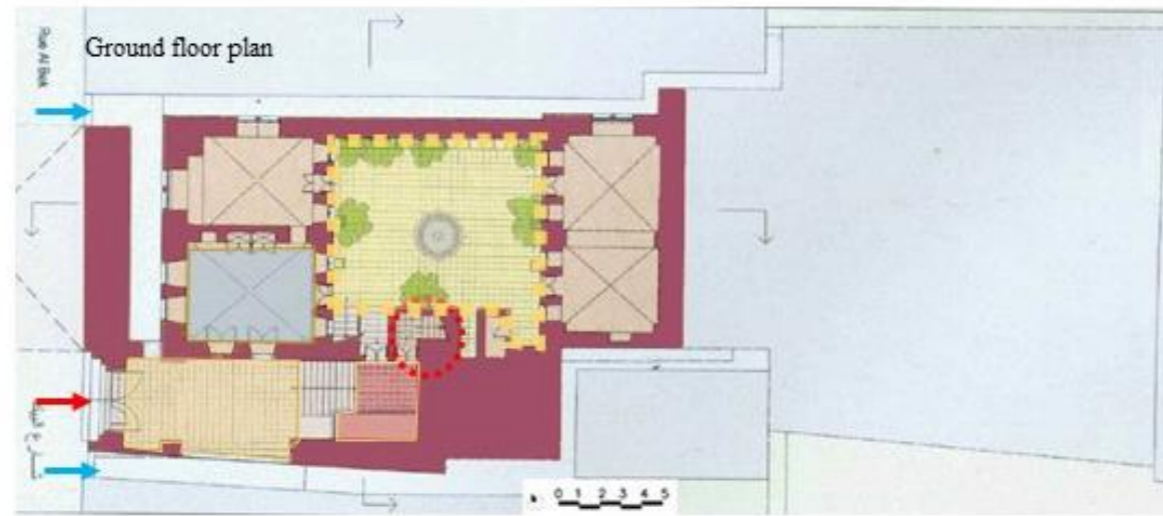
Entrance hall   Distributor zone   The staircase   The courtyard   "Iwan"

Toward surrounded path   Main entrance   Guesting room

Wide openings related to path or halls   High opening   Wide openings toward the courtyard

Figure 94: Analyzing the building elements category among Nabulsi mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

Analyzing the height and orientation

Section across the north and south elevations

Blanked façade

(P1) The north elevation

(P2) The openings in the main entrance hall

(P3) The main entrance facade

Section cross the east and west elevations

Orienting toward the court

Openings toward the court

High opening   Closed facade   The line of sight

Low & Small opening   The height   The human scale

Blanked façade

Domed roofs   **Domed roofs**

(P4) The treatment of the façade in the east elevation

(P5) locating high opening without any visual exposure

(P5 & 6) Openings toward the courtyard

Figure 95: Analyzing the height and orientation category among Nabulsi mansion (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

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Analyzing the spatial organization

Spaces segregation

Segregated two entrances

Utilizing the courtyards to separate between parts

Spaces hierarchy

Living rooms

Courtyard (Private)

Distributor hall (semi-private)

Guesting section

Entrance hall (semi-public)

The street (public)

Distributing the functions vertically to attain privacy

Residential parts, crusader Iwan, entrance hall

Residential

Residential parts, entrance hall

There are five residential parts in this mansion

Services and guesting beside rooms on the back

courtyard, rooms, services, guesting zones, long entrance hall

The street level
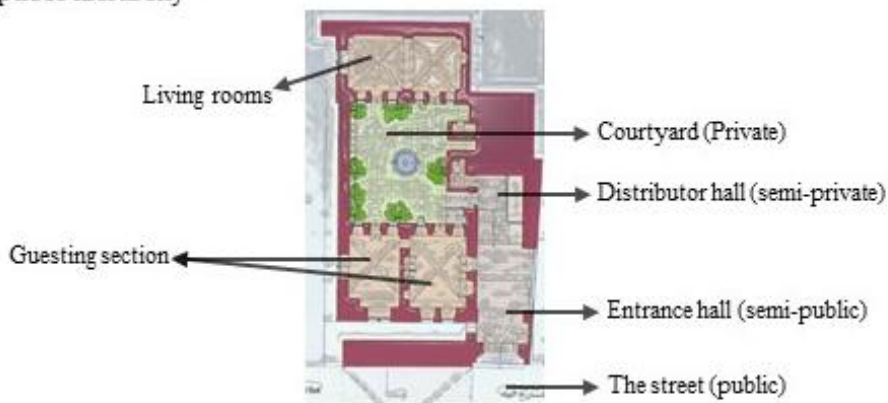
Figure 96: Analyzing the spatial organization category among Nabulsi mansion (Maps from (Rofo, Santelli, & Rochant, 2002), editing drawings by author)

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Visual Privacy in architectural aspect		
Building elements	**Main role in attaining visual privacy**	**Number of figure**
Entrance	Long entrance hall, separate doors for each section, twisted stairs, some stairs in front of rooms	(1)
Courtyard	One main courtyard	(2)
Spaces	Utilized spaces for living like crusader Iwan	(3)
Opening elements	Single or double windows on high level beside wide one toward courtyard	(4 & 5)
Boundaries and fences	The building fabric of the adjacent neighbors and garden beside the elevation of the mansion	(6)
Height and orientation	**Main role in attaining visual privacy**	**Number of figure**
Height of buildings	Around three floors	(7)
Openings location	Located the wide type toward the courtyard, high ones on the last floor	(4 & 5 & 7)
Orienting the dwelling	Toward the courtyard mainly beside orienting toward the exterior in the last floor	(7)
Relation with other	Blanked façade toward street and neighbor, regulate line of sight from the mansion toward neighbors.	(7)
Treatment of façade	Control the thickness of the wall from street, neglected them from opening when it's necessary	(8 & 9)
Spatial organization	**Main role in attaining visual privacy**	**Number of figure**
Space segregation	Utilized stairs, courtyard and halls for segregation	(1&2& 10)
Hierarchy of space	From public street toward private parts of the mansion through entrance hall, courtyards, stairs.	(12)
Distributing functions	Guesting in the ground floor, resedntial sections with their services in the upper floors	(12)
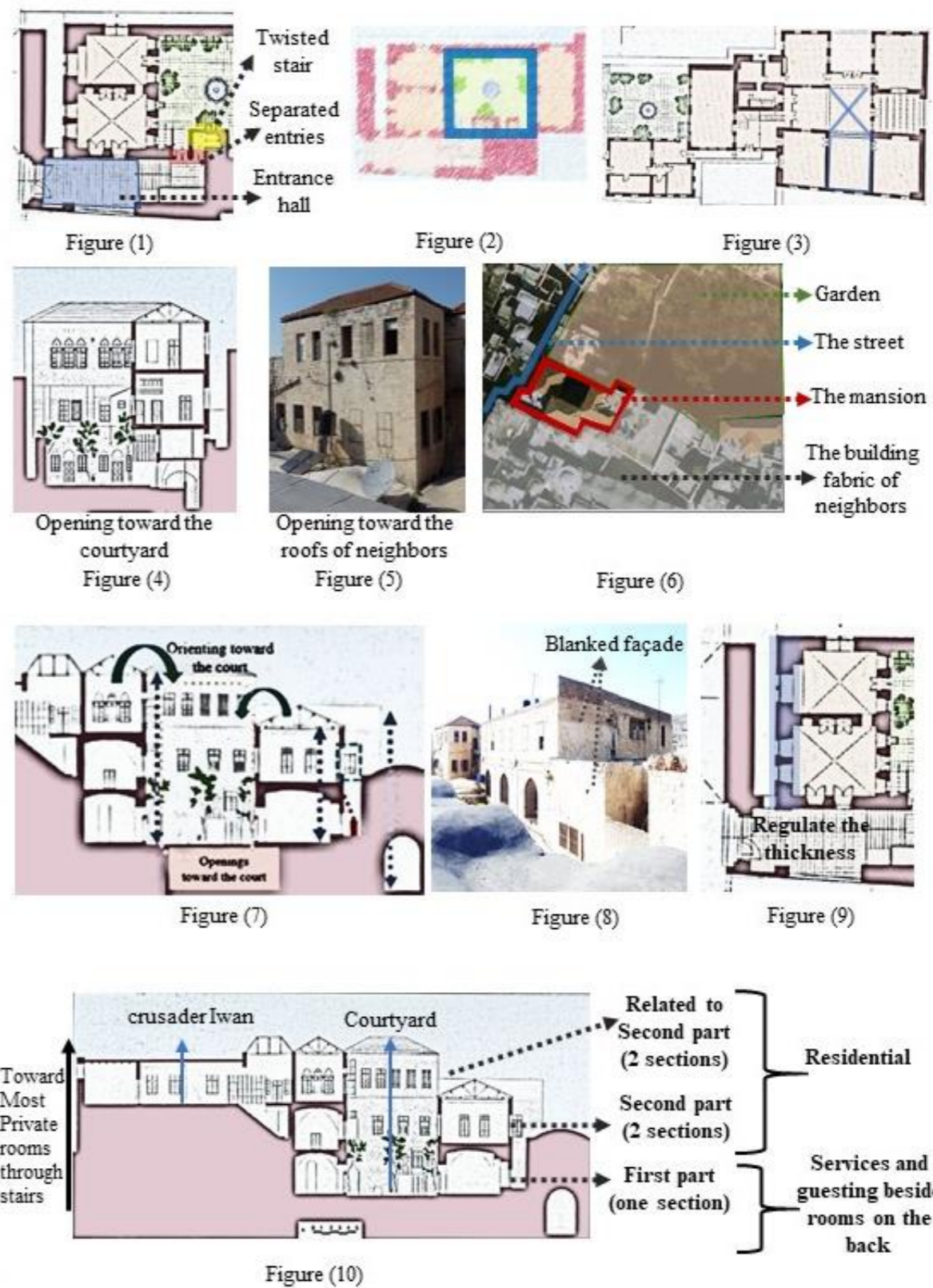
Figure 97: Main architectural aspects among Nabulsi mansion- in achieving visual privacy (Created by author)

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3.5.7 Shamout House

Shamout house is a small and simple house owned by a man from Shamout family, located in one of the main commercial zones in the old city. Along the northern façade of the main street of the city which is Al-Nasser street, this building has been erected, where "Al Manara center" beside Al Nasser mosque have been pinpointed near this house too. Accordingly, promoted visual privacy desired in this residential house demanded special consideration since it adjacent to a vital commercial district.

In general, the small house consists from one room in the first floor and topped by a similar second room in the second floor. The first space could be reached by winding and sheltered path and staircase under the house from the street level, while the second room is accessed by another stairway along the first staircase, after passing a small courtyard in front of the first room. Although it is small the consideration of visual privacy aspects is being observed deeply (Figure 98).

3.5.7.1 Building Elements

Entrance: In this house before reach the main residential zone various elements for entrances could be observed. The main entrance of this house is faced toward the adjacent public street. However, long vestibule toward a semi-private courtyard after this entrance has been disposed to contrive the visual privacy of this residential house which is contiguous to contrast commercial public zones. Also, the stairs toward the first room on the first upper level have been established in winding path. Moreover, each room has been expanded to form small entrance hall before entering it.

Courtyard: A semi-private back courtyard, lead you toward the first floor, where the residential spaces located, has been utilized to enhance segregation between the house

zone and the public commercial street in the ground floor. This courtyard contributing in protecting the visual privacy of the rooms, as the main openings of the house have been oriented toward it. Another small courtyard has been arranged in the first floor, which used as a distributor for the main first room, services zones and other stairs toward the second room.

Opening elements: Particularly kind of meshrabiya opening has been erected in the north faced which has been directed toward the public street, but now it was replaced with mental covered.

Boundaries: Solid stone wall has been established as a fence around the first courtyard and the blanked façade of the neighbor in the east direction, to attain visual privacy in this zone. While the boundaries were adjacent buildings and the street which is opposite to the back courtyard (Figure 99).

3.5.7.2 Height and Orientation

Height of the building: The house consists of three floors, so the visual exposure from the adjacent street was eliminated.

Opening location: The restricted openings of this houses by virtue of its location, that is directly adjacent to Al-Nasser public street, have taken into account the issue of visual privacy in its design; commonly the main double windows in each room are detected toward the courtyard beside street with proper modifications, while on the other two elevations were almost blanked except small and high two opposite openings arranged on the second floor.

Orienting of the dwelling: This house opens toward the back courtyard through two main windows along the south elevation.

Relations with other: The adjacent public street is affected the whole structure of this house. To emphasize, the wide of the public street allow to penetrate little views in the first-floor room depending on the line of sight of the human, hence several procedures have been beheld. the contiguous neighbors were affecting the shape of the façade.

Treatment of façade: The thickness of the wall from all directions, prevent any human's sight in the street from infiltrating the residential domestic. Also, blanked elevations have been observed mostly.

Site plan issues: The surrounded building on both sides neglected the façade from openings, while the remained two sides one opposite to the street and the other toward the back courtyard (Figure 100).

3.5.7.3 Spatial Organization

Space segregation: The visual privacy is achieved through separating the two main rooms on different levels, to enhance visual privacy for each function of them. As the first room arranged for daily activities and hosting, while the second one for sleeping. Specifically, the segregation observed through ground floor embraced zones.

Hierarchy of space: This aspect has been accomplished heavily by virtue of its location that adjacent to the public crowded street, hence the hierarchy to reach the private space achieved within various zones, from a public street to semi-public path then semi-private courtyards and halls to the private rooms on both levels.

Distributing functions: The main buffer zones arranged in the ground floor while the residential side set on the upper first and second floors. Also, the functions of the first floor were for hosting and living while the second for sleeping for this small family (Figure 101).

Eventually, this modest house in the area had secured complete level of visual privacy, although its adjacent to a public street, through various physical parameters. Within the prior analyzing these aspects have been illustrated to extract the main points at the end, in Figure 102. In contrast, the current situation of this house nowadays is a little bit distinguished from the original status; each room has been dwelled by various family and other spaces from the adjacent buildings have been shared with it, which contrasted the original situation.

Site plan and shots

Legend:
- Shamout house
- Al Nasser Mosque
- Al Nasser Street
- Part of Toqan palace zone
- The surrounded street
- Al-Manara square

Shots for Elevations

(P1)   (P2)   (P3)   (P4)

The South elevation, toward the back courtyard

The north elevation, toward the street

The west elevation

The east elevation

Three floors plans

Ground Floor plan

The street

S1

First Floor plan

Room 1

Second Floor plan

Room 2

Legend:
- Main Entrance
- Stairs
- The vestibule path
- Movements shape
- Back courtyard
- Small court
- Semi—private services zone
- The entrance hall
- S1   Space for shop

Figure 98: The location and maps with zoning for Shamout house (Maps from (Rofo, Santelli, & Rochant, 2002), capturing pictures and editing drawing by author)

Analyzing the building elements

Ground Floor plan

Al Nasser Street

P1
P2
P3

First Floor plan

P8
Residential room
P5
P4
P6
P7

Second Floor plan

Residential room
Residential room

	Vestibule		The vestibule path		The entrance hall		services zones
	Back courtyard		Stairs		Small openings		Shop spaces
	Small court		The winding stairs and path		Main openings		

Various shots

(P1)　　　(P2)　　　(P3)

(P9): representing the surrounded boundaries

The street
The house
The courtyard
Surrounded by buildings

(P4)　　(P5)　　(P6)

Panorama view for the semi-private courtyard
(P7)

"Meshrabiy" Opening
(P8)

Figure 99: Analyzing the building elements category among Shamout house (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

Figure 100: Analyzing the height and orientation category among Shamout house (Maps from (Rofo, Santelli, & Rochant, 2002), capturing the pictures and editing drawings by author)

Analyzing the spatial organization

Space segregation and distributing functions

Residential

The second room
Stairs & entrance hall ▪▪▪▪▪➤ For sleeping

The first room
Stairs & small court & entrance ▪▪▪▪▪➤ For living and hall guesting

Entrance zone

Main Entrances
Vestibule & Courtyard ▪▪▪▪▪➤ For movement

Space hierarchy

The street
(public)

Path & vestibule
(semi-public)

Stairs
(semi-private)

Back courtyard
(semi-private)

First room
(private)

Room entrance
hall (private)

Small court
(semi-private)

Second room
(private)

Room entrance
hall (private)

Figure 101: Analyzing the spatial organization category among Shamout house
(Maps from (Rofo, Santelli, & Rochant, 2002), editing drawings by author)

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Building elements	Main role in attaining visual privacy	Number of figure
Entrance	• Main entrance with long vestibule from the street • Separate entrance with small hall in front of each room.	(1 & 2)
Courtyard	Back courtyard as movement space and method for orientation Small courtyard as distributor in the first floor	(3)
Opening elements	Conventionally using wooden shutter like Mashrabiya	(4 & 6)
Boundaries	The walls of the building beside solid wall around the courtyard from the surrounded neighbors.	(5)

Height and orientation	Main role in attaining visual privacy	Number of figure
Height of the building	Three floor	(6)
Opening location	Toward the courtyard or street except some small one in the second floor, above human scale	(7)
Orienting the dwelling	Toward the back courtyard	(6)
Relation with other	Regulate line of sight and neglected the façade from openings	(6 & 7)
Treatment of facade	Control the thickness of the wall beside being almost blanked	(7)

Spatial organization	Main role in attaining visual privacy	Number of figure
Space segregation	Separate the function through floors with stairs	(8)
Hierarchy of space	From public street toward private rooms	(8)
Distributing functions	The ground floor for movement and the remain tow for residential function	(8)

Figure (1)

Figure (2)

Figure (3)

Figure (4)

Figure (5)

Figure (6)
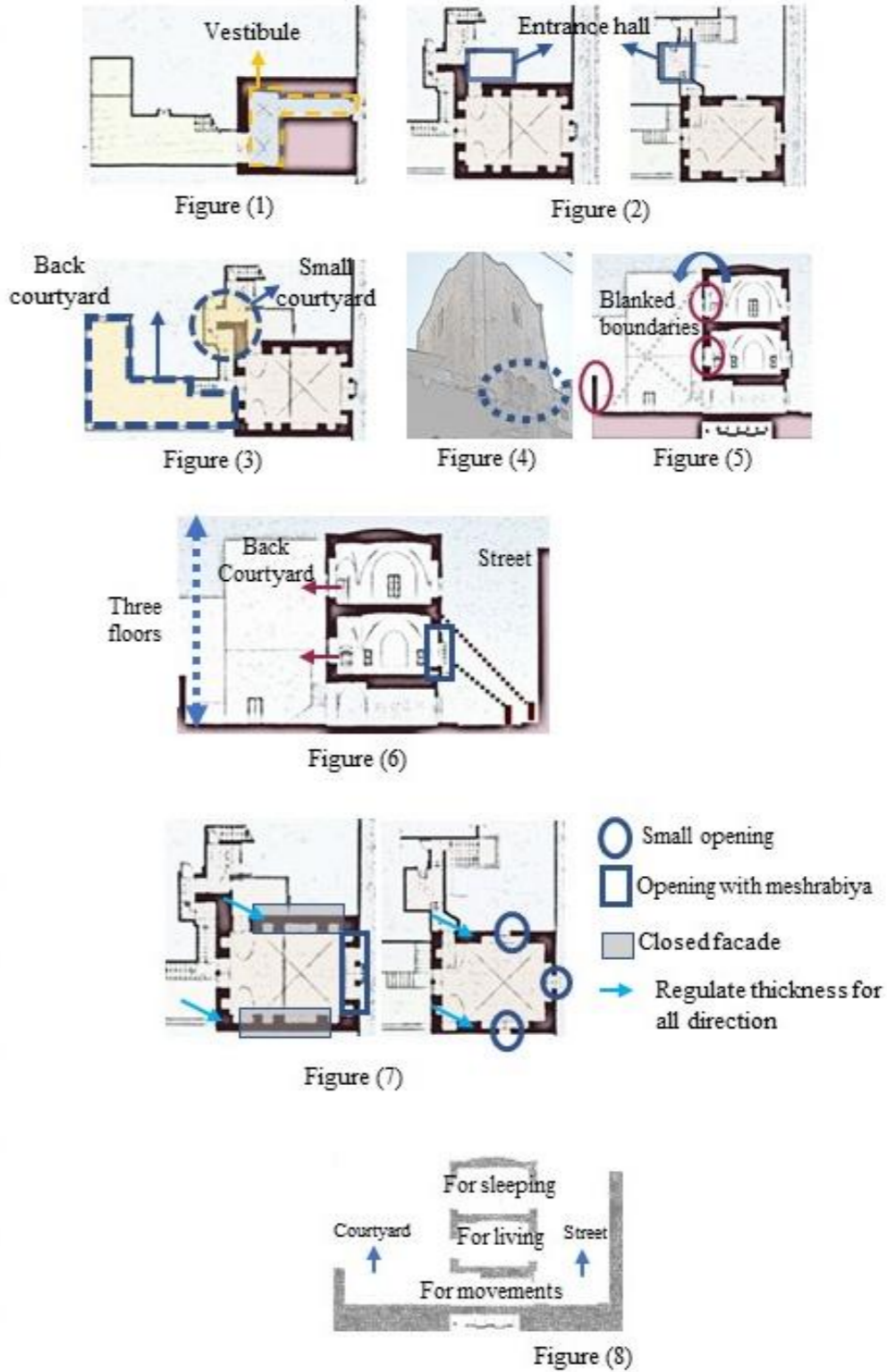
Figure (7)

Figure (8)

Figure 102: Main architectural aspects privacy among Shamout house- in achieving visual (Created by author)

3.5.8 Al-Amad House

This house set on the main stairs path of Al-Aqaba neighborhood, was owned by one of a mediate statues family in the city. Commonly, this house consisted from several residential rooms arranged on different level besides hosting and services zone to composed this house, which suggested to be related to one closed extended family, as it is not too big in comparison to the prior mansions examples. Considered as one of the examples of the house with a courtyard. The visual privacy parameters have been observed here too, thus in the next analysis they will be illustrated deeply (Figure 103).

3.5.8.1 Building Elements

Entrances: There are two entrances for the house; the main one with small entrance hall and twisted path with some stairs to reach the courtyard, another one is secondary one that leads you toward the private rooms in the second floor, after long stairs from the surrounding path and small hall to attain visual privacy protection there.

Courtyards: There are three courts, one of them is the main courtyard which set in the first level around the living and services parts, another one is most private arranged in front of the main private rooms in the second floor, to provide more visual privacy consideration for the inhabitants of that section. Also, there is a small one in the second floor of the opposite section of the house too.

Various spaces: Different sizes of iwan spaces have been positioned in this house to complete visual privacy deliberation; there are one iwan space which utilized as living zone in the first floor and opened toward the main courtyard and two other rooms beside it. To achieve more visual privacy protection to the users, some stairs have been designed in front of it. On the opposite side another small iwan zone which utilized as

distributor space for the upper sections. Moreover, in front of the small courtyard, there is a small iwan to enhance full visual privacy protection for the users in that section.

Openings elements: Among the main elevation, it is evident to consist one meshrabiya opening in the past, and some restricted high double or third windows and some small ones on the other side, while the remained north and west elevation were blanked as they are closed to adjacent neighbors.

Fences and boundaries: The elevation of the house represented its boundaries toward the building fabric of the neighbors and adjacent paths (Figure 104).

3.5.8.2 Height and Orientation

Height of the building: The visual privacy matters have been attained within the height of the house, it is around three and two floors.

Openings location: The majority of the openings have been oriented toward the courtyards in the house, while among the two elevations that faced the paths there are some high opening never opposite or exposure to neighbors, while the small ones are low.

Orienting of the dwelling: The house is oriented toward the main courtyard and other courts, so the visual privacy is attained deeply within this inward orientation.

Relations with other: To adjust the relation with neighbors under visual privacy realm the facades toward the paths were neglected from wide low openings, to prevent the

line of sight of the passengers from catch any inner vision, in contrast to some location there are some high openings that the line of sight could not penetrate them.

Treatment of façade: The thickness of the wall has been adjusted to be wider than other elevations, in the exterior façade toward the two paths, in order to prevent any possibility for the visual exposure. One of the main courtyard façades has been erected to be in a level of two floors just to preserve the visual privacy of the users, as there are no functions behind it, also some sides in the elevation have been raised just to prohibit any strange vision (Figure 105).

3.5.8.3 Spatial Organization

Space segregation: Mainly, the segregation attained in this house through several types of stairs, halls, and courtyards. In addition to that provide a second entrance for the most private and significant part to provide full visual privacy for its users. The segregation among functions and gender observed, through the arranged guest zones in the ground floor separate from the private environment of the house probably for men, as well within the first floor the living, services and some rooms arranged for women while on the upper floors most private residential parts appeared.

Space hierarchy: This parameter illustrated deeply to promote visual privacy, various zones like halls, paths and stairs have been arranged to attain progression from the public street toward private house zone. Moreover, vertically the most private zones positioned after the semi-private guest, services and living zones.

Distributing function: Mainly the functions in this residential building dispensed according to its privacy level for the inhabitants to enhance visual protection, to

illustrate, the hosting zones arranged closed to the street with separate entrance, living rooms, and services zones set in the first floor then later on the upper two floors the three residential parts organized.

Annexing zones: Various size of iwan spaces have been observed to promote more living or hosting zones for women with high level of visual privacy (Figure 106 and Figure 107).

Site plan

The house boundary · · · · Al Nasser Street

The surrounded street ── Al-Aqaba stairs path

(P1): Shot for the path

(P2): The entrance of the house from the main path

(P3): The elevation of the house from the main path

Ground floor plan

First floor plan

Room1

Room2

Room3

Second floor plan

Third floor plan

Guesting for men · · · Residential part 2 · · · Residential part 3 ↑ The main Entrance

Guesting for women · · · Residential part 1 ↑ The secondary Entrance

Figure 103: The location and maps with zoning for Al-Amad house (Maps from the architectural department at An-Najah National University, capturing pictures and editing drawing by author)

Analyzing the building elements

Ground floor plan

First floor plan

(P3): The main entrance and the surrounded one

(P4): stairs toward secondary entrance

(P5): entrance hall of main entrance

(1) (2) (3)

(P6): The two courtyards

(P7): The third courtyard

Second floor plan

Third floor plan

Iwan opening

From the main entrance

Stairs

(P8): The main iwan space

Iwan opening

(P9): The second iwan space

(P1): Drawing of main east elevation

(P2): shots for openings on main east elevation

Entrance hall   Distributor zone   "Iwan"

Guesting room   The courtyard   The staircase

→ Secondary entrance   → Main entrance

Meshrabiya opening location   High opening

Low small opening

Building fabric   House boundaries   Adjacent paths

(P10): The surrounded boundaries of the house

Part from the Paths

(P11): shots from the house toward the adjacent path

Figure 104: Analyzing the building elements category among Al-Amad house (Maps from the architectural department at An-Najah National University, capturing the pictures and editing drawings by author)

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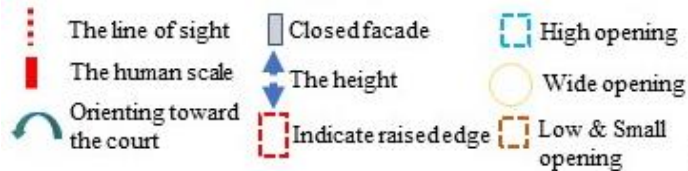
Figure 105: Analyzing the height and orientation category among Achour mansion (Maps from the architectural department at An-Najah National University, capturing the pictures and editing drawings by author)

Analyzing the spatial organization

Spaces segregation

Stairs from first entrance

Stairs to reach parts or functions

Utilizing the courtyards to separate between parts

Stairs toward second entrance

Spaces hierarchy

The paths (public)

Entrance hall (semi-public)

Twisted stairs (semi-private)

Guesting section

Iwan and guesting rooms (private)

Courtyard (Private)

Living rooms (private)

Distributing the functions vertically to attain privacy

Residential part, court,Iwan, stairs

Residential

Residential parts, court, second entrance, stairs

The street level

Services and guesting beside rooms

courtyard, Iwan spaces, rooms, services
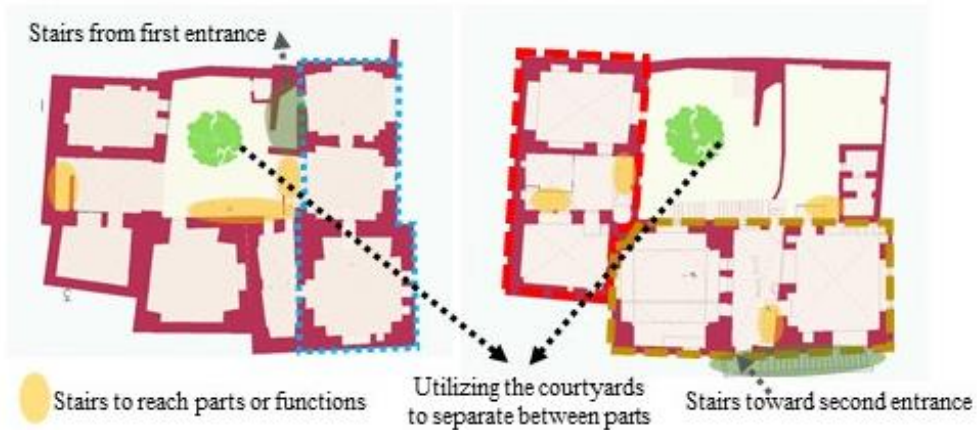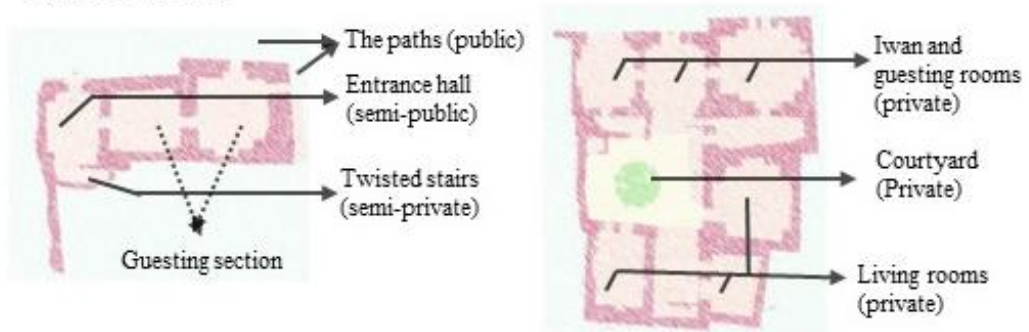
There are ground level here for gusting section, entrance hall (the level of the street increased gradually)

Figure 106: Analyzing the spatial organization category among Achour mansion (Maps from the architectural department at An-Najah National University, editing drawings by author)

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Visual Privacy in architectural aspect		
Building elements	**Main role in attaining visual privacy**	**Number of figure**
Entrance	Small entrance hall, twisted path and stairs for the main entrance, long stairs path toward the second entrance	(1&2)
Courtyard	One main courtyard beside other two	(3)
Spaces	Various sizes of Iwan spaces	(4)
Opening elements	Meshrabiya opening on the main façade beside small and high openings	(5&6)
Boundaries and fences	The building fabric of the adjacent neighbors and the elevation of the house toward surrounded paths	(7)
Height and orientation	**Main role in attaining visual privacy**	**Number of figure**
Height of buildings	Around three floors	(8)
Openings location	Located the wide type toward the courtyard, some high or small toward the paths, wide one covered with meshrabiya	(5&6&8)
Orienting the dwelling	Toward the main courtyard and small courts	(8)
Relation with other	Regulate line of sight toward the house	(8)
Treatment of façade	Control the thickness of the wall from paths side, neglected them from opening, raised the wall edges	(8 & 9)
Spatial organization	**Main role in attaining visual privacy**	**Number of figure**
Space segregation	Utilized stairs, courtyard and halls for segregation	(3)
Hierarchy of space	From public street toward private parts of the house through entrance hall, courtyards, stairs.	(1& 2&10)
Distributing functions	Guesting in the ground floor, living and services in first floor residential parts in the upper floors	(10)
Annexing zones	Various sizes of Iwan	(4)
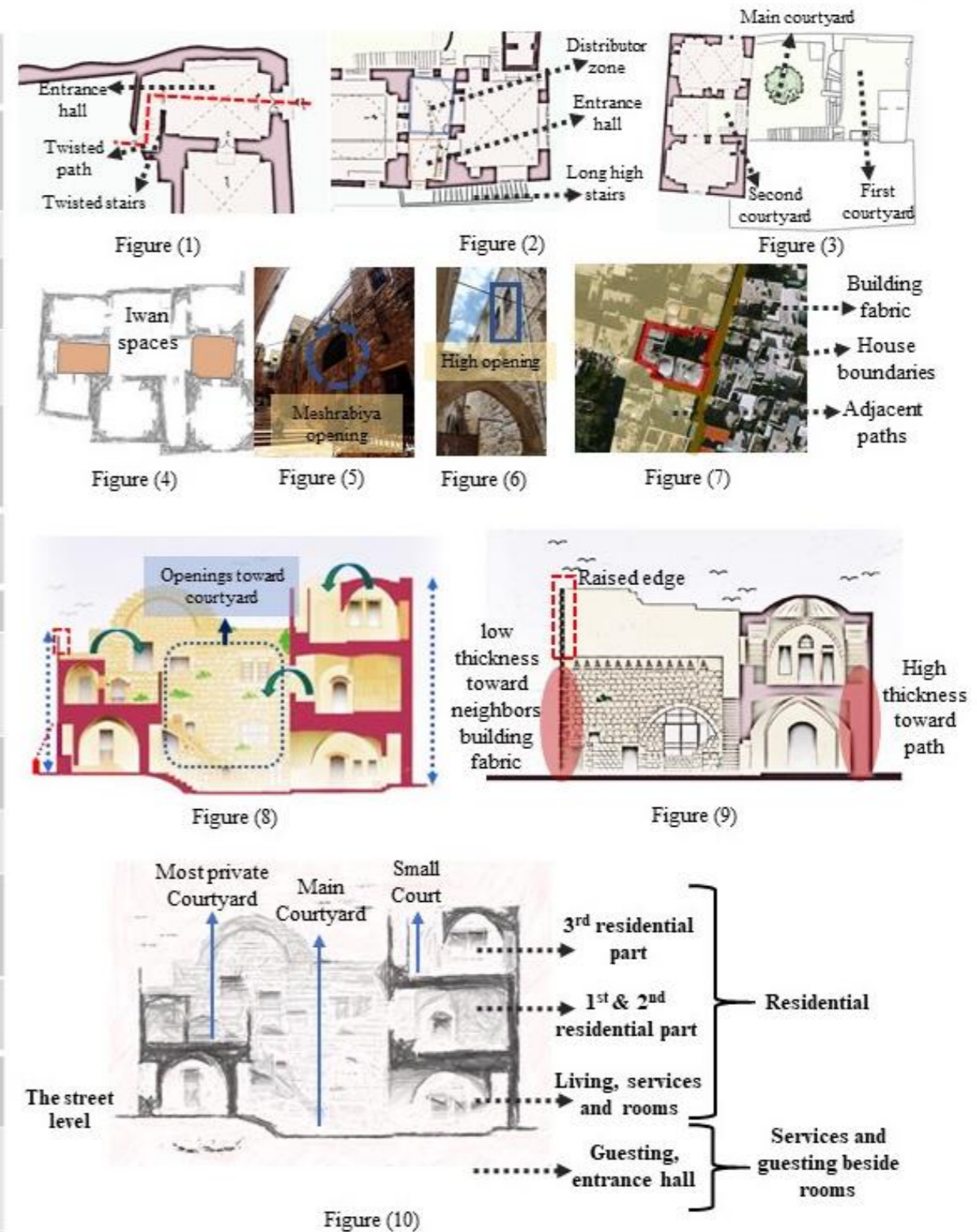
Figure 107: Main architectural aspects among Al-Amad house- in achieving visual privacy (Created by author)

3.5.9 Arafat House

This house located in Al-Gharb neighborhood, opened toward a road, that connected the main two commercial street in the old city of Nablus - Al-Nasser and Al-Hanbali streets - It considered as an example of the single house with central lounge, the functions in this house distributed among two floors around the central hall of them, two entrances lead to this house, one from Abu-Zant Hosh other from the main entrance of Arafat soap factory. Generally, the usage of this house has been changed from residential one to be a public office for the Municipality of Nablus consider it to be a location for its department that specializes in the issues of the old city of Nablus. Although this type is varied from the courtyard houses, the visual privacy matters have been attained within it environment too (Figure 108).

3.5.9.1 Building Elements

Entrances: To achieve more level of privacy for the users and visitors of this house, two entrances arranged; the main one directed toward distributor space that shared with the adjacent soap factory, with narrow path and some stairs, while another one is most private that opened toward the path of Abu-Zant residential complex after a twisted passage with some stairs and hall to attain more visual privacy degree in this entrance in comparison to other one.

Various spaces: The central hall in this house used to distribute the rooms around it, with taking into account the preservation of visual privacy through locating the entries toward extended paths from it.

Openings elements: To attain visual privacy protection for the users in the central hall, attractive meshrabiya opening coordinated at the opened edge of this lounge

toward the public street on both floors. Besides that, the majority of the openings toward the soap factory entrance have been arranged with sort of wooden covered too, while in the main elevation the remained openings were small and high.

Fences and boundaries: The main tow elevations of the house from the north and west direction composed the boundaries as well the building fabric of residential neighbors from the other direction (Figure 109).

3.5.9.2 Orientation and Height

Height of the building: The height of the house is around two residential floors, raised around one floor from the road level to provide commercial zones for shops. Hence this height sub-served the visual privacy consideration.

Openings location: The majority of the openings directed toward the exterior façade but their height and proper direction toward the roof of the adjacent buildings contributed in achieving the desired visual privacy degree, however, when there is a necessity for wide openings toward the road or near open spaces, kind of meshrabyia opening or sorts of wooden covering have been utilized, to prevent any visual exposure.

Orienting of the dwelling: The openings are directed toward the exterior environment while the inner circulation toward the central lounge.

Relations with other: The adjacent street and neighbors lead to regulating the passengers' line of sight properly, utilizing wooden covering set as an evidence example, additionally as the main entrance set for the soap factory direction this

another more private entrance arranged, to emphasize that the relations with other are affecting the visual privacy.

Treatment of façade: The thickness of the house facades differs, commonly they were almost thick from all direction with slightly different in the wide, Specifically the majority of the openings are arranged over the façade toward the main entrance space, additionally some openings with proper modification among the street façade, while the remained elevations almost neglected from any big openings. Hence, the whole façades were treated to serve the visual privacy protection (Figure 110).

3.5.9.3 Spatial Organization

Space segregation: The house consisted from two residential floors separated by stairs, so the whole house zones have been segregated from the public street through stairs too, to acquire visual privacy the segregation attained by stairs mainly.

Space hierarchy: The location of the house requires a high degree of hierarchy to achieve the desired visual privacy, from the public street long, wide and various twisted paths with stairs have been utilized to provide semi-public and semi-private spaces before entering the private zones of the house. The progression of privacy observed vertically too when you follow stairs and become high the visual privacy degree raised.

Distributing function: Commonly the living, gusting and services arranged in the first floor around the central lounge while the sleeping rooms position in the upper floor to attain more visual protection for their users (Figure 111 and Figure 112).

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Site plan

(P1): The house elevation toward the adjacent space

(P2): The house elevation toward the adjacent road

To the house

(P3): The house entrance from the road

■ Al Baik Mosque
■ Al Salahi Mosque
✳ Arafat Soap factory

•••• Al Nasser Street
━━ Al Hanbali Street
━━ Al Hanbali Street

Plans

First floor plan

Second floor plan

Room Room Services Services

Room Room

Room

Room Room Services

▒ Central lounge ▭ Distributor space ↑ The main Entrance ↑ The secondary Entrance

Figure 108: The location and maps with zoning for Arafat house (Maps from Nablus municipality, capturing pictures and editing drawing by author)

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Analyzing the building elements

First floor plan

Second floor plan

Legend:
- Central lounge
- Entrance hall
- The main Entrance
- The secondary Entrance
- Distributor space
- Narrow stairs
- Twisted path
- Meshrabiya opening location
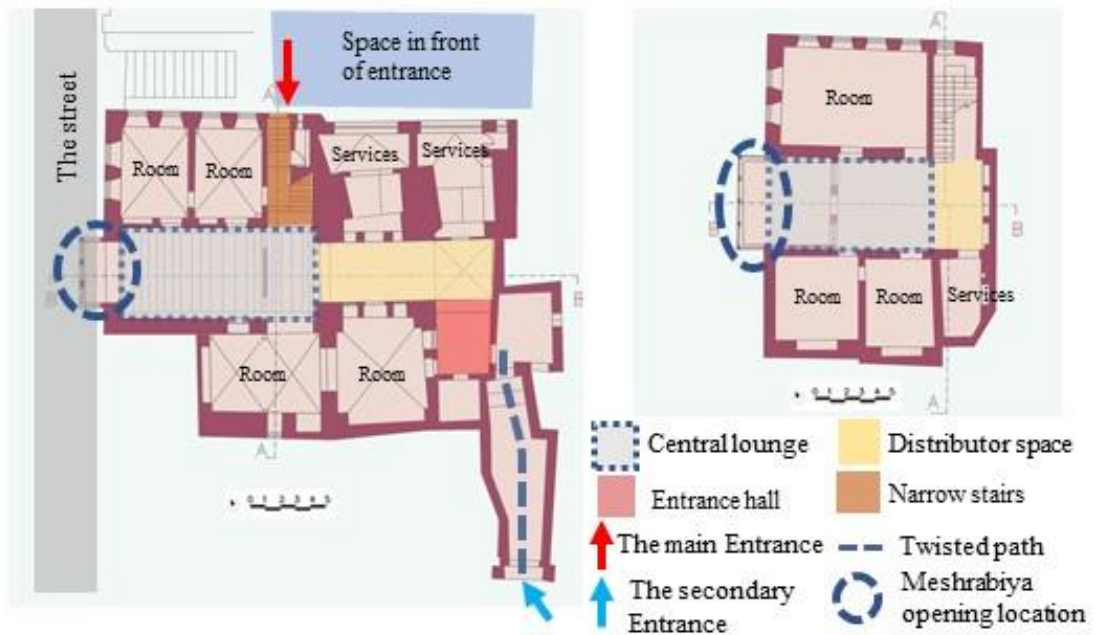
Shots for the main entrance

(P1): Toward the entrance from the road
(P2): Stairs toward the entrance
(P3): Door & stairs
(P4): Top view

Shots for the secondary entrance

(P5): Second entrance path
(P6): Stairs in the twisted path
(P7): Stairs in the path
(P8): Top view

Shots for openings elements

(P9): wooden covering
(P10): Meshrabiya in the elevation
(P11): Meshrabiya openings from the house

(P12): The adjacent soap factory
(P12): The surrounded building fabric

The road
The house bounadry
Building fabric

(P13): The surrounded boundaries of the house

Figure 109: Analyzing the building elements category among Arafat house (Maps from Nablus municipality, capturing the pictures and editing drawings by author)

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Analyzing the height and orientation

Section across the east and west elevations

Orienting toward the central lounge

Orienting toward the exterior environment

The shops & street level
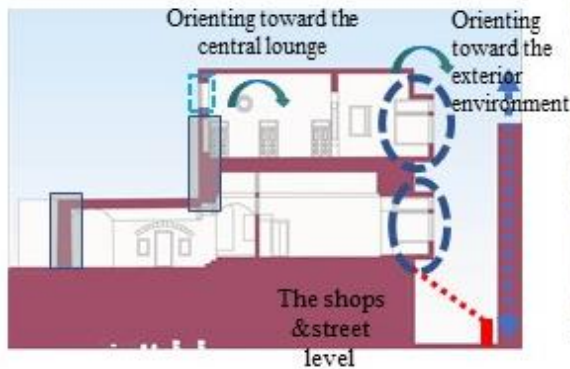
(P1): Openings in the north elevation

(P2): Orienting toward the central lounge

Section across the north and south elevations
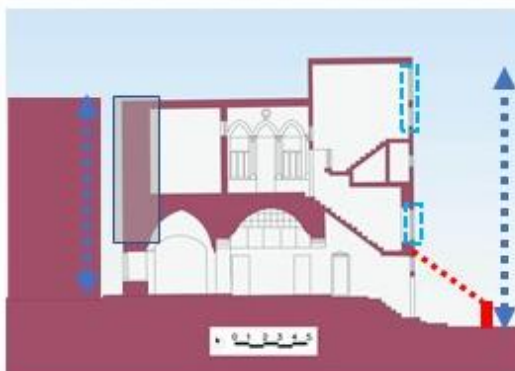
(P3): View from meshrabiya to the road

(P4): View from the road couldn't exceed any sight toward the house due to the height of the openings

North elevation

West elevation
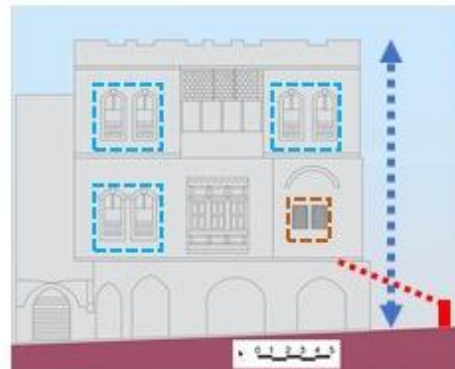
- ⋮ The line of sight
- ▮ The human scale
- ▯ Closed facade
- ⬍ The height
- ⬚ High opening
- ⬚ small opening
- ⬚ Opening with wooden covering
- ⬭ Meshrabiya opening location

(P5): The thickness of the façade for the whole openings

(P6): High wide opening

(P7): Openings in the main elevation

Figure 110: Analyzing the height and orientation category among Arafat house (Maps from Nablus municipality, capturing the pictures and editing drawings by author)

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Analyzing the spatial organization

Spaces segregation

The street

Main entrance

Second entrance

(P1): Main entrance stairs

(P2): Stairs segregate the road from the entrance space

(P2): Stairs toward second entrance

Spaces hierarchy

Distributor hall (semi-private)

Entrance hall (semi-private)

The street (public)

The street (public)

Twisted path with stairs (semi-public)

Stairs path (semi-public)

Entrance space (semi-public)

Narrow path with stairs (semi-private)

Entrance hall (semi-private)

Central lounge (private)

Distributing the functions vertically to attain privacy

Sleeping room, service, central lounge

Living, central lounge, services, gusting & rooms

Shops & path with stairs

Street level
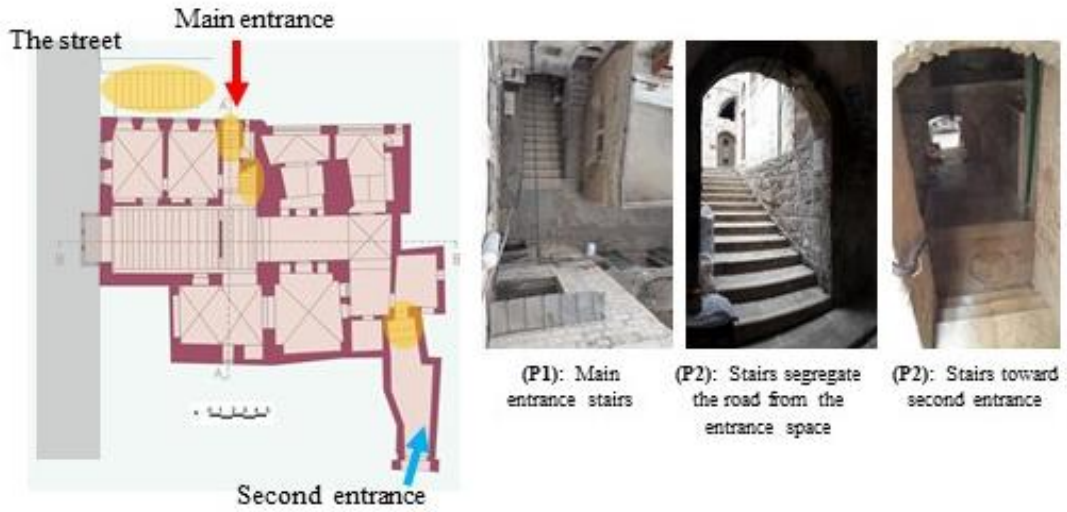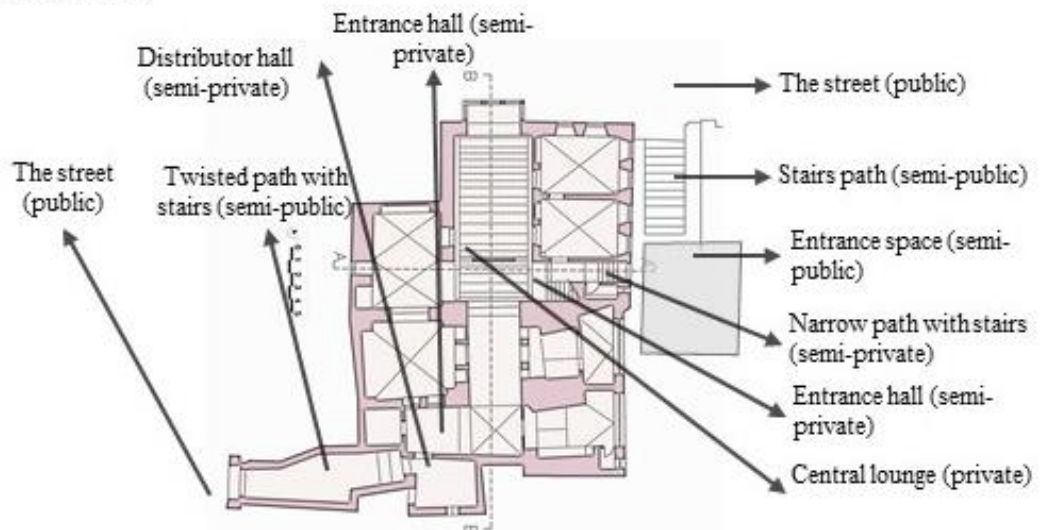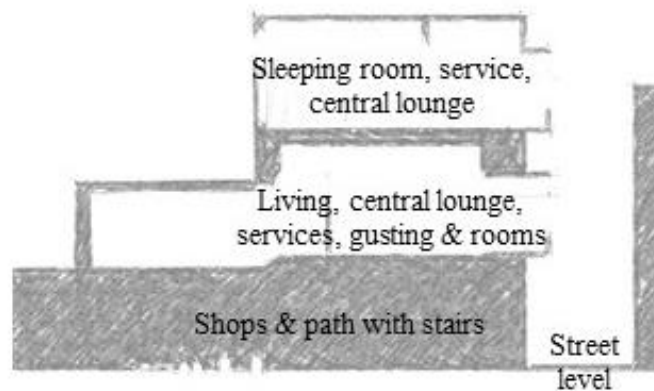
Figure 111: Analyzing the spatial organization category among Arafat house (Maps from Nablus municipality, editing drawings by author)

Visual Privacy in architectural aspect

Building elements	Main role in attaining visual privacy	Number of figure
Entrance	Arranged two entrance, one with Stairs and narrow path, other long path with hall and stairs	(1&2)
Spaces	Central hall	(3&4)
Opening elements	Meshrabiya opening on the main façade beside small and high openings	(5&6)
Boundaries and fences	The building fabric of the adjacent neighbors and the tow elevations of the house toward surrounded path and space	(7)

Height and orientation	Main role in attaining visual privacy	Number of figure
Height of buildings	Around three floors	(8)
Openings location	Located the wide type with meshrabiya, or toward the entrance space beside small and high ones	(5&6&8&9)
Orienting the dwelling	Toward the exterior adjacent space and central lounge	(3&6)
Relation with other	Regulate line of sight toward the house, provide two entrance	(8&1&2)
Treatment of façade	Control the thickness of the wall, neglected it when its exposure	(8&10)

Spatial organization	Main role in attaining visual privacy	Number of figure
Space segregation	Utilized stairs	(11)
Hierarchy of space	From public street toward private house through entrance hall, paths, stairs.	(1&2&11)
Distributing functions	Living, service, guesting in the first floor, sleeping in the second floor	(11)

Figure (1)

Figure (2)

Figure (3)

Figure (4)

Figure (5)

Figure (6)

Figure (7)

Figure (8)

Figure (9)

Figure (10)

Figure (11)

Figure 112: Main architectural aspects among Arafat house- in achieving visual privacy (Created by author)

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3.5.10 Al- Jitan Residential Complex "Hosh"

Al-Hosh or the residential complex is considered one of the most prominent architectural styles in the old town of Nablus and in many other Arab Islamic cities. In the city of Nablus, al-Ahwash is more distinguished in terms of size and number, likewise they are the main component of the urban fabric, besides palaces, mansions and single residential houses. They are the conventional model of houses that belong to the ordinary general public. All these residential complexes, Ahwash, were belonging to one family, by virtue of the dominant style of extended families. It can be said that the Hosh is an impermeable corridor surrounded by a group of separate houses, while the rooms of those houses disseminated around a small private courtyard in some cases (Abu-Hantash, 2007).

Al-Hosh specifically performs many functions to the family in accordance with their beliefs and traditions. They are impervious from all sides, so the privacy and visual sights from strangers toward family zones have been preserved through it. While other economic, climate, security and military functions have been accomplished by these spaces on both urban or dwellings scales.

The fundamental three types of Al-Ahwash existed in the old city; the Simple one consisted of one or two rooms with limited services and small area besides the courtyard. While complex Hosh is characterized by the existence of a large number of vaults and ground rooms with upper floors as well as stores and a number of public utilities. Whereas the last type is the composite one which consists from number of separate houses that distributed along the path of the Hosh, which is composed of large corridors interspersed with small yards and dispensers for the entrances of different

houses and this pattern is dominant as it applies for the majority of Al-Ahwash in the old town of Nablus as we see in Hosh Al-Jitan.

Specifically, Al- Jitan Hosh is located in the center of the old town in Al-Qaryoun neighborhood. Near to various important facilities in the old town such as Al-Naser Mosque, Al-Manara square, the new Khan and its entrance directly adjacent to Al-Naser Street, the main commercial street in the city. Al Hosh connects several residential homes around two main squares and a path between them, in each entrance through this passage several residential courts arranged, which may include two or more houses. This inner courtyard has been using as working place for women, children's playground and small arena for social events such as weddings, these squares were often paved and contains some fruit trees such as lemon.

The common structure of this residential complex, composed semi-public zones in the closet side to the entrance, whereas few residential zones have been arranged in the far part. Most of the houses are arranged on the first and second floor, they could be reached through vertical stairs in various shape from the path level, to enhance the privacy for the inhabitants. Moreover, there is a big semi-public zone in front of the first semi-public square that has been located for the men guests and specific events for the family, called diwan. The elevations commonly have been managed to promote high level of visual privacy too, hence visual privacy consideration on various parameters have been observed deeply in this complex, no one from the public surrounding street or centers could penetrate the privacy of the inhabitants (Figure 113).

3.5.10.1 Building Elements

Entrance: The main entrance represented high degree of isolation through stairs and twisted path to isolate this residential zone from the adjacent public domain. While, in particular each house within this Hosh has a specific entrance that has been arranged after small vestibule or entrance hall to promote a high level of visual privacy.

Courtyard: Initially, the main square has been set after the main curved entrance, used as a semi-public zone in comparison to other parts within this Hosh. Whereas different group of houses have been opened into a small semi-private court, by virtue of acquiring spaces for women's daily activities with respecting visual privacy.

Various spaces: qantara rooms portable above two vaults has been established above the main entrance to prevent any direct vision from the passengers in the public street toward the main square in the Hosh. Additionally, semi-public space called diwan have been arranged in front of the main court for the stranger guests.

Opening elements: The openings over the elevation of the Hosh paths were almost blanked, to enhance visual privacy for the users, but among one of the main elevation in the first main court, there are some signs that indicated to exist meshrabiya opening there.

Boundaries: Mainly composed from the existed building fabric of the houses and one small garden (Figure 114).

3.5.10.2 Height and Orientation

Height of the buildings: Commonly height varied between two or three floors in all the houses that consisted this Hosh, however, these variations in height has been managed correctly to respect visual privacy.

Openings location: The majority of the paths elevations were blanked, while some small or high openings, never be opposite to each other have been arranged toward the two courts.

Orienting the complex and dwellings: The Hosh direction commonly has been oriented toward the small courts between houses with some restricted orientations toward the main square and paths.

Relation with others: Through regulating the line of sight and the wide of the paths; around the courts as the space allow the human line of sight to exposure the visual privacy, whereas the openings commonly neglected from facedes, in contrast when it is necessary they set on high level or with meshrabiya covered, while on the paths the openings set higher than human line of sight.

Treatment of façade: Adjusting the thickness of the wall around the courts to prevent any kind of visual privacy penetration (Figure 115).

3.5.10.3 Spatial Organization

Space segregation: Segregation firstly occurred through curved entrance and stairs to configure the separation and privacy of this residential zone from the nearby public street and square. Also, another separation between the first semi-public spaces, which

is for the services and gusting of the hosh, and the residential zones around the second floor, has been attained within long curved path. The significant of segregation has been observed by managing stairs to reach the houses zones, which has been composed in the first and second floor.

Hierarchy of space: This has been observed deeply in this complex, to attain visual privacy inside the house, the zones have been graduated from the public street to semi-public entrance and main square, then the semi-private path, until reach the private houses. moreover, each private house progressed in privacy too, toward extreme private rooms.

Distributing functions: The residential functions dispensed on the upper floors mostly, besides some houses around the path and the second court. While hosting and services functions arranged within the ground floor of the first court.

Annexing zones: Some spaces for semi-public usage have been annexed, such as diwan. Also, qantara rooms above the main entrance have been managed to preserve the visual privacy of the Hosh users. Also, arranged the semi-public court after the entrance (Figure 116 and Figure 117).

Under those parameters and specific consideration, the visual privacy matter has been attained within this composite residential complex, as the main sample for this type of housing in the old city of Nablus. Although this Hosh had been destroyed remarkably within the Israeli invasion in 2002, an exceptional restoration process took place over the years following the invasion, to restructuring the conventional character of the

buildings which housing 18 families. Hence the situation of this residential complex is adequate, the prior harmful for the buildings was eliminated.

Site plan

(P1) **(P2)**

(P3) **(P4)**

□ Hosh Al-jitan path

▨ Al-Manara square

■ Al Naser Mosque

▦ The surrounded street

— Al Naser Street

Locating the residential houses among the three plans

Ground floor plan

First floor plan

Second floor plan

Ground floor plan

↑ The Entrance

The path

First square

Second square

Residential house

Stable horses

Semi-public zone "Diwan"

Closed zones

orchard

Store zones

Some Shots

(P5)

(P6) **(P7)**

P5: Panorama view of the first square

P6&7: Shots among the hosh path's

Figure 113: The location and maps with zoning for Al-Jitan hosh (Maps from Nablus municipality, capturing pictures and editing drawing by author)

Ground floor plan

The entrance (P1)

First vault of Qantara (P2)

Second vault of Qantara (P2)

(P5)

(P6)

(P7)

Meshrabiya opening (P8 & P9)

The curved entrance among one of the houses in the hosh

Inner courtyard see (P10 & P11)

(P7)

Main court   Second court   Store zones   orchard   Houses

Stairs   – – – The twisted entrance   Stable horses   Semi-public zone "Diwan"

First floor plan

Two rooms

Main court

Second court

Inner court behind the main court

Distributor entrance for two houses

Path toward the entrance

Small court

(P1) (P2) (P3) (P4)

(P2, P3, P4)
The "qantra" room, shot under it beside its elevation above the main entrance, to enhance separation between street and hosh

(P4) (P5) (P6) (P7)

(P4, P5, P6, P7)
Various type of stairs (to enhance attaining visual privacy)

(P8)

(P11)

(P9) (P10)

(P8, P9) The meshrabiya openings on the façade and the evidence of its existence before replacing with aluminum cover
(P10) Shot within an inner courtyard in the hosh
(P11) The entrance of this inner courtyard from the hosh path

(P12): Ariel photo of the hosh

(P13) Panorama view for the hosh and how the building fabric formed its boundaries

Public street   Indicate toward some inner courtyard

The path of the hosh   Square boundary

Figure 114: Analyzing the building elements category among Al-Jitan hosh (Maps from Nablus municipality, capturing the pictures and editing the drawings by author)

Shots for some elevations

(P1)

(P2)

(P3)
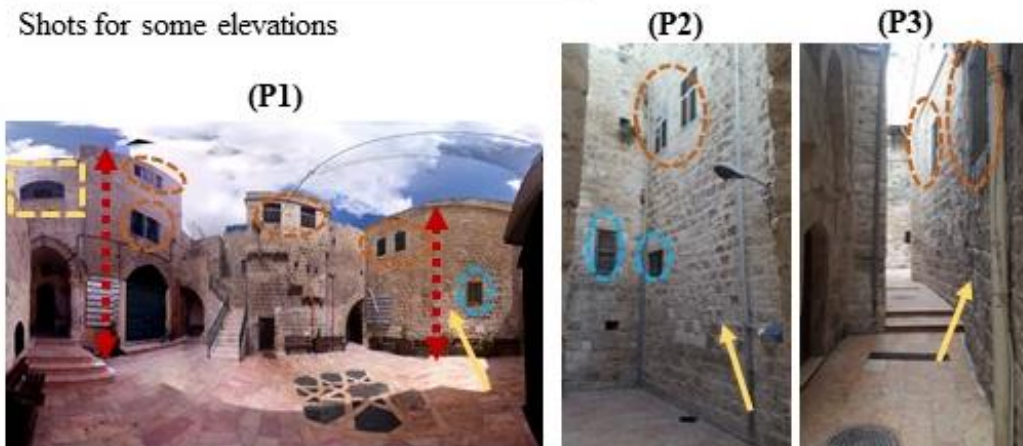
(P1): Panorama shot for the elevation of the main square
(P2 & P3): Shots through the paths of Al-jitan hosh

Virtual sections

Little orientation toward the exterior courts

Commonly toward the inner courts

Narrow path

The main square

Semi-public "diwan"

⭕ High opening	🔵 Small & low opening	⬜ Opening with meshrabiya cover	⬆ Indicate toward the Blanked façade
⬛ Entrance opening	⬜ Closed facade	⬆⬇ The height	🟥 The human scale
⦙ line of sight couldn't penetrating the house		⦙ line of sight could penetrating the house	

Figure 115: Analyzing the height and orientation category among Al-Jitan hosh (Maps from Nablus municipality, capturing the pictures and editing the drawings by author)

Analyzing the spatial organization

Space segregation

Public zones

Segregation occurred among the long and twisted entrance with stairs

First court

The second part

Second court

The first part

Segregation occurred among the path between this two courts

Houses zone

Stairs for segregation vertically

Semi-public spaces

Hierarchy of space

Public street

Semi entrance

Semi- Public court

Semi- Private path

Private houses

Annexing zones

Vaults that carry the qantara rooms

Main court

Semi-public diwan

Distributing functions

Residential houses around halls or inner courts, stairs

Court, semi public diwan and stable, services

Residential rooms
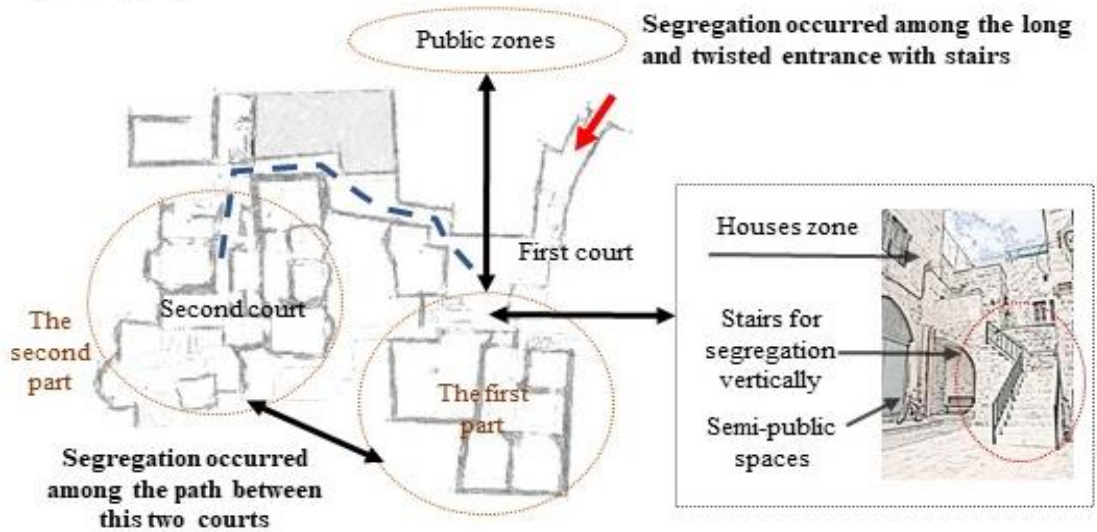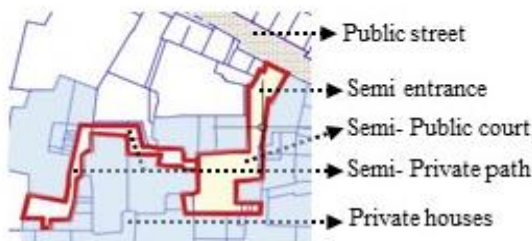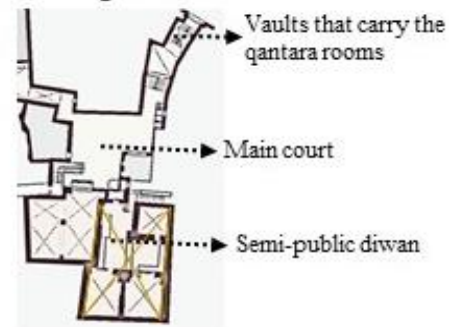
Services for houses, halls, courts
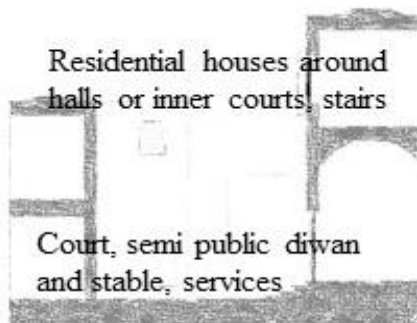
Around the exterior courts

Around the path

Figure 116: Analyzing the spatial organization category among Al-Jitan hosh (Maps from Nablus municipality, editing drawings by author)

Visual Privacy in architectural aspect		
Building elements	**Main role in attaining visual privacy**	**Number of figure**
Entrance	• Long curved path with stairs in the main entrance • Halls and small vestibule for the houses entrance	(1 & 2)
Courtyard	• Two courts along the path, one of them set as semi-public space for the hosh • Distributed inner courts among houses	(3)
Spaces	Utilized "qantra" rooms along the path, semi-public "diwan"	(4 & 5)
Opening elements	Meshrabiya type toward the main court, while other are small and high	(5)
Boundaries	The building fabric of the house beside small garden	(6)
Height and orientation	**Main role in attaining visual privacy**	**Number of figure**
Height of buildings	Three floor	(7 & 8)
Openings location	Toward inner courts and sometime toward the exterior courts but small and high above human scale, never opposite.	(8 & 9)
Orienting the complex and dwellings	Toward their inner courts while semi public function toward exterior courts	(10)
Relation with other	Regulate the line of sight on courts direction or path	(7 & 8)
Treatment of façade	Control the thickness of the wall beside being almost blanked	(8 & 9)
Spatial organization	**Main role in attaining visual privacy**	**Number of figure**
Space segregation	Utilized long path and qantra toward the hosh Used stairs and path inside the hosh	(2, 4,11 & 12)
Hierarchy of space	From public street toward private houses	(13)
Distributing functions	• dwellings on the second part and floors • Semi-public function arranged on the ground floor	(14)
Specific spaces	Main courts, "diwan", qantra	(3,4 & 5)
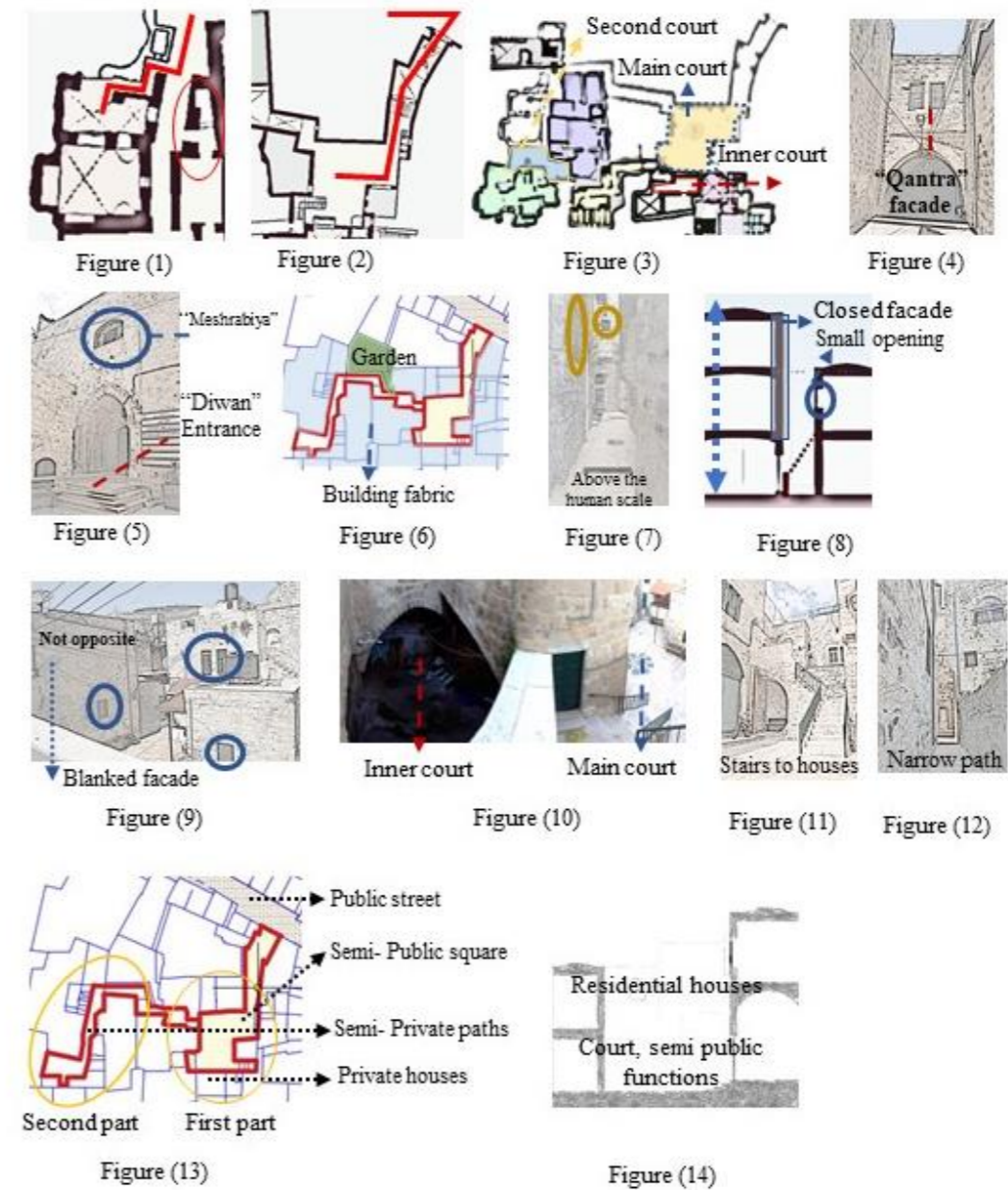
Figure 117: Main architectural aspects among Al-Jitan hosh- in achieving visual privacy (Created by author)

3.6 Evaluating Physical Patterns

Amidst the urban scale of the old city of Nablus, several physical patterns could be extracted under the visual privacy considerations. For more clarification, the further analyzing will be focus on Al-Qaryoun neighborhood particularly, for its prominence as it one of the most important regions from ancient time, most of its buildings returned to Ottoman era and still usable there. Within it, various physical patterns categories like space hierarchy, the line of sight regulation, distributing function, building styles and distances between neighbors, could be extracted from this district to complement the purpose of this thesis.

3.6.1 Extract Pattern in Al-Qaryoun Neighborhood

Al-Qaryoun neighborhood is located in the middle of the old town of Nablus. It is located between Al-Gharb and Al-Yasmeneh neighborhoods to the west and Al-Aqabe and Al-Habaleh districts to the east. This neighborhood gives a high sense of antiquity from the significant buildings there, that help make it distinct from other neighborhoods and gives it cultural importance, like Tokan palace, Abdulhadi Palace, Nabulsi mansion and soap factory, Hachim mansion etc., the existence of the main historical center of the old city, and various traditional elements that are used there like the arches, qanater, meshrabiya, etc. beside famous mosques, soap factories and sorts of shops that attract people to the region. Also, the existence of a specific water, which is Al qaryoun spring, enhanced its significant

Specifically, the level of visual privacy has been considered on the whole region despite the mixed functions in it. To emphasize, although the main square 'Al Nasir Square' gives the feeling of a social and commercial area with its shops, the adjacent residential complex "Ahwash" give a sense of privacy and identify the region as a

residential area, moreover several patterns to provide segregation between the most public areas and most private zones of the house are observed in this district, later it will be clarified through the main patterns categories (Figure 118).
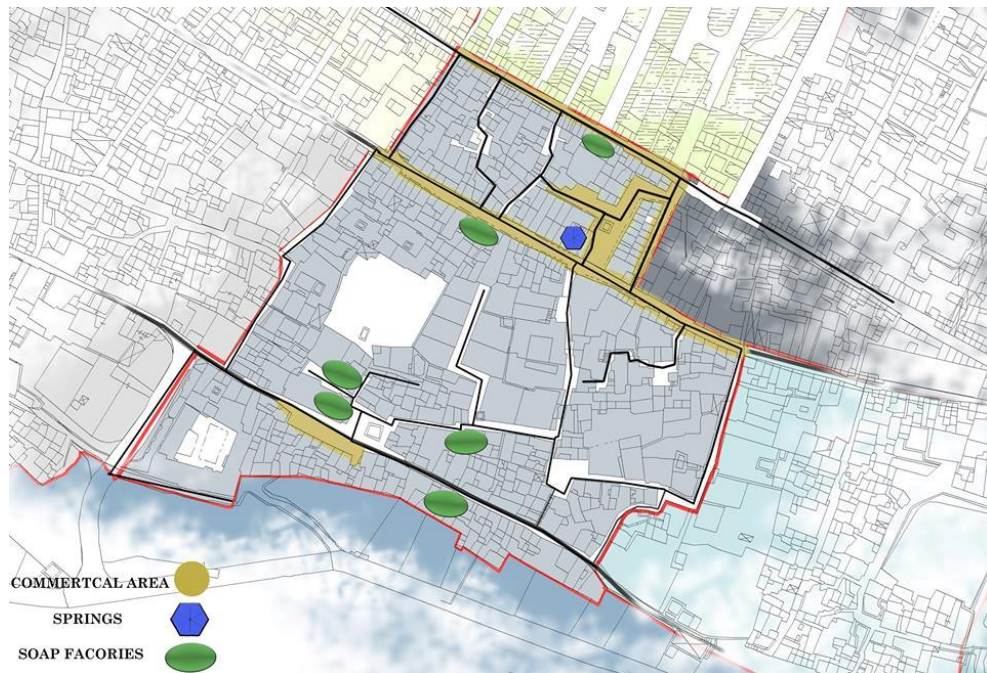
Figure 118: Al-Qaryoun boundaries and main facilities; commercial area, spring, soap factory (Created by author)

Hierarchy of spaces: The progression of spaces from the public region to the private zones of residential buildings has contributed in attaining a high level of visual privacy. This hierarchy achieved through the semi-public paths that arranged to connect the major or minor public street and semi-public paths, to reach the semi-private "Ahwash" spaces and paths in most cases or toward various sizes of halls and stairs in the single houses, mansions, and palaces, before entering the private residential zones.

Openings and paths: The passengers within any path either if it public or not, could not penetrate any inner private zone in the adjacent residential building to the paths by his line of sight, by dint of the height, treatment of façade, size of openings, sorts of

wooden covering if it possible, broken pathway, indoor courts and the width of the paths which usually were narrow, which makes it hard to look at the full facade of the surrounding buildings. These pathways act as a maze to help provide privacy to the courts and houses. In contrast, when the width of the road permits for any inner sight, the elevation neglected from any openings. The openings of any house could not catch any vision toward the neighbors through raised walls, directed toward the courtyard, and distribute the semi-private squares or paths for Ahwash (Figure 119).

Distributing functions: The public or semi-public functions like shops, mosques, and soap factory arranged around the public streets and squares, while the residential zones set in the upper level with almost hidden paths for entrances, which are observed to use by their inhabitants. So, the visual privacy preservation attained through dispensing zones.

Building styles: The sorts of the building types in the region play a role in attaining visual privacy, as the palace arranged on the slope of the hill of this neighborhood, also the inward direction of it toward its various courts and garden prevent any vision toward the Lower and adjacent residential houses. Kind of multi-story houses arranged in the public street path to prevent any vision from the passengers, besides several types of compacted residential complexes with each other, multi-story or courtyard styles of mansions and small single houses. Hence the styles of the buildings corresponding to their location to attain a high level of visual privacy protection. Additionally, in general the form of the buildings reflects its function like the mosques and the residential areas are deep in the district and private.

Distances between neighbors: The distances between neighbors depend on the location of the houses; the major pattern in the residential complexes was zero-distance between adjacent residential houses, as the majority of the facades are directed toward the inner courtyards, small halls, and semi-private spaces. While among the main street areas, the houses were directed toward the street from one blanked façade and closed from other directions toward neighbors' directions. The various width of paths arranged between the houses for ventilation or movement and access purpose, the plurality of them are narrow, just for human usage to enhance visual privacy. Thus, the distance pattern used to be closed with the inward orientation to achieve visual privacy (Figure 120 and Figure 121).

Physical patters in Al qaryoun district

The site plan
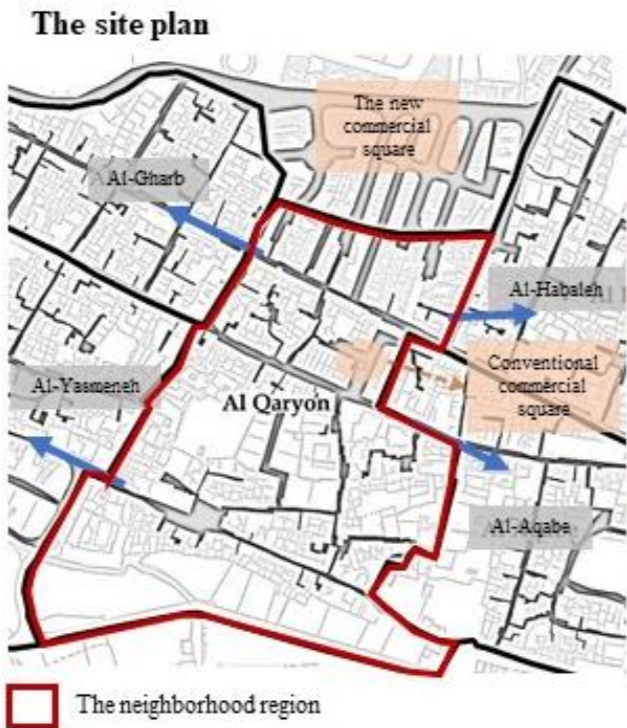
P(1): Main commercial square "Al-manara" or "Al-Nasser"

P(2): From the square toward residential zones

The neighborhood region

Hierarchy of spaces

Al Gharb

Al Qaryon

Al

100 50 0 100
Meters

Major roads (public)

Passable minor roads (public or semi-public)

Unpassable and "ahwash" roads (semi-private)

Main squares (public)

Toward residential zone / Toward semi-private path

P(1) P(2) P(3): Distributor semi-public hall

Hierarchy of paths represented by shots (utilized "Qantra" rooms)

Toward residential zone / Public square

P(4) P(5) P(6)

Toward semi-private path / Public square / Twisted path / Public square

P(7) P(8) P(9): How the paths distributed in hidden way from the square

Openings and paths

Al-Nasser street
Al Qaryon
Al-Qaryoun street

Blanked façade & long path
Blanked façade
High openings

P(1) P(2) P(3) P(4) P(5)

Twisted path
Distributor paths with blanked facades
High openings
Twisted road
Turned path Toward Al-Qaryoun square

P(6) P(7) P(8) P(9) P(10)

Note:
The photos from 1 to 10 represented how the line of sight for the passenger regulated to attain visual privacy for the adjacent housing in this path between the main two streets in this neighborhood

Shots among the neighborhood indicated how the line of sight pattern acquired

P(12): Openings directed toward the roof of neighbors to prevent any unwanted sight from the house

P(12): Section illustrated how the width regulate the line of sight

Narrow street

P(11): Meshrabiya openings toward Al-Nasser street

P(12): Blanked elevation with very high opening when the road width and mansion location allow line of sight to reach inner environment

Figure 119: The location and analyzing of the physical patterns in Al-Qaryoun (Maps from Nablus municipality, editing drawings by author)

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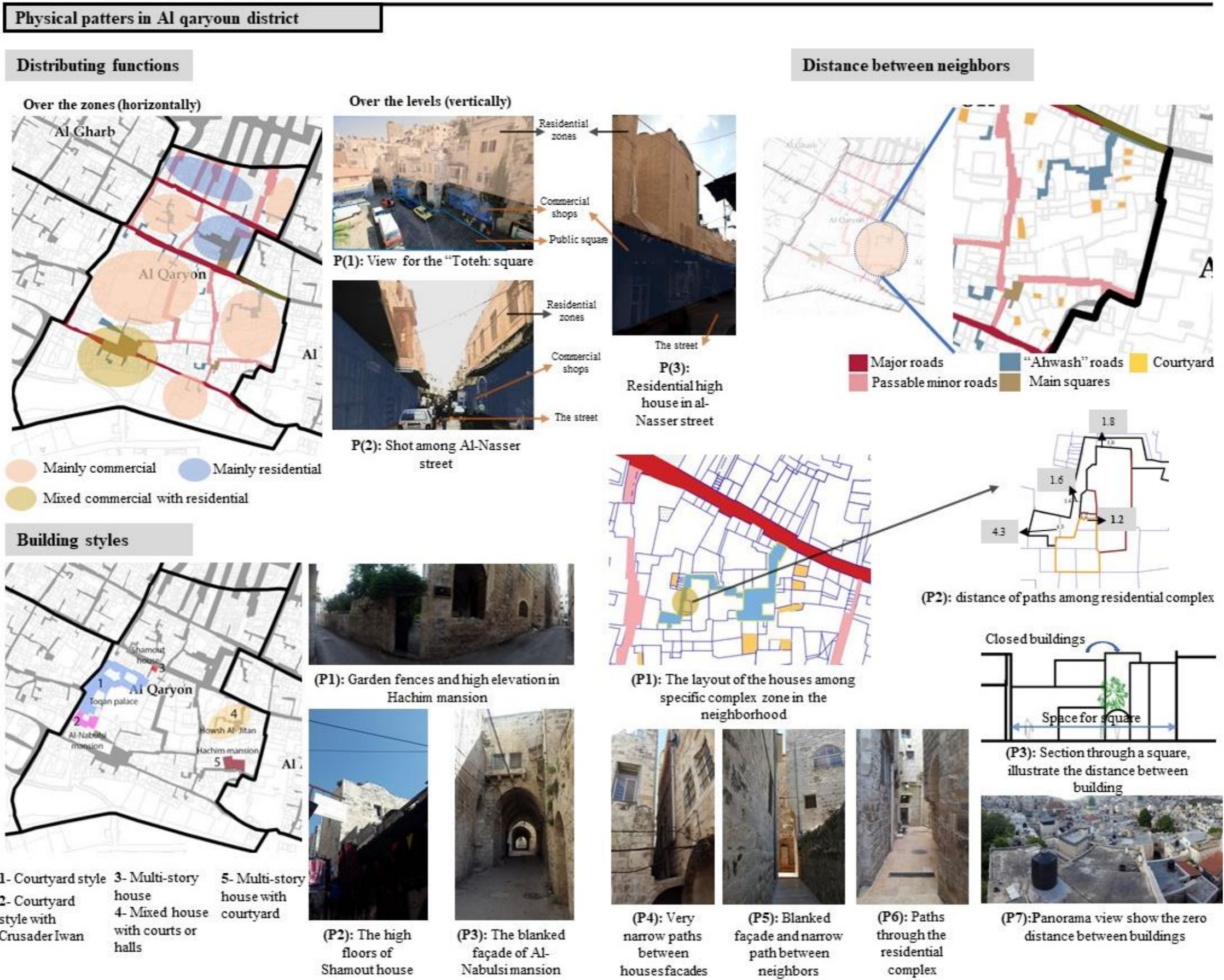
Figure 120: The analyzing of the physical patterns in Al-Qaryoun neighborhood (Maps from Nablus municipality, editing the drawings by author)

Visual Privacy in architectural aspect		
Physical patterns	**Main role in attaining visual privacy**	**Number of figure**
Hierarchy of spaces	Provide semi-public and semi-private paths and spaces	(1)
Openings and paths	Regulate the line of sight Never set opposite openings without proper modification	(2)
Distributing functions	Commercial zones around the street directly while residential zones behind them or in higher level	(3)
Building styles	Courtyard houses style, multi story or houses with lounge arranged in the proper location	(4)
Distances between neighbors	Almost little distance or zero spaces between houses except streets or squares zones.	(5)

Figure (1): hierarchy of spaces over one zone in Al-Qaryoun district

Figure (2): Regulating line of sight among paths

Figure (3): Distributing functions over one zone in Al-Qaryoun district
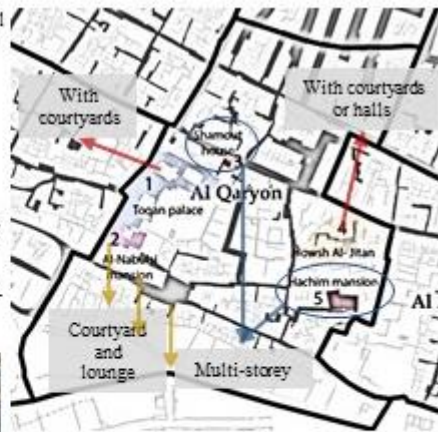
Figure (4): Various types of residential buildings in this district

Figure (5): adjacent buildings and some spaces to form the paths and squares

Figure 121: Main architectural aspects among Al-Qaryoun neighborhood- in achieving visual privacy (Created by author)

3.7 Evaluating Visual Privacy in the Old City of Nablus

Selected examples were analyzed to extract how the visual privacy specifically was acquired according to the physical parameters of the building scale and the physical patterns of the urban scale. Thus, under the parameters category, there are three main traits with their associated issues; they are the elements of the building, the height and orientation, and the spatial organization. Meanwhile the patterns are comprised of a hierarchy of spaces, regulating line of sight, distribution of functions, building styles and regulating adjacent distances. Through trial and evaluation of various combinations of these traits at different scales on the eleven examples, numerous results and recommendations for achieving visual privacy were developed for contemporary design.

Considering the building-elements category, several observations for each component are described: the entrances for each case have been modified by various methods but all common in achieving visual privacy. It is observed either that the entrance leads to a staircase up to the house entrance at a level higher than that of the public road, or the entrance opens to a winding corridor, vaulted space, hall, or vestibule initially then leads to the entry of the house or to an inner court. Alternately, some entrances are arranged after some alleys, dead-end paths, or squares in Al-Ahwash residential complexes. When the scale of a residence becomes larger these methods are applied to the main entrance before reaching a secondary entrance inside the building.

In most cases it was necessary to employ various sizes of courts or spaces dedicated to ventilation and orientation of the building for high percentages of visual privacy. Relatedly, it was determined that there is one central courtyard in most cases; it is

annexed to other small courts in mansions or big houses, while in palaces other additional courtyards exist. Numerous spaces like diwan and iwan are smaller vaulted spaces opening to courts in most cases and used for living functions. A qantara room is erected above a vault to acquire a progression of visual privacy from the adjacent path; it provides a ventilated room with high degree of visual protection due to its height. A rewaq path affords open and shaded space while preserving visual privacy. Moreover, in some examples a central hall or crusader iwan may be utilized as an alternative to the courts.

Residential buildings with openings directly adjacent to public space, such as roads, have taken the issue of privacy and visual perspectives into account in their design. They are usually small, narrow, set above the human-scale level when possible, and off-set in comparison to the inner openings toward courts or rooms. In contrast when openings are wide or big, wooden coverings called meshrabiya is arranged in three panels (one to the front and one to each the side to encase the opening). meshrabiya is carved wood with small holes in decorative patterns such that the interior user can see the exterior environment without any kind of visual penetration from passers-by. Another kind of opening is very small openings and called talakat. These occur in the palaces or mansion fences, are mainly use for defense purpose and secondarily provide high visual protection.

Boundaries and fences around residential buildings at various scales also play an essential role in achieving visual privacy. Commonly the adjacent building fabric that surrounded each analyzed example determined the shape of boundaries while its height and proper orientation attain visual privacy. In some examples, the walls of the

buildings themselves formed the boundaries. In other cases, adjacent gardens complete the visual protection. Wall-like fences are not as common as closed buildings in the urban fabric of the old city but when they were existed, they contribute to achieving visual privacy (Table 1).

Table 1: The building Elements category among the cases in the old city (Created by author)

Examples \ Categories		Entrance	Courtyard	Spaces	Opening elements	Boundaries	Fences
Tokan Palace	Yes\No	Yes	Yes	Yes	Yes	Yes	Yes
		Vaulted, Long, twisted path, stairs & vestibule	Four courtyards	"diwan, Iwan & qantra"	single or double high openings & "Talakat" openings	Building fabric of neighbors & garden	High wall surrounded the garden
Hachim mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	Yes
		Small hall and long path	One center court to direct openings to it	Two Rewaqs zones	One "meshrabiya" Small for low and single or double for high level	Surrounded garden The walls of the mansion	Surrounded wall
Abdo mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		vaulted hall and some stairs	One in front court & small one for service	Diwan & Iwan	Wooden coverings over all of them	Adjacent buildings	----
Al-Masri mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Small hall and stairs	Three courtyard for each part	Iwan & vaulted path	Single & double on high and small on low level	The mansion elevations	----
Ashour mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Twisted hall & long stairs	Two courts	"Iwan", rewaq, qantra	Meshrabiya opening, Single & double on high and small on low level	The mansion elevation & garden	----
Al-Nabulsi mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Long hall and stairs	One courtyard	Crusader Iwan	Single & double on high	Adjacent neighbors & elevations of mansion	----
Shamout house	Yes\No	Yes	Yes	No	Yes	Yes	No
		Long vestibule & stairs & halls	Back courtyard & small court	----	Meshrabiya opening, Single on high level	The elevations of house & neighbors	----
Al-Amad house	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Small hall, twisted path and stairs	Three courtyard	Crusader Iwan	Different size of Iwan spaces	Building fabric of neighbors & the elevation of house	----
Arafat house	Yes\No	Yes	No	Yes	Yes	Yes	No
		Stairs, long, narrow path & hall	----	Central hall	Meshrabiya opening, Single on high level	Adjacent building fabric of neighbors & house elevations	----
Al-Jitan hosh	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Long curved path, stairs beside halls & vestibule for houses	Main courts beside small ones for houses	Qantara & Diwan	"Meshrabiya" opening and single high ones	Building fabric of houses & garden	----

Equally important in achieving the desired visual privacy are the height and orientation parameters of the buildings. To clarify, the heights of the selected cases varied from two to three floors above street level, which prevented any visual exposure. As well, the location of the window openings assisted in acquiring the demanded level of visual privacy. Wherever there is a court, wider openings face toward it while smaller and restricted windows face the exterior environment. When there is no court and the openings face the exterior, the windows were set at very high levels compared to eye level with specific openings like wide openings covered with meshrabiya. For privacy, the majority of the cases were oriented toward the inside courts or openings with restricted access to the outside. All openings when facing the exterior environment are composed location, height, and styles to acquire visual privacy.

Furthermore, the visual relationships between surrounding neighbors should be modified by the line of sight to preserve privacy from-to both neighbors' interior spaces; from within the building itself looking toward adjacent neighbors or from the passersby in the public spaces looking toward the house, no one should be able to visually penetrate the structures. This issue has been addressed by adjustments to the height of the buildings and openings as well as some specific treatments to the façades. Controlling the walls to be thicker near the street helps prevent any sight from passersby and neglecting the facades from any openings toward the streets or neighbors, when the thickness or other parameters couldn't prevent visual penetrations. Similarly, a few site plan modifications, like creating gardens in front of the exposed side, have been utilized for visual privacy under this category (Table 2).

Table 2: The Height and orientation category among the cases in the old city (Created by author)

Examples \ Categories		Height of the building	Openings location	Orienting of dwelling	Relations with other	Treatment of facade	Site plan issues
Tokan Palace	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Three floors	Toward courts, high openings to outside	Toward courtyards	Regulate line of sight	Control thickness, neglected walls from openings	----
Hachim mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	Yes
		Three floors	Above human scale, wide to court, small to outside	Toward garden & courtyard	Regulate line of sight	Control thickness & blanked exterior façades	Surrounded by garden
Abdo mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	Yes
		Tow and Three floors	On high level	Toward adjacent buildings	Fixed the line of sight	Control thickness	In the past surrounded by garden
Al-Masri mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Two floors	Above human scale, wide to court, small to outside	Toward courtyards	Regulate line of sight & prevent openings toward neighbors	Control thickness	----
Ashour mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Three floors	On high level & toward courts or garden	Toward courtyards & garden	Regulate the line of sight, blanked façade	Control thickness	----
Al-Nabulsi mansion	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Two and Three floors	wide to court, high to outside	Toward courtyard and toward outside	Regulate line of sight & blanked facade	Control thickness, neglected walls from openings	----
Shamout house	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Three floors	On high level & toward court	Toward back court	Regulate the line of sight, blanked façade	Control thickness	----
Al-Amad house	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Two and Three floors	wide to court, high to outside & meshrabiya covering	Toward courtyards	Regulate line of sight	Control thickness, neglected walls from openings	----
Arafat house	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Three floors	On high level	Toward exterior court & central hall	Regulate the line of sight, set two entrances	Control thickness & neglected façades	----
Al-Jitan hosh	Yes\No	Yes	Yes	Yes	Yes	Yes	No
		Two to Three floors	To inner or exterior courts, some openings to outside & Meshrabiya covering	Toward inner or exterior courtyards	Regulate line of sight	Control thickness, neglected walls from openings	----

For visual privacy, the spaces between the buildings in all the examples have been organized according to the discussed parameters. The segregation between buildings is exploited by spaces to enhance visual privacy. Spaces such as stairs, courtyards, halls, and iwan are utilized to separate functions, gender, or direction to provide more visual privacy. In like manner, the hierarchy of space usage adopted in all the cases is applied horizontally on every floor, specifically the ground level, and vertically. The further from entrances and the higher from the ground, the more privacy increases. The various shapes or sizes of entrances, hall, stairs, paths, and vestibules have been employed to progress from the public or semi-public path toward the most private zones; correspondingly visual privacy performs in a similar hierarchy.

Equally other parameters have been observed among the cases, such as the distribution of functions and annexation of zones. Commonly the less private functions, like hosting occur in semi-public zones of the ground floor in the examples. Social-living, services, hosting (with guest rooms in some cases), are arranged in the lowest floor of the building beyond the progression through the entrance. Conversely, the most private sections or rooms are organized in the upper floors. To emphasize, in each palace or mansion there is a domed room or separate section on the highest floor, which is the private quarters of the possessor of the building, to increase overall privacy as well as visual privacy (Table 3).

Table 3: The spatial organization category among the cases in the old city (Created by author)

Examples \ Categories	Yes\No	Space segregation	Hierarchy of space	Distributing functions	Annexing zones
Tokan Palace		Yes	Yes	Yes	Yes
		Utilized stairs, courtyard and paths, Erected "haremlik" and "zalamlik"	From public street toward private parts of the palace	Gf: for guesting & public functions, Other for residential parts on each sections	Main courts, "diwan", "zalamlik & Haramlik
Hachim mansion		Yes	Yes	Yes	Yes
		Separate parts by entrances & stairs	Horizontally (semi-public halls and path & semi-private distributors) beside vertically by stairs	Gf: for guesting Other for residence	Utilizing "rewaq" spaces
Abdo mansion		Yes	Yes	Yes	Yes
		Utilized stairs	Horizontally (semi-public vaulted hall semi-private stairs) and vertically by stairs	Gf: for guesting & services Other for residence	Utilizing Iwan and vaulted space
Al-Masri mansion		Yes	Yes	Yes	Yes
		Separate parts by stairs and courtyards	Horizontally (semi-public hall & semi-private court) beside vertically by stairs and courts	Gf: for guesting, services & dwellings Other for residence	Utilizing Iwan & vaulted space
Ashour mansion		Yes	Yes	Yes	Yes
		Utilized courtyard, stairs and Iwan	Horizontally (semi-public hall & semi-private court and stairs) and vertically by stairs	Gf: for guesting, services & dwellings Other for residence	Utilizing Qantara, Iwan and rewaq
Al-Nabulsi mansion		Yes	Yes	Yes	No
		Separate parts by stairs and courtyards or halls	Horizontally (semi-public hall & semi-private distributors) beside vertically by stairs	Gf: for guesting & services Other for residence	----
Shamout house		Yes	Yes	Yes	No
		Utilized stairs	Horizontally (semi-public vestibule & semi-private court then stairs to vertical progression	Gf: for movement Other for residence	----
Al-Amad house		Yes	Yes	Yes	Yes
		Utilized stairs, courtyard and halls	Horizontally (semi-public hall & semi-private stairs) beside vertically by stairs	Gf: for guesting & services & living Other for residence	Various sizes of Iwan
Arafat house		Yes	Yes	Yes	No
		Utilized stairs	Horizontally semi-public path & semi-private stairs to vertical progression	Gf: for Living, service & guesting Other for residence	----
Al-Jitan hosh		Yes	Yes	Yes	Yes
		Utilized stairs, courtyard and paths	Horizontally (semi-public path& spaces & semi-private stairs) beside vertically by stairs	Gf: for guesting & services Other for residential parts	Main courts, "diwan", qantra

Besides all the parameters on the building scale, visual privacy aspects have been detected through various patterns at the urban scale. The most important and prominent of them is the hierarchy of spaces through a progression from the most public squares or street until reaching the most private house zones of the house. Techniques for building this hierarchy include differing widths of paths so that the most public paths are wider than the narrow, semi-private paths. Stairs, vaulted zone, and qantara rooms are also utilized to control lines of sight and indicate to the passersby that there is progression in the privacy level. Hence between neighbor this acquired pattern comprises one of the urban-scale means of considering privacy in the old city.

The façades facing the paths, especially those of residential buildings, are almost empty except for some high, small openings. Such openings never are opposite those of other neighbors across the paths. Also, the entrance openings are always arranged along twisted paths, differ in size and shape according to the scale of the house, and never are directly opposite the doors or halls of nearby residential buildings. So, along the whole path network regardless of path size or degree of privacy, passersby can never catch any forbidden views and visual privacy is enhanced.

Again, distribution of functions is observed at the urban scale to enhance visual privacy. Whereas the commercial areas, public squares, and associated functions are sited on the edges of the public streets or between them in an obvious way, the residential zones and buildings are arranged in a hidden way behind those public functions. Upon transition from public/commercial areas to private/residential areas, the differences in path widths, materials and facade characteristics become apparent. Furthermore, the form of buildings corresponds to the location and function in such a

way that appropriate levels of privacy are attained for the users. When adjacent to public path, the majority of the examples of multi-story houses are arranged around central courtyards to accommodate the back-to-back building fabric.

A progression pattern of distances between neighbors is promoted to attain visual privacy too. The common distances between residential neighbors is zero or too narrow for a human to fit through, whereas the public streets and semi-public paths are arranged for human passage and various modes of transportations in the past. Because of these urban-scale arrangements, from the further point the human line of sight cannot penetrate the private zones of residential complexes (Table 4).

In essence, among the ten selected housing examples and the selected neighborhood in the old city of Nablus, the physical parameters and patterns are almost alike in utilization but vary in the size or shape according to the financial state and social strata of the inhabitants of the residential building. This confirms the importance of visual privacy in conventional cities and Nablus' old city specifically. From these, new proposals can be devised for contemporary design in residential buildings especially according to visual-privacy values. Tested and proposed design elements which support visual privacy are urgently needed to serve as alternatives to the random modifications by inhabitants in contemporary regions and contemporary styles of buildings.

Table 4: The physical patterns among Al-Qaryoun neighborhood (Created by author)

Categories\ Example	Al- Qaryon neighborhood
Hierarchy of spaces	• Several spaces observed to employ hierarchy between two main squares and two streets • Streets distributed to be public or semi-public for general users and semi-private inside the hosh • Qantra rooms in the building level utilized to provide the sense of hierarchy
Openings and paths	• Never catch sights from the passenger toward the house, the line of sight regulated properly • Never arrange opposite openings or entrances • Provide proper modification like wooden coverings for wide openings
Distributing functions	• The commercial functions arranged around the streets and squares • Residential zones not in the direct face after twisted paths. • In the case of houses adjacent to public spaces, the residential spaces separated to be in upper floor after one floor for movement
Building styles	• According to the nature of the location or adjacent functions the styles of the house arranged • Almost were Courtyard houses, multi storey with halls, or mixed styles.
Distances between neighbors	• Zero distance between residential neighbors • Very narrow semi-private path • Mediate for human and animals in semi-public path • Little wide for human, animals, one car later in public street. • Almost rectangular shape for squares (wide spaces)

3.8 Results from the Discussion and Analysis

For the purpose of delivering numerous suggestions to aid and direct contemporary design toward considerations of visual privacy, sincere attention should be directed toward the results of earlier analytical processes. Alongside some limited former success in achieving visual privacy among residences in contemporary Arab regions, various recommendations from former observations and interpretations of the analyzed examples will offer options for further residential development and later implementation.

From the selected examples - despite their differences in area, location, space type, or path width - certain building elements proved to solve for ultimate visual privacy. For more clarification, the entrance zone is intended to segregate the residence from the public street via stairs or twisting, vaulted paths for example, and it should never be opposite a neighbors' entrance. Another element, the courtyard is considered to be a private zone; if guest-related functions would penetrate its privacy or the adjacent street is very public, alternate courts in upper residential floors are annexed for private use. In some cases, the courtyard is replaced by specific central zones. Alternatively, coverings over wide openings to paths, fences or landscaped boundaries are adopted when necessary (Figure 122)
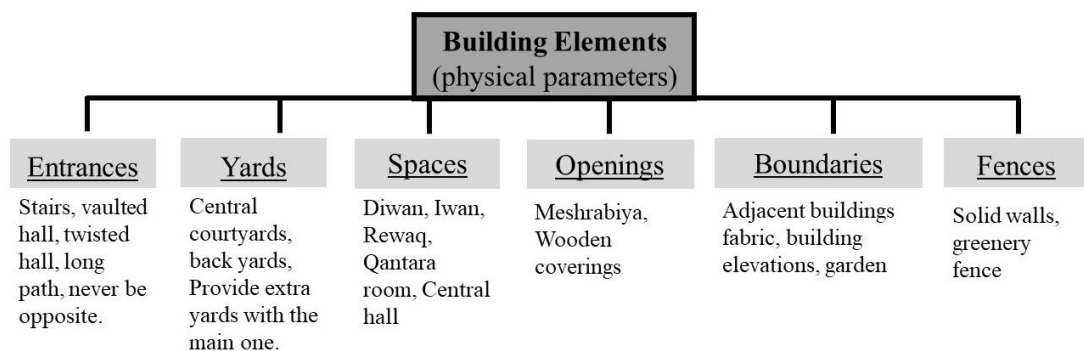
Figure 122: The main results of building elements category (Created by author)

Equally significant aspects in acquiring visual privacy are the height and orientation parameters. Commonly noticeable is the asymmetry of building heights with between two or three levels and without any sort of overlooking buildings in-between. It is customary for windows to be small and above eye-level where lower floors are beside paths. At the same time, upper floors are never exposed to adjacent neighbors because of employment of proper orientations, window-coverings techniques, adjusted wall thicknesses, and closure of line of sight between occupants and passersby or neighbors (Figure 123).

Height & Orientation (physical parameters)					
The height of buildings	Opening location	Orienting the dwelling	Relation with other	Treatment of façade	Site plan issues
Around two or three floors	No direct openings toward street or neighbors, high and above human level	Inner direction, with limited outward orienting	Regulating the line of sight between adjacent buildings	Adjusted the thickness, neglected the façade from direct openings to outside	Arrange sort of garden around the buildings

Figure 123: The main results of height and orientation category (Created by author)

Another momentous parameters observed to obtain visual privacy amid residential places is the organization of spaces. Fundamentally, besides hierarchy of spaces for visual privacy, the concept of segregation involves essential parameters in residential buildings: various shapes of stairs; courtyards; spaces like iwan, diwan, qantara; and paths and halls. Frequently, guest functions and services are positioned nearer to the street whereas other residential zones are set further back, direct sight between guest and residential sleeping spaces in the house are the sleeping rooms, so they are arranged on upper floors, far from semi-private areas. Correspondingly, various zones

like, heramlik, zelamlik and rewaq spaces are annexed in some cases to provide more visual privacy (Figure 124).

Spatial organization (physical parameters)			
Space segregation	Hierarchy of spaces	Distributing functions	Annexing zones
The separation achieved through stairs, courts, spaces & halls according to gender, functions.	On the horizontal scale and vertical scale by semi-public or private zones	The most private on the highest floors then gradually downstairs until reach semi-public or public area.	Haramlik & Zalamlik, Iwan, Diwan, Rewaq, Qantra

Figure 124: The main results of spatial organization category (Created by author)

By the same token, at the urban scale several patterns were observed in the neighborhood; some of them resemble building-scale parameters but in a much broader sense and a wider scale. To illustrate, street or path types are classified according to privacy, while the width of them is adjusted to protect visual access of the residential zones. Heavy blanked façades – with few, high openings - block visual penetration where residential buildings meet public paths. Distributed visible public or commercial functions beside hidden residential zones pick the most suitable style to achieve higher visual privacy from the passersby in the roads. For instance, multi-story houses erected next to public paths or squares may have a very long, twisted path to the interior entrance or in some cases the private court came later (Figure 125).

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                        ┌─────────────────────┐
                        │  Physical patterns  │
                        └─────────────────────┘
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Hierarchy of spaces	Opening & paths	Distributing functions	Building styles	Distances between neighbors
Achieved through sorts of paths or patios between zones.	Regulating the width and locations of openings (windows, doors).	Residential zones not oriented directly toward public squares or street, or around it.	Multi storey,. Courtyard houses, Houses with garden.	Almost small, wide around public streets or squares.

Figure 125: Results of the physical patterns among the selected neighborhood
(Created by author)

Based on the prior results of this study, it is understandable that the old city of Nablus is abundant with various patterns or parameters. This evidence through analyzed the former selected examples in the old city. So those extracted results composed a base to be reiterated in a much contemporary way and fit the psychological aspects and social needs of the Local inhabitants among Nablus city specifically and Palestinian or Arab cities commonly.

Chapter 4

CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Though social values can diversify in several ways, privacy - as a fundamental social value in specific cultures – is more likely to be precisely planned; it directly depends on the beliefs or norms of the society. In such situations, the affinity between the human need and architectural manifestation has expressly been fixed since ancient times because privacy denotes to restriction of interaction with others in the psychological domain and is created via shelters in the physical domain. Therefore, the physical aspects of the architecture of residential buildings selected within this study accurately demonstrate visual privacy.

This selection criterion for visual privacy aspects was established to achieve the study's aim; identify various conventional means of actualizing proper visual privacy in residential environments. Where contemporary house and residential-complex designs are the antithesis to conventional visual privacy in the old districts, random modifications against visual exposure are observed. Individual responses to contemporary designs with visual publicness are noted in the majority of Muslim and Arab countries but specifically in Palestine and especially in the city of Nablus.

Several indicators for analysis about privacy generally and visual privacy specifically were obtained from the literature after deep aggregation of the explanations,

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definitions, regulations, and other issues. From these sources and from case study observations, means of visual privacy were converted into applicable parameters and patterns. They are sufficiently diverse to accomplish visual privacy yet match attitudes or components observed on various scales and building statures. The extracted parameters and patterns were then applied to the ten selected examples and one district in the old city of Nablus. Relying on the analysis, assorted outcomes under each category were utilized as basepoint for suggesting further recommendations to designers and architects of residences, to avoid continuation and exacerbation of the gap between what is demanded and what existed.

The significance of visual privacy is evident through the continued desire to attain it and attempts to simulate conventional methods. To illustrate, the architect Rasem Badran composed a vision for residential buildings to evolve compatibly with local culture and conventional cities without completely imitating them (Al Sayyed , 2012). Internal yards, garden surrounds, close the facades erected at varying levels, and several other components on various scales have been observed among his projects (Figure 126). These trends contribute to fulfillment of visual privacy needs inside the home.

Based on the findings of this thesis via the main categories of physical parameters and patterns, further explorations could be undertaken to evaluate, compare, and measure details of visual privacy. Accordingly, regulation of visual privacy inside dwellings demands the following of architects throughout Islamic regions:

- To diminish random modification by inhabitants.
- To enhance the architectural condition of the city

- To resolve and perfect one of the main socio-cultural concerns of users in the residential domain.
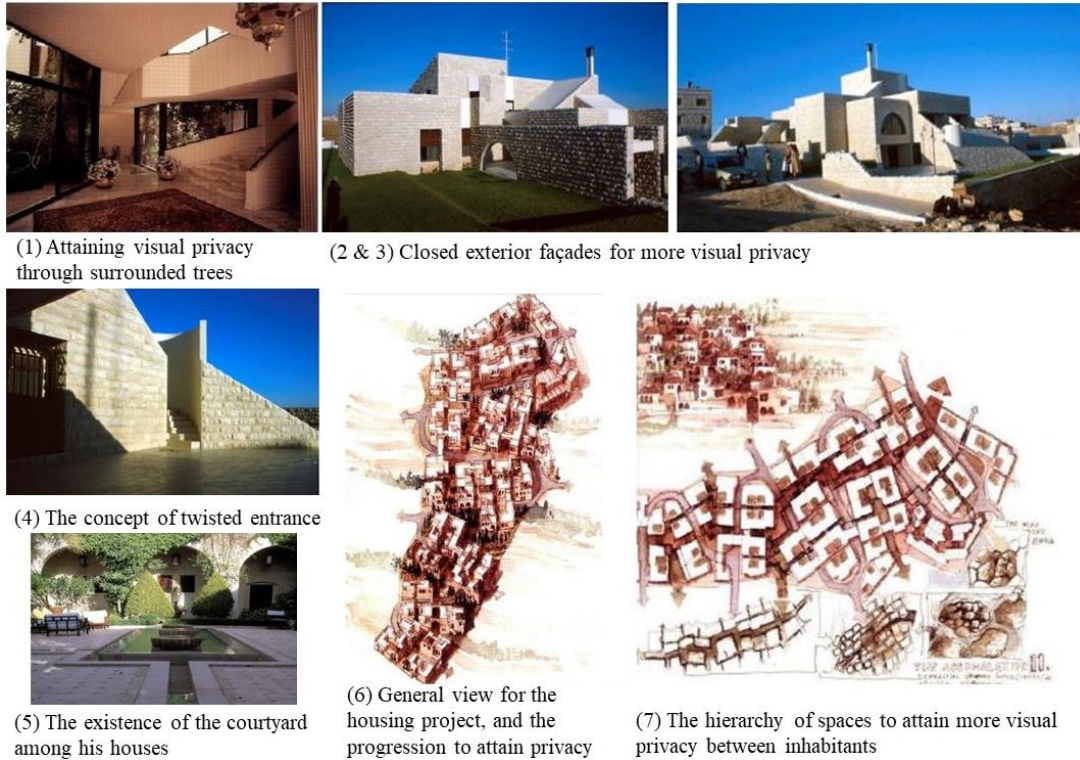

(1) Attaining visual privacy through surrounded trees

(2 & 3) Closed exterior façades for more visual privacy

(4) The concept of twisted entrance

(5) The existence of the courtyard among his houses

(6) General view for the housing project, and the progression to attain privacy

(7) The hierarchy of spaces to attain more visual privacy between inhabitants

Figure 126: Some projects related to the architect Rasem Badran (from (Al-Tawayh, 2011), edited by author)

4.2 The Recommendations

The thesis endeavored to explore how visual privacy in conventional residential architecture can be manifested and replicated in contemporary residential design. This search is crucial for amending situations in current residential complexes or individual residential buildings where the essential socio-cultural value of visual privacy was neglected in design considerations and yet desired by the majority of Muslims inhabitants, specifically in Nablus. For these reasons, this research is a starting point rather than an end point for researchers who are interested in the topic. The current investigation gathered a set of recommendations to enhance visual privacy in residential zones, which have been represented through some conceptual sketches.

In order to achieve visual privacy amid high-rise models of residential buildings in Arab and Islamic countries, descending gradients and privacy screens can be used to shape and segregate dwelling units. Privacy screens block direct visibility between balconies and terraces of opposite and contiguous buildings, providing suitable visual privacy (Sketch 1 in Table 5).

The visual privacy of multi-story residential buildings may be achieved through the work of balconies with vertical retreats, so that the terraces break the direct line of sight and block views into the balconies, with additions such as privacy screens or fences, if necessary. This work efficiently when of views are uni-directional and there are no adjacent or opposite balconies. Hence for the case of Nablus city, a sort of terrace housing style is recommended as opposed to small balconies stacked and in the public view on high-rise buildings (Sketch 2 & 3 in Table 5).

In addition, at the housing-complex or neighborhood scale, visual privacy may be acquired through formation of public, semi-public or private zones delineated by blocks or streets (Sketch 4 in Table 5). Moreover, visual privacy might be attained by orientation of blocks or buildings and increasing the distances between them. A semi-circular segment can direct views away from adjacent buildings; this shape of distribution also increases the distance between adjacent buildings to accomplish more visual privacy (Sketch 5 in Table 5).

At the dwelling scale modifications of specific elements may be implemented to attain visual privacy such as:

- Obscure entrances by designing partitions in front of the entry or create extra turns in the path.

- Within apartment buildings, avoid facing entrances across corridors at those of nearby flats.

- On both the scales of flats and building complexes, reuse meshrabiya-style coverings through transformation of its wooden motifs into more modern-appearing grid patterns mixed with some transparent elements (Sketch 6 & 7 in Table 5).

Simulating the usage of courts is possible through the provision of spaces between houses; by modifications of the laws regarding setbacks between buildings allows space between them for approach from a certain direction. These make private or semi-private yards possible.

Another suggestion that employs courtyards is mat buildings, a modern concept derived from Arabic strategies where courtyards for each flat provide separation between them in a pleasurable way. Mat buildings are in harmony with the geographic situation of Nablus especially and Palestine generally, yet the design is inspired by worldwide experiences (Sarkis, 2001). These buildings emerged in architecture through team 10 in the late 1960's to "generate social interaction across segregated uses" (Sketch 8 in Table 5).

Table 5: Arranging some sketching for the recommendations (Created by author)

Sketches for attaining visual privacy on building or urban scale

Sketch (1)
Proposed horizontal retreats in multi-story residential buildings- to attain visual privacy

Sketch (2)
Proposed vertical retreats through in front terraces

Sketch (3)
3d- view for the terraces housing style

Private blocks

Semi-Private zones (gardens, stairs, for movements)
Semi- Public street
Public street

Sketch (4)
Sketches for the hierarchy of streets among residential zones

Sketch (5)
Suggesting shape of circular segment for the dwellings – to attain more visual privacy

A Twisted long path for entrance
arrange secondary segregated entrance

Long entrance hall with side doors
Small garden between neighbors

A Twisted long path for entrance
Non-facing doors for apartments

Sketch (6)
Some solutions for entrances among the residential complexes- to attain levels of visual privacy

Sketch (7)
Covering balconies by sort of shutters- extracted from the meshrabiya opening

DPA 27/28
MAT-BUILDING

Sketch (8)
Top view and 3-d model for the matt building style from (Brau , 2012) & (Pinterest , n.d.)

At the dwelling or the complex scale, boundary wall and fences are suggested to be arranged in a proper way to attain more visual privacy. In some cases, greenery boundaries on terraces beside small gardens are utilized with similar results. Besides, all sorts of coverings, curtains, and curtain walls might be applied to windows, balconies, or any exposed spaces.

Generally, regulations from municipal governments should be modified to specify suitable guidelines for enhancing visual privacy among neighbors. Strategies like building-height restrictions per the location and according to the lines of sight are becoming more common throughout the world. Also, regulations commonly limit heights to four floors when there is a slope in the land. Regulating building form is more challenging but split-level design of apartments will minimize the sharing of staircases. To outline these regulations more precisely, further study is suggested.

To promote more visual privacy in interior environments, the organization of spaces must be adjusted. Commonly, living and hosting zones should be positioned closest to the entrance while the most private sleeping zones should be furthest from the entrance. As mediator, service zones should be positioned between them. This organization forms a simple hierarchy where segregation can be enhanced by solid or ornamented partitions between zones. As well, such partitions can be used to form a small entrance hall for more segregation. Moreover, on the complex scale and for visual privacy in high-rise buildings, another sort of segregation for stairs between flats is possible besides hierarchy of spaces: long, twisted main entrance paths.

Eventually various recommendations for both physical patterns and parameters are suggested from the analysis. This study serves as a base for further discussions and research evaluating visual privacy matters in contemporary urban areas. Further comparison of utilized elements or patterns from past or present eras will help to continue improving visual privacy strategies. For Nablus, the current topic could be expanded to study and make suggestions for several contemporary regions in this city. Furthermore, the city's distinguished location between two mountains and the associated terrain means that visual privacy issues vary among districts. The combination and complexity of these conditions and efforts could lead in the direction of PhD research or other theses depending on this topic and scope (Table 6).

Table 6: Some recommendations (Created by author)

Physical patterns
• Residential complex with multi storey levels and horizontal gradients . • Employ hierarchy over street before reach the dwellings • Orienting group of separate blocks in circular segments • Regulate the setbacks between buildings • Execute mat building styles or terraces houses complex. • Arrange similar style of buildings beside each other

Physical parameters	
Building elements	• Arrange yards or balconies with vertical retreats • Establish greenery or solid fences • Set twisted entrances (on flat, house or complex scales) • Order halls in different sizes • Reuse Meshrabiya concept and Utilize curtain walls or sort of coverings • Annex greenry boundaries over windows, yards, spaces, etc. • Arranging gardens when it is possible
Orientation & height	• Restrict height of buildings through regulations from the municipality • Regulate the line of sight, avoid opposite openings • The height not more than four floors if there is a slope in the site • Use spilt level inside the multi storey complex.
Spatial organization	• Segregate between zones inside flat through partitions or some stairs • Provide hierarchy by small halls inside flat, single house, high rise complexes • Arrange living and gusting functions near entrances, services mediate between semi-private zone and most private-sleeping. • Attain segregation among complexes by stairs, levels, and non-opposite entrances.

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