THE REPUBLIC OF TURKEY
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URBAN PATTERN AND HOUSING TYPOLOGY OF DAMASCUS: POSTWAR PROJECTIONS FOR SOCIAL SUSTAINABILITY AND RESIDENTIAL PLACE-MAKING

Master Thesis

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THE REPUBLIC OF TURKEY
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Thesis Supervisor: ASSIST. PROF. DR. NILAY ÜNSAL GÜLMEZ

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ABSTRACT

URBAN PATTERN AND HOUSING TYPOLOGY OF DAMASCUS: POSTWAR PROJECTIONS FOR SOCIAL SUSTAINABILITY AND RESIDENTIAL PLACE-MAKING

Kinan Hatahet

Master of Architecture

Thesis Supervisor: Assist. Prof. Dr. Nilay Ünsal Gülmez

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The recent Syrian war has caused a major destruction of Damascus, especially in the war zones, mainly informal settlements surrounding the core of the city in Al-Ghouta. Prospectively, these destructed areas need to be reconstructed, and new residential projects might appear. It is really important to develop new urban patterns and housing designs that would be compatible with the local environment and resources; that would accommodate the high population, and perform efficiently for both healing local people and upgrading the urban fabric. The Syrian people will sure need a safe harbor or a "home" to dwell after the war ends, a home which is socially sustainable to heal, live, and prosper.

Social sustainability is about individuals' "quality of life", now and in the future and place-making is a crucial factor to ensure social sustainability. Place-making is the way, all of us change the places in which we find ourselves in, into places in which we live. Hence, place-making features of Damascus need to be studied for a socially sustainable reconstruction of destroyed parts of the city. Damascus has mainly three types of urban fabrics and related housing stock: Old Damascus with traditional courtyard houses, Modern Damascus with block apartment buildings, and outskirts of the city with mostly informal houses. In each urban fabric, people have created special kinds of communities and sense of place. This research aims at analyzing diverse urban features and related housing stock of Damascus through a conceptual framework developed to reveal the physical and non-physical aspects of place-making. Mainly morphological analysis has been carried out to uncover the physical aspects of place-making while a questionnaire has been designed to learn more about its non-physical aspects for Damascene people. Thus, learning from the place-making features and potentials of Damascus, the research intends to propose design guidelines for socially sustainable reconstruction of destructed zones in urban and housing scale that can inspire happiness, equality, safety, and confidence to the people who suffered and paved the way for a better quality life.

Keywords: Damascus, Social Sustainability, Place-Making, Urban Fabric, Housing Design.

ÖZET

ŞAM'IN KENTSEL DOKUSU VE KONUT TIPOLOJISI: SAVAŞ SONRASI IÇIN SOSYAL SÜRDÜRÜLEBILIRLIK VE YER OLUŞTURMA ODAKLI ÖNERILER

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Suriye'de süren savaş Şam'ın savaş bölgelerinde özellikle Al-Ghouta'da kentin merkezini çevreleyen enformel yerleşim bölgelerinde büyük hasara yol açmıştır. Gelecekte hasar görmüş alanların yeniden inşası ve yeni konut projelerinin gerçekleştirilmesi söz konusudur. Bu süreçte yerel çevre ve kaynaklarla uyumlu, yüksek nüfusu barındıracak ve bölge insanını iyileştirme, savaşın yaralarını sarma potansiyeli taşıyan planlama prensiplerinin ve konut tasarımlarının geliştirilmesi büyük önem taşımaktadır. Suriyeliler şüphesiz savaş sona erdikten sonra barınabilecekleri bir 'yuva'ya, güvenli bir limana, bir başka deyişle iyileşmek, yaşama devam etmek, başarmak için sosyal anlamda sürdürülebilir çevrelere ihtiyaç duyacaklardır.

Sosyal sürdürülebilirlik şimdi ve gelecekte bireylerin 'yaşam kalitesi' ile ilgilidir ve yer oluşturma (place-making) sosyal sürdürülebilirliğin temininde can alıcı bir unsurdur. Yer oluşturma, kendimizi içinde bulduğumuz mekânları yaşadığımız yerlere dönüştürme pratiğidir. Bu nedenle Şam'ın yer oluşturma pratikleri, kentin hasar gören, yıkılan kısımlarının sosyal açıdan da sürdürülebilir biçimde yeniden inşa edilebilmesi için araştırılmalıdır. Şam'da temel olarak üç farklı kentsel doku ve ilişkili konut stoğu bulunmaktadır: Eski şehir ve geleneksel avlulu evler, modern Şam ve apartman blokları ve enformal konut stoğunu barındıran kentin çeperleri. Her kentsel dokuda yaşayanlar kendine has topluluklar ve 'yer' duygusu, 'yer'e dönüştürme/bağlanma pratikleri ortaya koymuşlardır. Bu araştırma yer oluşturmanın fiziksel ve fiziksel olmayan kriterlerini açığa çıkarmak amacıyla, geliştirilen kavramsal çerçeve üzerinden Şam'ın üç farklı kentsel dokusu ve ilgili konut stoğunu analiz etmeyi amaçlar. Yer oluşturmanın fiziksel kriterleri temelde morfolojik analizlerle çalışılmış, fiziksel olmayan yönü ile ilgili veri toplamak için bir anket çalışması gerçekleştirilmiştir. Böylece Şam'ın yer oluşturma pratikleri ve potansiyellerinden öğrenilenlerle kentin zarar gören enformel bölgelerinin kentsel doku ve konut ölçeğinde yeniden inşası için, süreçte zarar gören insanların daha mutlu, eşitlikçi, güvenli yaşamalarına olanak sağlayacak ve daha kaliteli bir yaşamın yolunu açacak bir tasarım rehberi önerilmiştir.

Anahtar Kelimeler: Sosyal Sürdürülebilirlik, Yer Oluşturma, Kentsel Doku, Konut Tasarımı

CONTENTS

TABLES

FIGURES

1. INTRODUCTION

1.1. PROBLEM DEFINITION

In the last two centuries, the world population has increased dramatically from 2 billion people to 7 billion. This high increase has caused many serious problems affecting both the natural and the social environment. The high percent of poverty along with the governments' urban planning failure, mostly in the developing countries, has caused the emergence of informal houses around the world. We have become living in a socially ill world. Even though such areas have major problems regarding infrastructure, sanitation, and aesthetic, they have both negative and positive aspects regarding social sustainability, which is a broad concept that covers many (physical and non-physical) features necessary for a better living. It is evident that there is an urgent need for developing socially sustainable design approaches. Approaches which are appropriate for the regional features of the environment and living patterns should be concerned.

The same applies to major Syrian cities (Aleppo, Hama, and Homs), which require more socially sustainable design criteria. Syria has been the focal point of Islamic empires more than one thousand years, as its primary cities have created along a straight line following the traditional pilgrimage route to Mecca, north to south. Through time, those cities shared similar historical and cultural backgrounds while developing particular features depending on their geographical features and ethnic composition. For instance, Old City of Damascus is one of the world's oldest cities that has been continually inhabited. I believe that there is a lot to learn from the urban features of Damascus and Damascene courtyard houses, regarding social sustainability, which also bear some similarities to other Syrian cities.

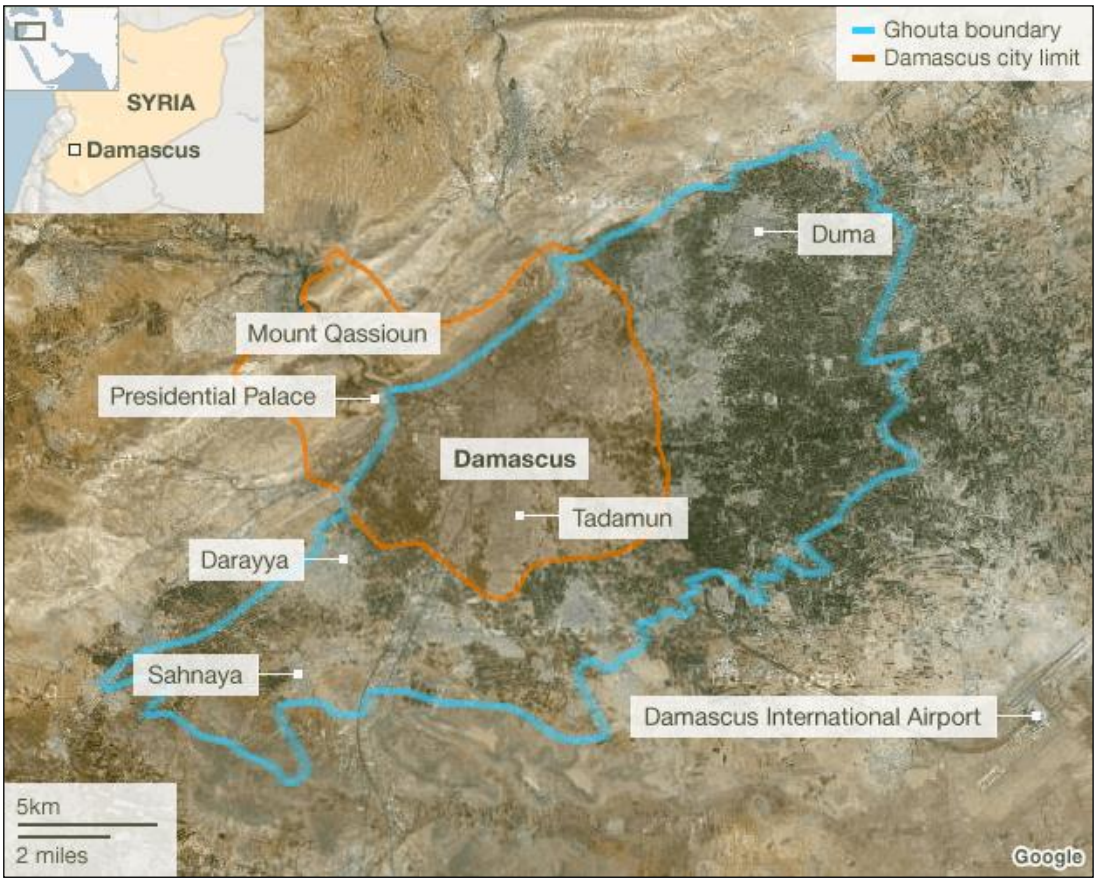
Outside the walls of the Old City of Damascus, a lot of residential buildings have emerged for about 50 years, which have also changed the city's identity and caused many environmental, economic, and social problems. Moreover, the location of Damascus as the center of a large oasis in the dessert, Al-Ghouta, and its high urban growth rate creates further problems given its fragile ecological environment. And because the government

did not establish a system of social housing for the past 50 years, poor immigrants of Syrian cities had to build their homes informally. Eight years ago Zara Lababedi (2008, p.49) wrote that illegal housing settlements have reached 1/3 of the residences in Damascus, and are "the main reason for the destruction of the green surroundings of the city, Al-Ghouta" (see figure 1.1). Furthermore, the recent Syrian war caused a major destruction in Damascus especially in the war zones, mainly informal settlements surrounding the core of the city in Al-Ghouta, which according to the Al-Mostaqbal newspaper, more than 90 percent of its Infrastructure and 60 percent Superstructure have been bombed and destroyed (Anon 2013). That is the same case with other major cities of Syria such as Homs, which according to the Housing and Land Rights Network 2/3 of the buildings were destroyed in 2014 (Anon 2014).

Moreover, Syria has always opened the door for refugees from neighboring countries such as Iraq. After 2003, the estimated arrivals of Iraqi refugees to Damascus only were 1.4 million (O'Donnell & Newland, 2008 cited by Lababedi, 2008). This condition caused many problems regarding the infrastructure and the urban texture of the city. More informal housing settlements have emerged, and more pressure on the existing water supply had led the city to wide water shortages and black-outs (Lababedi, 2008), not to mention the war effects which caused more damage.

Syrian cities after all the disregard and destruction they faced, starting from the years of failure of urban planning policies and ending up with the great devastation of the recent Syrian war, desperately need to be reconstructed. Five years have passed since the start of the Syrian revolution in 2011. The Syrian people have witnessed all sort of destruction and displacement, in search of respectful and decent life. However, most of them lost their homes and had stripped off all their rights and dreams. They will sure need a safe harbor or a "home" to dwell after the war ends, a home which is socially sustainable to heal, live, and prosper.

Figure 1.1: The Outskirt of Damascus (Al-Ghouta) Surrounding Damascus city



Source: http://www.bbc.com/news/world-middle-east-31427471 (accessed 15 December 2015).

1.2. MOTIVATION AND AIM OF THE STUDY

Norman Foster (2014) said "The city is a response to human needs" observing the requirements of the humans who have been directly affected by the crisis. He emphasizes the need for an architecture that not only motivates and strengthens the connections between people of the community but will also have a sense of balance between the present and future. Prospectively, in the future, if the war ends, these destructed areas need to be reconstructed, and new residential projects might appear. Considering the richness of Damascus culture and architecture, which is full of great examples of sustainable Damascene houses, it is really important to develop new urban designs that would accommodate the high population, be compatible with the local environment, and

most importantly that would perform efficiently healing both local people and urban fabric structure. Moreover, the fact that mostly the informal settlements with significant physical problems are destructed so far might help to converge this disaster to an opportunity regarding urban planning to heal the periphery of Damascus.

As I have mentioned, Damascus presents some common features with other Syrian cities, which share mutual past and similar cultural values. However, there are also differences in urban pattern and housing in terms of climate, used materials, and population …etc. This thesis which aims to develop a guideline for socially sustainable reconstruction of informal settlements of Damascus can be essential basis study for further studies or design approaches for rebuilding other damaged cities of Syria. There is an urgent need for such approaches that bear healing capacity for their residents, just like IBA buildings built in 1987 and preserved the place-memory of some important parts of Berlin. Dan Borden (2011) wrote that Berlin's designers and planners after WWII realized that "replacing small-scale city fabric with forests of apartment towers was killing European cities". That is why they launched IBA, to come up with design approaches taking into account the urban pattern of the city. A new group of designers and planners rejected modernist city planning principles and focused on this context "the city within a city". And from this context they developed the concept of "urban villa" as a form of urban living form in order to combine the intimacy of the home with the public spaces. I believe that IBA case epitomizes a successful reconstruction practice, and in the same manner, new approaches should focus on place-making principles in different scales and building complex prototypes.

Such an attempt necessitates the consideration of social sustainability, especially in the Middle East considering the high birth rates and the instability of social life. Housing Center magazine illustrates the important role of social sustainability in reconstructing fragile housing environments, as such: "In addition to helping the vulnerable to solve their housing situation, it contributes to the development of an inclusive society by creating an environment which assists different vulnerable groups to improve their living conditions" (2014, p.33). Schneekloth and Shibley also highlight the effect of socially

sustainable place-making on healing the society, “Place-making as a resituated professional practice makes room for uncertainties by trusting in the possibility of beloved places and processes that include forgiveness and healing” (2000, p.137).

1.3. SCOPE OF THE STUDY

Contemporary Damascus can be classified into three zones:

a. The historical city.
b. The modern city, which was built during and under the norms of urban planning theories.
c. Informal settlements with heavy densities of urban middle class, urban poor, and rural migrants without infrastructure struggling with urban and architectural dysfunction.

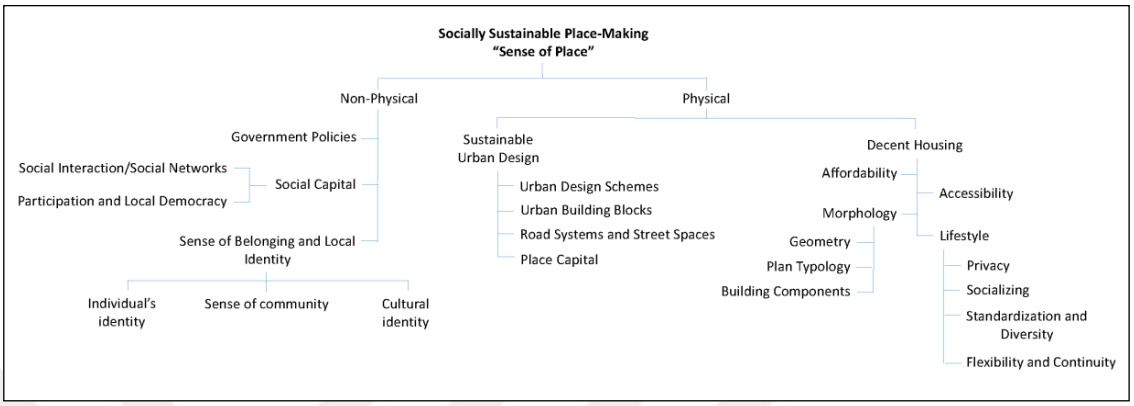
Each one of these districts has its urban texture that needs to be studied to reveal their place-making features in the scope of social sustainability. Especially within the design of Damascene courtyard houses and its urban texture there are important key concepts that might lead to the development of socially sustainable environments. These houses vary in size and luxury level, although they all have one common feature, the open courtyard. It functions more than being an inner realm area in the house, or an enclosed space that provide privacy for its occupants. It privileges the relations between the individuals of the family, who develop a strong attachment to the house. But after the emergence of the modern city blocks, people have preferred living in these blocks instead of the old courtyard houses. And the ones who couldn’t afford to live in the modern city they started building informal settlements. And in each district people have created a special kind of communities and socially different lifestyles.

1.4. METHODOLOGY

To analyze the urban features and housing of above-mentioned zones of Damascus, first of all, I aimed at developing a conceptual framework for social sustainability (see figure 1.2). I will use this framework for the morphological analysis of the physical features of each zone: Damascene courtyard houses and their relation to their surroundings (urban pattern), the urban texture of the modern city blocks and informal settlements. I will make some comparisons upon features of my social sustainability framework, such as sustainable urban design, decent housing, social capital, sense of community, and cultural identity… etc. Furthermore, a questionnaire is prepared to support the analysis of the non-physical part. The questionnaire has been shared via Google Forms, and 165 people have responded to the questionnaire. The quantitative data gathered from the questionnaire have also been analyzed and visualized by graphics.

Moreover, to come up with a novel approach and set a sustainable design guideline that would help the reconstruction of residential districts in other damaged Syrian cities, a comparison with some contemporary similar housing projects around the world would be useful. With this comparison, the study can focus on the strengths and avoid the flaws of each case to set up a local guideline. All these analyses aim at developing a socially sustainable design guideline to impose a quality architecture that can reflect happiness, equality, safety, confidence, and freedom to the people who suffered.

Figure 1.2: The Developed Conceptual Framework for Socially Sustainable Place-Making



Source: Sources include Dempsey, Bramley, Power and Brown 2009; Burton and Mitchell, 2006; Bramley and Power, 2009; Berecly Group, 2012; Forrest and Kearns, 2001; Heller and Adams, 2009; House of Commons, 2010; Lawson, 2012; Le Blanc, 2006.

1.5. LIMITATIONS

There are many important factors and challenges we face while studying the socially sustainable architecture in Syria in general. Given the limited time and length available for this thesis, many issues of urban development will not be covered. Furthermore, it is important to note that international academic resources on urban policy and planning in Syria are minimal. Even in Syria itself, research into urban development is sparse. As Hillenbrand (2003, cited by Lababedi, 2008) explains, the study of Islamic architecture and development, in particular, is a Western monopoly, and due to the lack of funds for libraries in the poorer countries of the Arab world, such studies are hard to find. Moreover, the non-physical part of the socially sustainable place-making framework will be discussed briefly because of the difficulty of having site visits and making interviews with locals considering the war condition.

2. SOCIALLY SUSTAINABLE PLACE-MAKING

Due to the growing urban population more than half of the world's population now live in the cities and according to the United Nations Population Fund (2007), the urban dwellers will increase by 72 percent between 2000 and 2030. The role of cities in sustainable development has become more notable, and the "sustainable city" concept has become an important political issue with different approaches worldwide. In the Middle East, despite its rich architectural, traditional heritage, the new sustainable design approaches have differed in considering the traditional architecture as an important inspiration or disregarding it to come out with completely new concepts. According to Karim Elgendy (2012) three main sustainable design approaches have been applied in the Middle East; a revivalist approach, a progressive approach, and a hybrid approach. The revivalist approach depends on nearly the same elements, techniques and design concepts as in the traditional local architecture. One of the most famous examples is the work of the Egyptian Architect Hassan Fathy. Even though his designs were vernacular and environmentally sustainable, they had major flaws causing low comfort design, which prevented the revivalist approach to continue and yield. On the other hand, the progressive approach is completely the opposite of the previous one. It uses the latest sustainable environmental technologies in design without considering the local urban texture or the social environment. This approach did not spread in the Middle East either, due its shortage of understanding the local characteristics amongst the local architects, who might have proposed better solutions since they are supposed to be more familiar with the social texture and the environment of their regions. That caused foreigner designers to come to fill the gaps, who also did not succeed because their approaches and strategies were more suitable for the European architecture (Elgendy 2012). That leads us to the hybrid approach, which is an attempt to bring together the revivalist and progressive approaches. It aims to apply modern solutions and designs that understand the local environment and social texture, providing a comfortable lifestyle for local users. Therefore, following this approach, this thesis mainly intends to understand and analyze the Damascene urban pattern and housing features to be able to learn from the local. Also, learning from other socially sustainable case studies around the world will be discussed in order to come

up with useful ideas for post-war reconstruction of the city. The social aspect of sustainability is highly important since it can "reduce both the level of exclusion of marginal and/or disadvantaged groups and the degree of social and spatial fragmentation that both encourages and reflects this exclusionary pattern" (Polese & Stren 2000, p.16). The following section will explain more the importance of social sustainability and the key role of place-making in rebuilding fragile cities such as Damascus. Moreover, a conceptual framework for social sustainability will be developed to guide the thesis research.

2.1. SOCIAL SUSTAINABILITY

It has been evident recently that the sustainability debate “has moved on from the ecological and environmental to the social and economic, such that social sustainability has emerged as a theme in its own right” (Turkington and Sangster 2006). According to the Berecly Group (2012, p.9), social sustainability is about individuals' “quality of life”, now and in the future. It shows the range to which a neighborhood assists both individuals and “collective well-being”. It also merges the design of the physical environment with social aspects focusing on how the general population who dwell in a space connect with one another and live as a community. Social sustainability is upgraded by progress which gives the right framework to bolster a good social and cultural life; it paves the way for participatory design and aims at improvement of that place and the surrounding community (Berecly Group 2012). In other words, socially sustainable architecture encourages “1) balance between the individual and the collective and between the present and the future; and 2) connections between individuals within the building and between occupants and the surrounding community” (Anon 2012).

Kelly et al (2012 cited by Palich and Edmonds, 2013) points out the importance of being socially and culturally healthy for a lot of people. Enhanced relationships are a significantly more sensible path to a better life than high income. This “social role” of development is defined in the National Planning Policy Framework of UK as such: “supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment,

with accessible local services that reflect the community's needs and support its health, social and cultural well-being" (Berecly Group 2012, p.17).

According to Dempsey, Bramley, Power and Brown social sustainability, like the concept of sustainability, "is neither an absolute nor a constant" and it has to be "considered as a dynamic concept, which will change over time (from year to year/decade to decade) in a place" (2009, p.4). This might appear through external impacts such as social cohesion and interaction increase. However, despite the wide acceptance of the concept of social sustainability, its definition in built environment disciplines has not been very clear and there is a limited literature that concentrates directly on it. There is, however, significant engagement between aspects of social sustainability and concepts such as the "sustainable community", which is supported by other key factors such as; social equity and justice (Dempsey, Bramley, Power & Brown 2009, p.1-2). Hence, social sustainability is "a wide-ranging multi-dimensional concept, with the underlying question 'what are the social goals of sustainable development?', which is open to a multitude of answers, with no consensus on how these goals are defined" (Hopwood et al. 2005; Littig and Griessler 2005 cited by Dempsey, Bramley, Power & Brown 2009).

2.2. THE DIMENSIONS OF SOCIAL SUSTAINABILITY

According to Dempsey, Bramley, Power and Brown, the dimensions of social sustainability are specified as "social equity" and "the sustainability of community." That does not mean that these two dimensions are entirely independent of one another, but a conceptual distinction is useful. The more social equity issues are politically powerful and centered to the distribution of social justice, the more aggregate the dimension of sustainability of community. Moreover, a balance between these dimensions might be required to make sure that social sustainability does not come at the detriment of economic or ecological sustainability (Dempsey, Bramley, Power & Brown 2009, p.9-10).

Under the two main dimensions of social sustainability, social equity and sustainability of community, lay essential aspects of daily life to most residents as shown in table 2.1. Some

of these aspects are specifically connected to the built environment, either through the actual procurement of services and administrations or for the purpose of accessing them. Others are indirectly connected like access to “decent housing”, which might be measured by the state of the physical housing form, but at the same is dependent on the service provided by the local authority (Dempsey, Bramley, Power & Brown 2009, p.5).

Moreover, in order to inspect how urban design may effect on social sustainability, some services and administrations can be chosen at neighborhood scale for further scan. Empirical research led in the West of England distinguished eight services and administrations most repeatedly utilized when locally provided (Winter and Farthing 1997). These “everyday eight” are food shop, newsagent, open space, post office, primary school, pub, supermarket and secondary school. And there are lots of other services to which scholars assert that residents need frequent local access like doctor/GP surgery, chemist, café/restaurant, bank, and community center, … etc. (see figure 2.1). The importance of these services might differ from one community to another considering each community has its own singularity, but there is a general agreement on the services that residents should have good access. Therefore, in this thesis, the focus will be on the common dimensions needed by any community.

Table 2.1: Urban Social Sustainability: Contributory Factors As Identified in the Review of Literature (in no Particular Order)

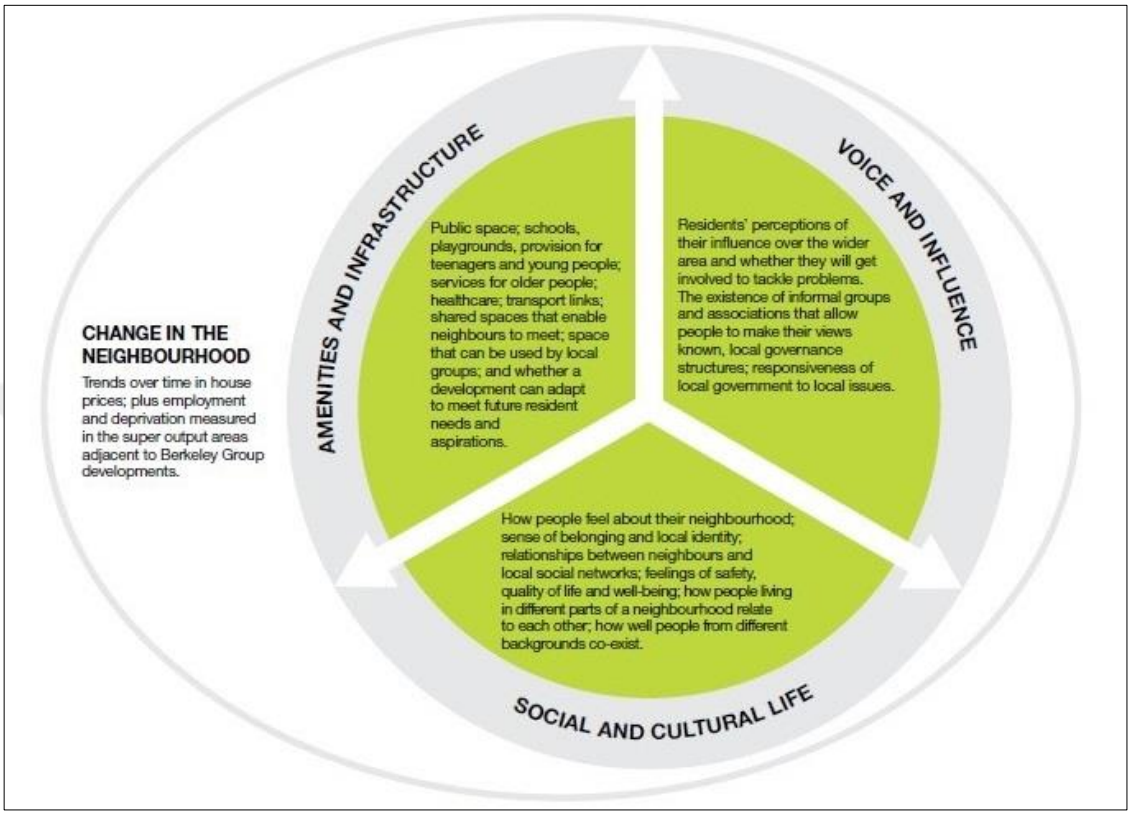
Non-physical factors	Predominantly physical factors
• Education and training • Social justice: inter- and intra-generational • Participation and local democracy • Health, quality of life and well-being • Social inclusion (and eradication of social exclusion) • Social capital • Community • Safety • Mixed tenure • Fair distribution of income • Social order • Social cohesion • Community cohesion (i.e. cohesion between and among different groups) • Social networks • Social interaction • Sense of community and belonging • Employment • Residential stability (vs turnover) • Active community organizations • Cultural traditions	• Urbanity • Attractive public realm • Decent housing • Local environmental quality and amenity • Accessibility (e.g. to local services and facilities/employment/ green space) • Sustainable urban design • Neighbourhood • Walkable neighbourhood: pedestrian friendly

Source: Sources include Chan and Lee, 2008; Meegan and Mitchell, 2001; Turkington and Sangster, 2006; Jacobs, 1999; Bramley et al., 2009; Yiftachel and Hedgcock, 1993; Urban Task Force, 1999; Hopwood et al., 2005; Littig and Griessler, 2005; Burton, 2000a. (Cited by Dempsey, Bramley, Power & Brown 2009).

2.2.1. Social Equity

The concept of social sustainability has its grounds in social justice, distributive justice, and equality of condition. “An equitable society is one in which there are no “exclusionary” or discriminatory practices hindering individuals from participating economically, socially and politically in society” (Pierson, 2002; Ratcliffe, 2000 cited by Dempsey, Bramley, Power & Brown 2009). Such practices may appear as social exclusion like racism and ageism. As far as measuring social equity, accessibility is regularly referred to as a crucial measure (see figure 2.2).

Figure 2.1: The Main Measurements of Social Sustainability



Source: The Berkeley Group, Creating Strong Communities: How to Measure the Social Sustainability of New Housing Development

Figure 2.2: Developing Hybrid Framework for Social Sustainability Part 1

Source: Sources include Burton, 2000; Dempsey, Bramley, Power and Brown 2009

2.2.2. Sustainability of Community

Sustainable communities are defined as “places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all” (ODPM, 2006 cited by Dempsey, Bramley, Power & Brown 2009). In principle, this identifies with an overarching social order in neighborhoods and the backing of social interaction and networks between all occupants. Hence, the sustainability of community according to Dempsey (2008) is about the “ability of society itself, or its manifestation as the local community, to sustain and reproduce itself at an acceptable level of functioning”. This is connected with “social capital” and “social cohesion” as concepts which envelope social networks, standards of correspondence and elements of social organization and the coordination of generating social behavior (Dempsey 2008).

The European policy understanding of “sustainable communities” incorporates social aspects of sustainability and depicts them as dynamic, inclusive and safe (ODPM, 2006 cited by Dempsey, Bramley, Power & Brown 2009). Hence, what makes a community sustainable is being open to some interpretation. It is clear that sustainability of community identifies with the aggregate aspects of social life. In order to investigate such social life at the neighborhood level, various particular measurable dimensions of community sustainability are distinguished here. These five dimensions according to Bramley and Power (2009) are:

a. Social interaction/social networks in the community
b. Participation in collective groups and networks in the community
c. Community stability
d. Pride/sense of place
e. Safety and security.

2.2.2.1. Social Interaction/Social networks

Social interaction is the basic process in the formation both of human nature and of the social order as described by Wirth (1964). “Without social interaction, people living in a given area can only be described as a group of individuals living separate lives, with little sense of community or sense of pride or place attachment” (Dempsey 2006). It is contended that social networks are “social support systems” showing that the people we know and feel we can rely on can impact other sides of life like feelings of safety and sense of well-being (Dempsey, Bramley, Power & Brown 2009, p.7).

Social networks can extend from weak, such as remembering somebody by sight, to strong like having close friends and family. It is argued that at the local scale weak networks can be as imperative as strong ties, especially in relation to the size of a neighborhood, providing a variety of social opportunities (Dempsey, Bramley, Power & Brown 2009, p.8). Hence, social interaction and networks can be studied within local urban scale in these aspects:

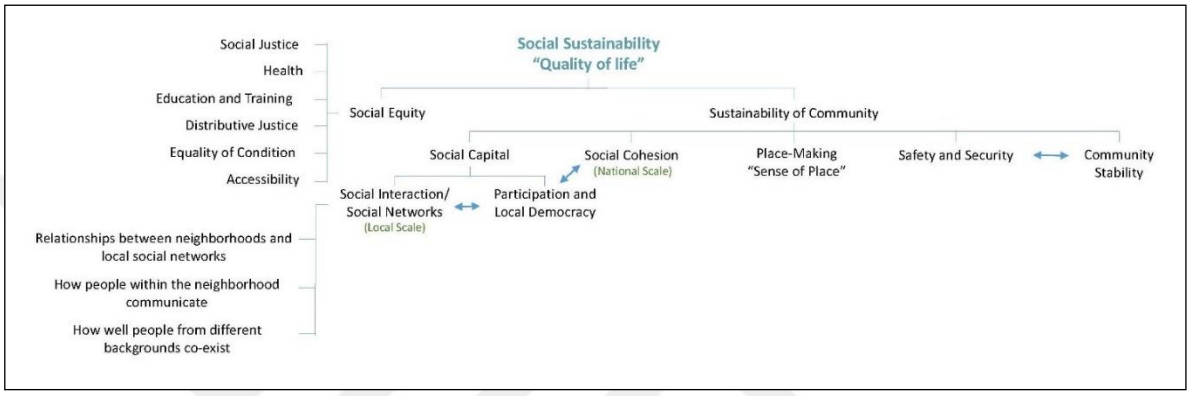
a. Relationships between neighborhoods and local social networks
b. How people within the neighborhood communicate
c. How well people from different backgrounds co-exist

While social interaction and local environment quality are identified with actions and places on a local scale, “social cohesion” is regularly argued at a national scale. Social cohesion is a term regularly used to portray the social order in a physical or non-physical social setting (Dempsey 2007, p.3). Nash and Christie say that cohesion should mean that “all social groups should feel able to enjoy an area’s public life free from attack, abuse or hostility” (2003, cited by Dempsey 2007).

Other scholars conversely allude to “social cohesion” and “social capital” and use social capital to refer to “the connections between people and their social networks”, while it is discussed somewhere else that social capital and social networks engage to social cohesion (Dempsey 2007, p.4) (see figure 2.3). In addition, social interaction and social networks are reliably depicted as essential parts of social capital. Social capital has been referred to

elements of social organization including “trust, the density and knowledge of relationships within networks and obligations and expectations” (Pennington and Rydin 2000).

Figure 2.3: Developing Hybrid Framework for Social Sustainability Part 2



Source: Sources include Burton, 2000; Dempsey, Bramley, Power and Brown 2009; Burton and Mitchell, 2006; Bramley and Power, 2009; Berecly Group, 2012; Forrest and Kearns, 2001

2.2.2.2. Participation in Collective Groups

Participation in local and community activities is depicted as one of the key elements of social capital and a dimension of social sustainability attached to social coherence and social network integration (Dempsey, Bramley, Power & Brown 2009, p.8). “...people have a right to be involved in deciding how their town or city develops. Real, sustainable change will not be achieved unless local people are in the driving seat right from the start. Successful cities are founded on participative democracy” (Heller & Adams 2009, p.18). From this point of view, residents should be involved in project execution and the design process.

According to Suzanne Keller (1968), it is not, however, an inevitable conclusion that if participation in organized activities in a neighborhood does not happen, such conduct is fundamentally portrayed as socially unsustainable. Individuals have numerous and diverse sorts of social network, both inside and outside the neighborhood, which might imply that they cannot frequently participate in localized exercises, or that their specific interest is not shared by others in the neighborhood. Furthermore, people may not have an interest to participate. It is clear however that participation in organized activities is broadly considered

to contribute decidedly to community sustainability (Dempsey, Bramley, Power & Brown 2009, p.8).

2.2.2.3. Community Stability

Alongside points of underpinning social capital, for example through good educational and community facilities and minimizing crime and hostile social behavior, it is recommended by scholars and policy makers that a community needs to be settled, long haul inhabitants with a specific end goal to be portrayed as sustainable. Although it has been contended that community stability is not necessary for social order to take over, it is generally viewed as a positive social quality, which can be imperiled by high levels of social mobility (Dempsey, Bramley, Power & Brown 2009, p.9). The connections between community stability and the built environment are not clear and direct. Occupants' choices to stay in or move out of a neighborhood might be identified with the apparent quality and upkeep of "the built environment, the level of accessibility to key services and facilities (such as schools) and the type and size of dwellings in relation to the life stage of the resident" (Wilson and Taub, 2006).

2.2.2.4. Safety and Security

The safety of a neighborhood is said to be an essential part of social sustainability (Barton, 2000). "Providing security and, with it, feelings of safety in a neighborhood is closely related to the other dimensions of community sustainability. In a neighborhood free from crime and disorder, residents can feel secure in their social interactions with other people and participation in community activities" (Dempsey, Bramley, Power & Brown 2009, p.10). It is debated that people detest to feel unsafe or to dwell in a hazardous environment and need consolation that they do not have anything to fear from their neighbors. Such feelings of safety seemingly upgrade trust and correspondence between inhabitants and add to the sense of community and sense of place in a neighborhood.

2.2.2.5. Place-Making (Sense of Place) as a Key Element of Social Sustainability and Housing

In the UK, the Oxford Institute for Sustainable Development (OISD) conducted some research in 2009 and produced a report entitled Measuring Socially Sustainable Urban Regeneration in Europe. In this report, the authors Colantonio and Dixon developed a set of social sustainability factors for indicating the social dimensions of urban renovation (2009 cited by Palich and Edmonds, 2013). Some of these factors are about cultural activities, community involvement, safety, quality, and most importantly the "place-making". According to Heller and Adams (2009, p18) place-making spots through emerging a "sense of place" through the design of spaces intended to contribute to community inclusion and engagement in acknowledgment of the reality, remarked in healthy places that a "community's sense of belonging is a key health indicator." A sense of place is perceived as a vital segment of wellbeing as it forms part of an "individual's identity, contributes to the creation of a group, neighborhood or cultural identity."

Heller and Adams (2009, p18) also define place-making as "a genuinely holistic approach which seeks to give equal recognition to economic, environmental and social characteristics in the planning, development, and renewal of our towns and cities." And they have set its indicators through mixed tenure, mixed use and flexible environments as key ingredients. Place-making is not only about the relationship of people to their places, but also encourage relationships between people within places (Schneekloth & Shibley 2000, p.133). Relph (1976) argues that "to be inside a place is to belong to it and to identify with it," which can be as much about the physical environment as the individuals who occupy it. Hence, a positive sense of connection to a place is viewed as a dimension of social sustainability because it is an indispensable segment of individuals' enjoyment of the neighborhood in which they live (Dempsey, Bramley, Power & Brown 2009, p.9).

While it is recognized that occupants' sense of place connection is identified with the physical environment in which they live, the socio-spatial understanding of neighborhood and community also recognizes the connection that inhabitants have to the people living there. This is regularly depicted as a "sense of community" and is "related not only to other

residents, but to the social order, common norms and, to a lesser extent, civic culture in a neighborhood" (Kearns & Forrest 2000). Fukuyama (2000) expresses that there is an immediate and positive relationship between values and the sense of community, "the deeper and more strongly held these common values are, the stronger the sense of community is". Such a sense of community might show itself through the built environment just like the general concept of sense of place since it is said that it can be influenced by the quality of place (Dempsey, Bramley, Power & Brown 2009, p.10). Therefore, some state that the value of the urban design should not be disregarded in relation to the sense of identity and belong (Kearns & Forrest 2000).

In the article titled Back to Phenomenological Place-making, Iris Aravot (2002, p.202) considers the sense of place achieved by place-making as a human need. It is necessary for well-being, security and introduction, and cure sentiments of distance and antagonism. Gordon Cullen describes it as "the sense of being here" (1961 cited by Aravot, 2002), and Christopher Alexander states that it can be accomplished by "the timeless way of building" (1979 cited by Aravot, 2002). Having a sense of place is a need. And this place might not be unique or even supportive, but you still love it because it is yours. "It is intimate and known, cared for and argued about" (Schneekloth & Shibley 2000, p.132). Places, unlike spaces, have meaning, they are essential and sensible by all our senses. Their size is related to a human scale, and they have direction. They have physical, spiritual and social dimensions. For Schneekloth and Shibley (2000, p.132), place-making is the way all of us change the places in which we find ourselves in, into places in which we live. The same applies to Syrian cities, which most of them are not qualified for living anymore, but for a lot of people they still have meaning. However, they are now in desperate need for a new socially sustainable place making so that they could provide a "home" to dwell in and to self-heal.

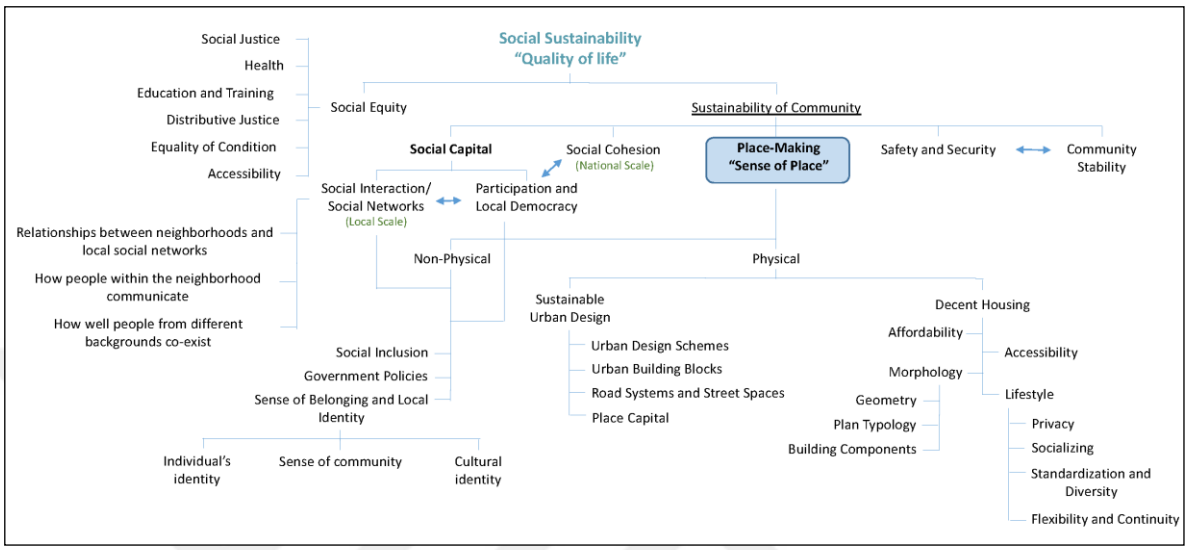
2.3. PLACE-MAKING'S KEY CONCEPTS

According to Aravot (2002, p.209), place-making can be multidimensional; it is cultural, physical, spiritual and social. So he believes that it is more a guiding basis than a model. As for Heller and Adams (2009, p.19), place-making process includes perceiving, looking to

comprehend, and therefore expanding on a range's current physical and social qualities as a method for utilizing its “place capital” in its continuing development. In this case, successful place-making must be accomplished through the true conjunction of urban planning, design, and social arranging standards. Genuinely multidisciplinary methodologies nourish fruitful place-making. Not to mention that place-making is probably an ongoing and evolving process, rather than a condition.

The place-making factors that support socially sustainable life in general can be categorized as physical and non-physical. According to Berecly Group (2012, p.18) physical factors, in short, include: “Decent and affordable housing, access to opportunities, high-quality public services, good quality and sustainable public realm, good transport connections”. On the other hand, non-physical factors embrace: “Safety, local social networks, social inclusion and spatial integration, cultural heritage, a sense of belonging and identity, and well-being.” Therefore, considering how large is the concept place-making as shown in the general conceptual framework for the analysis of social sustainability (figure 2.4), this thesis will mostly focus on the physical parts of place-making. It will also briefly discuss the non-physical factors since they are strongly linked to the physical parts.

Figure 2.4: Developing Hybrid Framework for Social Sustainability Part 3: The General Conceptual Framework for the Analysis of Social Sustainability



Source: Sources include Burton, 2000; Dempsey, Bramley, Power and Brown 2009; Burton and Mitchell, 2006; Bramley and Power, 2009; Berecly Group, 2012; Forrest and Kearns, 2001; Heller and Adams, 2009; House of Commons, 2010; Lawson, 2012; Le Blanc, 2006; Schenk, 2013.

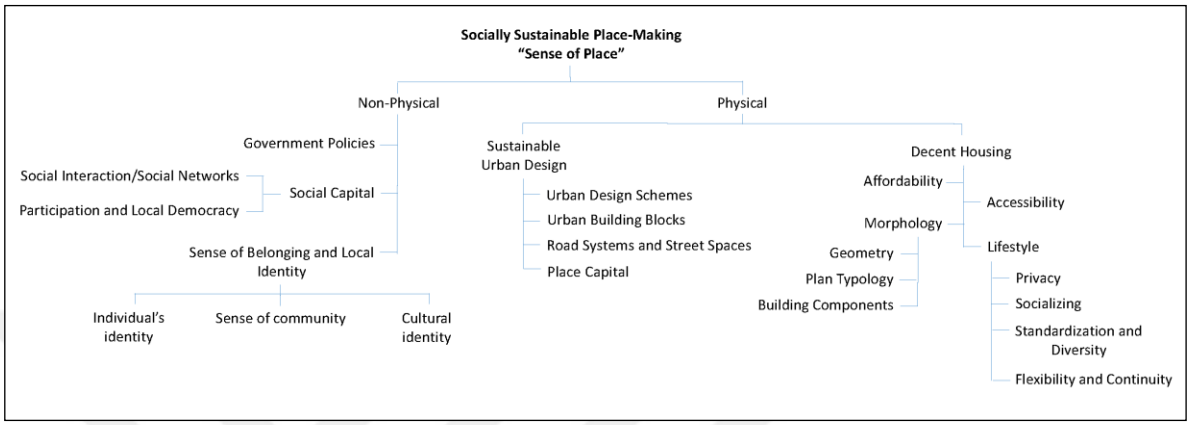
The place-making capacity of three zones (historical city, the modern city and informal settlements) in Damascus and their housing typologies will be studied/analyzed according to filtered physical features of place-making: Sustainable urban design and decent housing as shown in the final abbreviated conceptual framework (see figure 2.5). The urban pattern features which will be discussed are urban design schemes (visual and geometrical principles), urban building blocks, road systems and street pattern, and "place capital." Place capital is a "concrete set of learning conditions where people come together to speak, to dialogue, to share their stories, to struggle together within social relationships that strengthen rather than weaken the possibility for active citizenship" (Giroux cited by Schneekloth & G. Shibley, 2000). However, Schneekloth and G. Shibley continue to say that we live nowadays in a media-soaked world in which there are few public spaces remaining where there is little chance to figure out how to be a citizen or how to figure out how to participate in group activity and create public goals. Democracy just like architecture is an intricate and delicate activity that must be experienced to be learned (2000, p.138). Therefore, well place-making can create such an urban public space or green areas that could be like a living room for the

society. On the other hand, the housing design features which will be discussed are: Affordability, accessibility, morphology, and lifestyle.

Furthermore, the non-physical features will include: Government policies, social capital (social interaction and participation), and sense of belonging and local identity. Underneath sense of belonging lays; individual's identity, sense of community, and cultural identity. "Individual's Identity" can be described as the distinctive characteristic belonging to any given individual within his or her community, and "sense of community" can be defined as "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan and Chavis 1986). Finally, according to Gad Barzilai (2003) "Cultural Identity" is part of a "person's self-conception and self-perception and is related to nationality, ethnicity, religion, social class, generation, locality or any kind of social group that has its own distinct culture. In this way, cultural identity is both characteristic of the individual and also of the culturally identical group of members sharing the same cultural characteristics".

A comparison will be made with other related case studies around the world that epitomize socially sustainable reconstruction to come up in the end with a set of ideas and suggestions for post-war reconstruction of demolished neighborhoods in Damascus, and revitalization for the city that would foster sense of place/place-making as one of the key concepts of social sustainability.

Figure 2.5: Developing Hybrid Framework for Social Sustainability Part 4: The Final Abbreviated Conceptual Framework for the Analysis of Socially Sustainable Place-Making



Source: Sources include Dempsey, Bramley, Power and Brown 2009; Burton and Mitchell, 2006; Bramley and Power, 2009; Berecly Group, 2012; Forrest and Kearns, 2001; Heller and Adams, 2009; House of Commons, 2010; Lawson, 2012; Le Blanc, 2006; Schenk, 2013.

3. DAMASCUS CITY

3.1. GEOGRAPHY

Contemporary Syria was founded following the 1916 agreement of Sykes-Picot. It did not gain its independence until the end of Second World War in 1946. Turkey surrounds it from the south, Lebanon and the Mediterranean Sea from the west, Iraq from the east and finally Palestine and Jordan from the South as shown in figure 3.1. The city of Damascus, which is the Capital and the cultural and political heart of Syria, is located in the southwest of Syria. Located in the middle of the East and West, Syria's vital position has been fought over since ancient times. Damascus is among the most ancient surviving cities worldwide which provide it with a long urban history.

Although Damascus was threatened by drought from time to time due to the Anti-Lebanon mountains that are located between Lebanon and Syria intercepting the Mediterranean Sea's precipitation, the "Barada" River used to lessen the drought's damage in the long past that was formed from the melted snow streams from the mountain tops. "Al-Ghouta" is an oasis that circles Damascus and was used throughout the ages for farming cereals, fruits, and vegetables. According to Roman maps of Syria, Barada River used to bleed into a lake that's called "Bahira Atayba" or the hesitant lake due to its disappearance in years of drought. The contemporary city is divided into two parts; an urban part that covers 77 km2, and Mount Qasioun that covers 28 km2. Both covers 105 km2 in total (see figure 3.2). Former Damascus is located to the south of the almost depleted Barada River and surrounded by city walls.

3.2. CLIMATE

The ever constant ocean stream and the Anti-Lebanon Mountains causing precipitation obstruction made the region's climate, according to the Köppen-Geiger system, a cool steppe climate, which means that the winters are chilly and fairly rainy, about 130 mm yearly between October and May, with sporadic snowfall, and the summers are arid, blistering and low on moisture.

Figure 3.1: The Location of Syria

Sources: Google maps.

Figure 3.2: The Urban Part of Damascus City and Mount Qasioun

Sources: Google maps.

3.3. HISTORICAL OVERVIEW OF URBAN DEVELOPMENT OF THE CITY

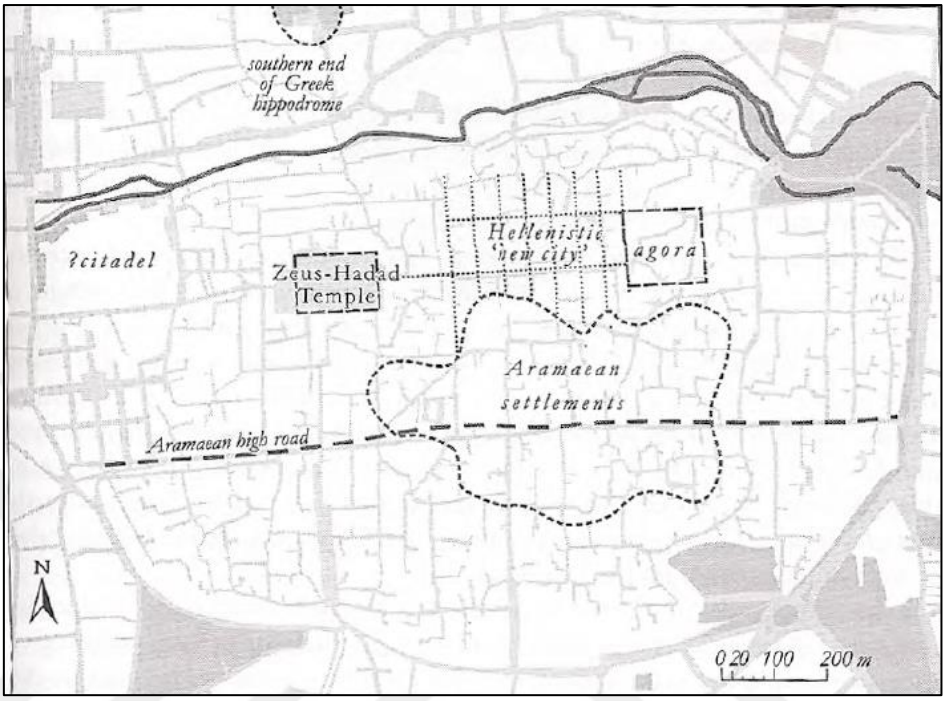
The two major cities of Syria, Damascus and Aleppo, were both developed to be the main economic hubs and Islamic style living in Syria, which used to be the heart of Islamic domain for more than a millennium. Yet, Stefano Bianca (2000) has emphasized in his book Urban Form in the Arab World, that the Islamic effect on urbanism is prominent even though some cities were constructed over Hellenistic or Roman or Byzantine ruins. The main common factors that unify them are the domestic buildings, religious identity, socioeconomic elements, all affected by the same environmental factors.

3.3.1. The Early Formation

Damascus was built in the middle of two threats due to its topography: the phreatic layer at the bottom of the mountain that is thoroughly used for urban construction, and the danger of the river flooding down the mountain's top because of its gradual incline. Signs of urbanism started to unravel in Damascus around 3000BC. The capital was built with "straight wide streets radiating outward from the concentration of public buildings in the center" (Bonine 1977, p.145) and surrounded by the city's wall as shown in figure 3.3. The city's current form was not apparent up until the Hellenic era (336-146 BC) including public baths, theaters, sports stadiums, porticos, agora and the alleys' layout.

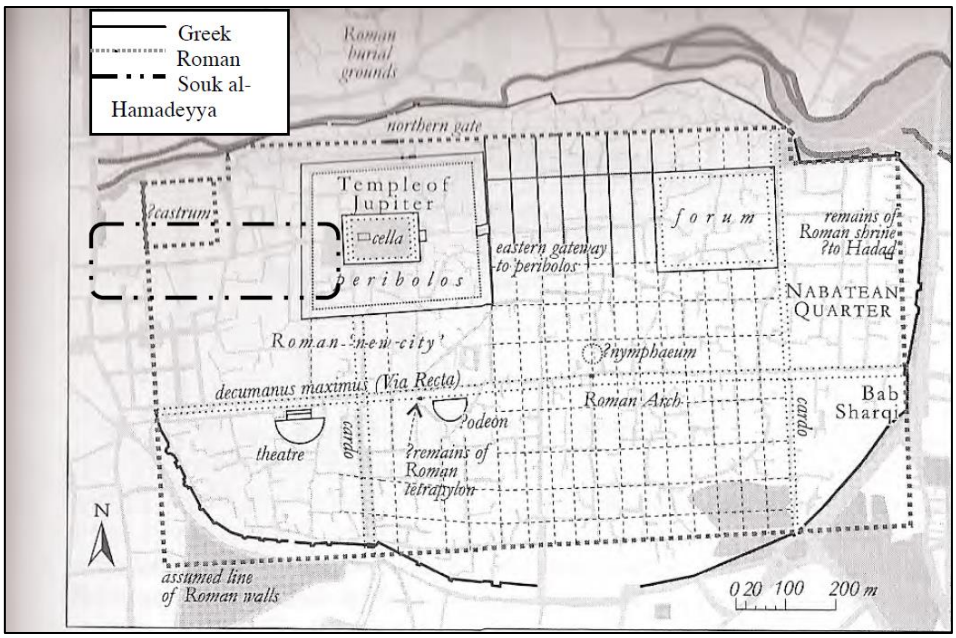
The Romans continued to enhance established cities in Syria and constructing new ones like their Grecian predecessors. Romans enjoyed showing off their major cities using glamorous sites some of which still exist in our time. Romans have enlarged Agora, the Temple of Jupiter and the streets' layout such as adding the Via Recta (Straight Road) that connects two of the seven Roman Gates: "Bab Sharqi" and "Bab Al-Jabiya," which are still recognizable (see figure 3.4). They also implemented the premiere water pipes system in the city, some parts of which it can still be viewed in "Qanawat" neighborhood (Burns, 2005).

Figure 3.3: The Greek City Located within Today's Damascus Old City Walls



Sources: Burnes 2005 cited by Lababidi 2008 The Urban Development of Damascus: A study of its past, present and future.

Figure 3.4: The Roman City of Damascus



Sources: Burnes 2005 cited by Lababidi 2008 The Urban Development of Damascus: A study of its past, present and future.

3.3.2. Under Islamic Rule

Damascus was the Damascus got under the Islamic rule by the Rashidun Caliphate in 634 AD to be the first major city of the Byzantine (Roman) Empire to fall in the Muslim conquest of Syria. Soon later it became the Umayyad Caliphate's capital for around a century. According to Lapidus (1973), the initial Umayyad city was not, in contrast to numerous elements of "Islamic urbanism", a city of magnificent style and construction. It was not common for conquerors to construct new cities, for Arabian forces used to inhabit already constructed neighborhoods of the occupied provinces. Although city life and trading hubs still occupied the same places, Kennedy argues that "Paradoxically, however, this continuity of social and political function did not result in a continuity of architectural design and urban planning, even in cities like Damascus… The broad, colonnaded streets were invaded and divided up by intrusive structures, both houses, and shops, and became more like narrow winding lanes than the majestic thoroughfares of classical antiquity; and the extensive, open agora, scene for markets and meetings, was gone" (1985, p.4-5).

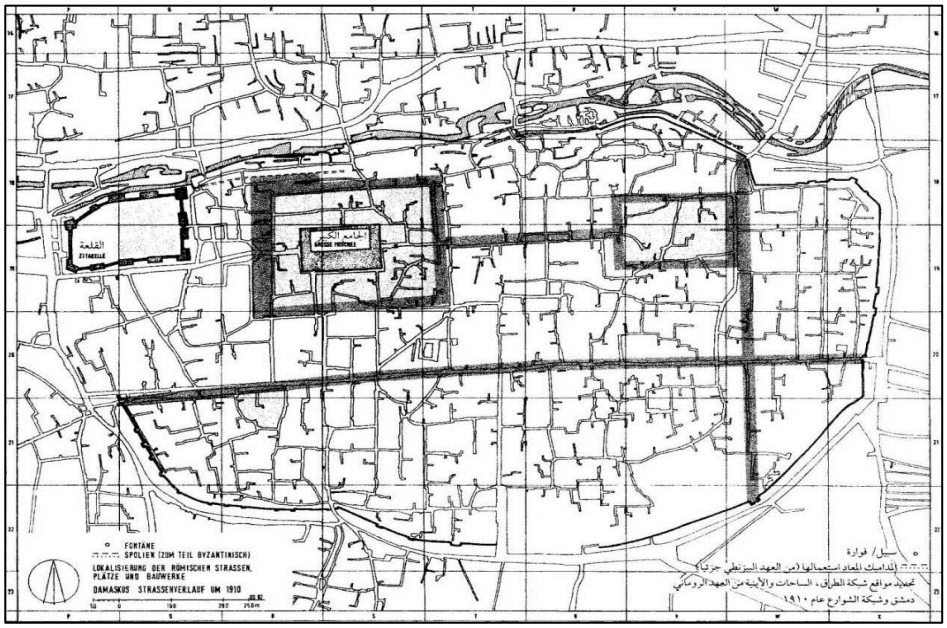
Some of the main characteristics of the capital were changed during the early Islamic period, as shown in figure 3.5, such as the roads' grid, the construction of straight closed markets (souks) and the size and style of public (Kennedy 1985). Because of Islam's identity and the simplistic form of the Empire, the government's part in the construction and preservation of residential quarters went through a big transformation. As mentioned by Bianca (2000), "The most significant social implication of Islam is the strength of ritualized living patterns which dispenses the need of formal institutions," hence, government officials were not necessary for Muslim cities when it came to urban matters and design.

Kennedy (1985) states that every Islamic city was protected by city walls, included a mosque and supplied with water that was essential for the everyday religious ablution that is called "Wadu." Moreover, property holders were able to construct and expand their land provided that the neighbors gave their consent due to the significance of personal real-estate in Islam. Hence, house owners kept extending their properties without any official approval, which eventually led to the connection between Islamic cities and tight alleys. The form of such

cities was linear and it took centuries to develop that is among the common characteristics of Islamic cities (Kennedy, 1985).

The oldest complete "town-planning" of Damascus was carried out by the orders of the Zengid commander Nur Al-Din, who won victory over the Crusaders in the Mid-12th century. Burns described this era as "the city's new golden age… a period of building that is unmatched in any other century of the city's history" (2005, p.158). Hence, the people of Damascus started expanding outwards due to the strengthened protection under the rule of Nur Al-Din. According to Lababidi water supplying and other Infrastructure related issues, having been ignored for centuries were also upgraded. These upgrades covered fortifying the Roman gates, city walls, and the construction the oldest lasting Islamic hospital and other religious sites. Districts such as Salihiye, which was developed at the foot of the Mount Qasioun, Maydan, Saruja and Amara to the southwest, north and northwest were part of the satellite suburbs that started to form at that time, on the route to the capital and next to mausoleums (2008, p.22).

Figure 3.5: The Old City Around 1910, The Previous Roman Temple and Agora's Locations Are Highlighted



*Sources:*https://360th.wordpress.com/%D9%85%D8%AF%D9%8A%D9%86%D8%A9-%D8%AF%D9%85%D8%B4%D9%82/ (accessed 20 February 2016).

3.3.3. Under the Ottoman Empire

The Ottomans concentrated on unifying the heterogeneous masses under the banner of faith since they ascended to power in the mid-16th century. Damascus turned into the main rendezvous during the Islamic Empire for convoys of pilgrims on their way to Mecca to perform the holy Hajj. It had become the heart of the Empire since one of the two convoys heading to Hajj was passing from Damascus, the other from Cairo. The number of pilgrims has increased until it reached the range between 25000 and 60000 person meeting in the Maydan neighborhood two times a year –at the beginning and the end of the pilgrimage- due to the growth of the Empire (Arnaud 2006, p.34). Additionally, it was a major city on Silk Road, 2 to 3 convoys coming from the east (China, Japan, India, Baghdad) visited the capital transporting commodities carried by 2000 camels on its way to Cairo and Istanbul. That tradition that lasted until the 19th century.

The Hajj pilgrimage accompanied by its economic benefits has raised the population up to 30 percent of its original count, which eventually caused a rapid growth of the suburbs and considerable displacements in the capital's arrangement. Although Maydan, which is located to the south of the city, was considered rural due to its location, it was now a part of the capital, becoming the cultivation center and residential suburb. The southern route to Mecca was an optimal location to build new residential areas. However, when the construction sites around Maydan ran out, they started to develop others around the route to Saliheye. By then, the extra-muros neighborhoods covered over 64 hectares in 1516, reached up to 184 hectares, almost thrice its original area, around 1850 (Burns, 2005).

The "Tnazimate" age, or the rearrangement age, came around the last sixty years of the Ottoman Empire, to address the need for a managerial adjustment and upgrade with a newborn interest in city design and construction, which was caused partially because of the growing wealth of the European market. The Grand Vizier Mustafa Rachid Pasha has laid down the three main rules that the urban construction followed in the Tanzimat:

a. Expansion of alleys and roads, eliminating dead-ends.
b. The planning for the new suburbs with geometric rules.

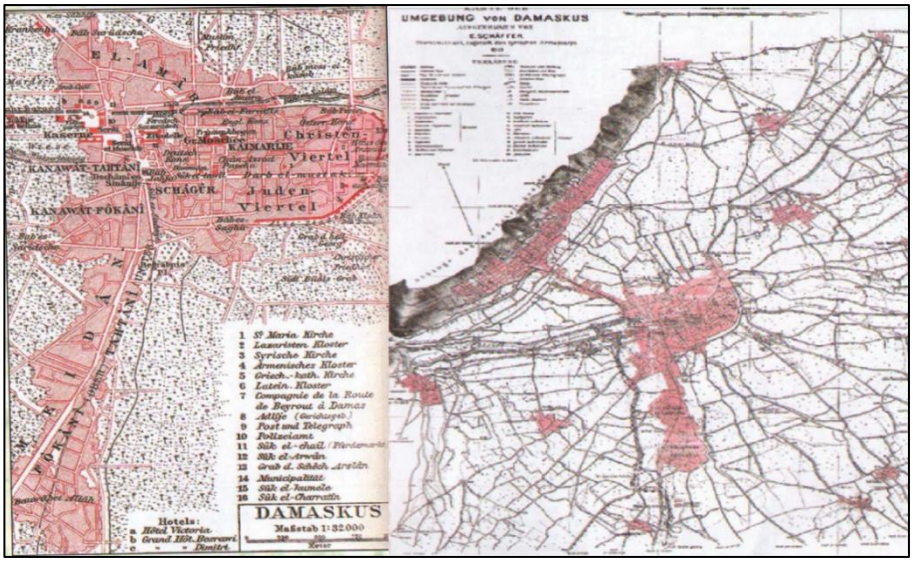
c. Use stone rather than wood in buildings.

Rachid Pasha suggested to dispatch Ottoman students for an internship overseas and to include Western architects in the construction layout (Lababidi 2008, p.28).

Damascus was growing southwards on the bank to the right of the river till the beginning of the 19th century. However, the capital has expanded up to 25 percent in the area between 1860 and 1919, even though it doubled its census, which in turn occupied the areas left between the old city and the extra-muros (Maydan suburb, Saruja and Uqaba) as shown in Figures 3.6 & 3.7. 90 percent of the urban growth happened in the western bank of the river (Arnus, Qassa, Jisr) heading northwards around the fall of the empire. Later on, suburbs which started to rise unplanned to the north of the capital were an exception to the three rules of Ottoman urban construction. Much like the pre-contemporary Damascus, it had sporadic irregularly shaped estates with many dead-ends and cul-de-sacs, just like Al-Muhajarin (Arnuad, 2006).

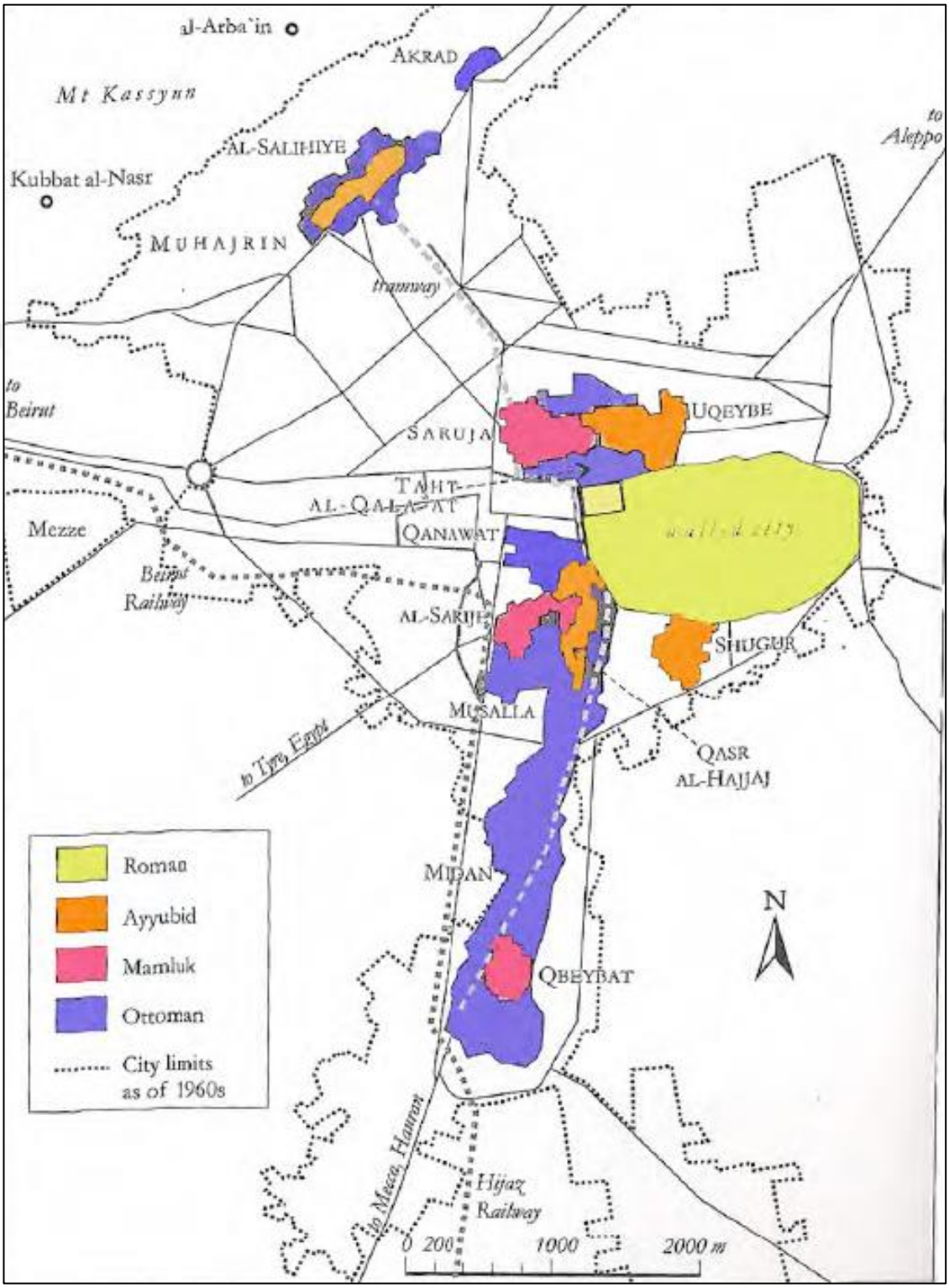
Ottomans constructed the first Syrian University in the "Baramke" neighborhood to the west part of the capital as well in order to motivate Western business and to improve the reputation of their provinces to Europe.

Figure 3.6: Damascus in 1895 (Left Picture) and in 1913 (Right Picture)



Sources: https://360th.wordpress.com/%D9%85%D8%AF%D9%8A%D9%86%D8%A9%D8%AF%D9%85%D8%B4%D9%82/ (accessed 20 February 2016).

Figure 3.7: Historical Development of Damascus



Sources: Al-Qattan 2002 cited by Lababidi 2008 The Urban Development of Damascus: A study of its past, present and future.

3.3.4. Under the French Mandate

The French mandate ruled, post-WW1 years after the fall of the Ottoman Empire, between 1920 and 1946. They perused the urban reconstruction which had begun around the 19th century (Fries 2000). The French had hatched novel overarching projects for the major cities of Syria such as Damascus and Aleppo. However, they have prepared their plans without regarding the natives' heritage and requirements, strengthened the mark of the old city, viewing it as "backward place for the indigenous Arabs", and concentrated on the suburbs instead (Fries 2000). Therefore, the old city was abandoned by its rich citizens who settled in the newborn suburbs and was then populated by the poor, which eventually marked the old city as a regressive. Moreover, some of the parts of the old city had been bombed by the French such as Maydan and Al-Harika causing the destruction of many traditional houses and valuable heritage buildings (see figure 3.8).

Figure 3.8: Destruction of Traditional Houses Following the French Bombing in 1925

Sources: http://www.syrianhistory.com/ar/photos/514 (accessed 23 February 2016).

Apart from those, many modern structures have appeared in that period such as electric tramways, theaters, three train stations, street- lights, large hotels, and cafes. The construction of banks and the redesign of the worn-out markets (souks) were only possible due to western economic ties. New schools, hospitals, and a town hall were constructed due to the changes in the political scene.

Rene Danger, who was the famous master mind behind the plan to renovate Damascus in 1935, mainly focused on the matters of enlargement, cleanliness, and the infrastructure of the capital. He wanted to create, with the help of Michel Ecochard, a circular road center, in order to relieve traffic jams and to allow easy travel in the heart of Damascus by creating a circular motorway surrounding the city.

In contrast with 1858 Ottoman real-estate laws, 36 percent of the estates in the capital were constructed without authorization in 1919, which caused the city to expand up to 25 percent between 1920 and 1930s, the same amount it expanded in the previous five decades (Fries 2000). As the city kept expanding to the north, the western impact started to emerge further more in the capital, merchants, and missionaries from overseas started inhabiting the old Christian districts, which encouraged numerous rich native families to leave for the newly developed suburbs, like the new part of Salhiye neighborhood. Such suburbs were developed by French and Italian architects with residential buildings inspired from Classical and Rococo styles, on modern European styled roads covered by trees (Bianca 2000).

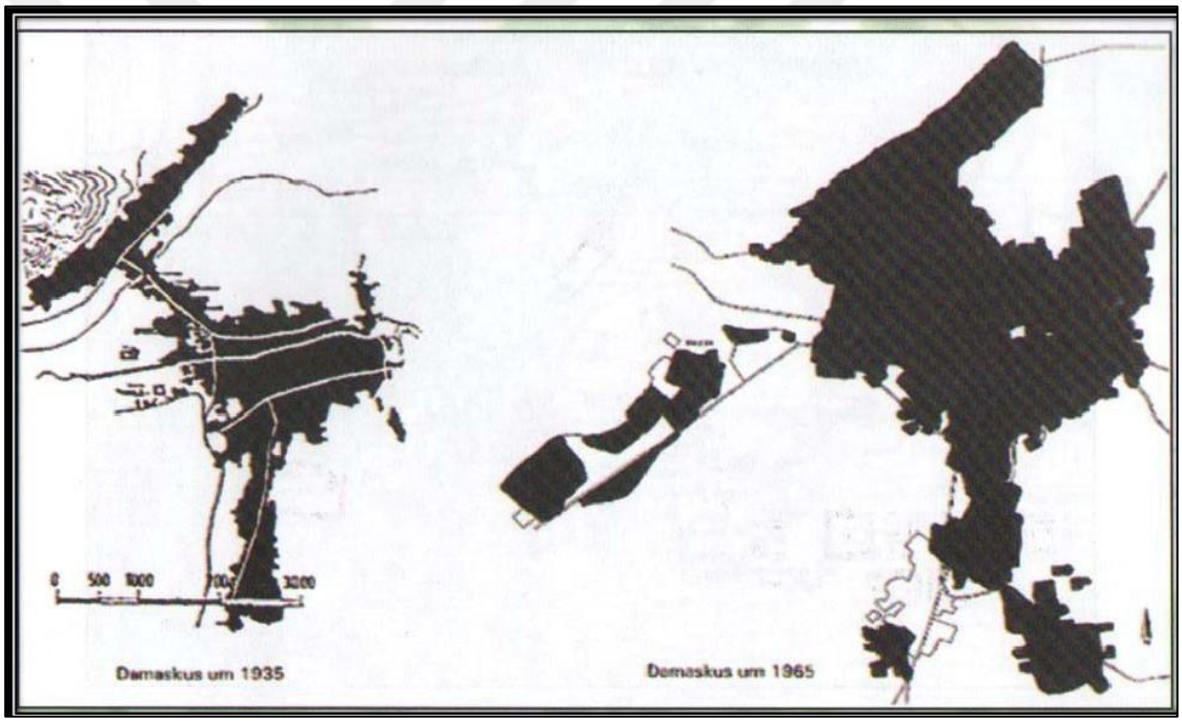
3.3.5. After Independence

The political environment in Syria was plagued by domestic problems due to the French exercising of 25 years of “divide and rule” plan before they left the country in 1946. Therefore, the rise of the contemporary Republic of Syria was daunted with political uncertainty, on account of the success of consecutive military coups that left the country with about 20 various parliaments and four outlined constitutions between 1946 and 1956.

Hafez Al-Assad, with the help of other leaders of the Ba’ath party, made a military coup on his own ruling party, Ba’ath party, to become the president in 1970. After that, the estate renovation became extremely repressive and dictatorial. Moreover, although his estate renovation was “supposed to create a more equal society, the Ba’ath Party favored members of their sect; hordes of Alawites from the North flooded Damascus and land was distributed amongst friends and families of the government” (Ayoub Agha, 2008 cited by Lababidi, 2008).

The rising value of property in the 1960s became affiliated with fast expansion of urbanism in the main cities of Syria as shown in figure 3.9. Due to the apparent "low-risk" of housing, property estimation has taken control of the economic environment from the 1960s to this day. Syria had, as stated by the world Bank Statistics, one of the highest increasing census rate around the globe, around 3 percent annually according to World Bank Statistics, due to the growing use of farming machines, and the increasing rural unemployment (Lababidi 2008, p.44).

Figure 3.9: The Urban Growth of Damascus between 1935 and 1965



Sources: https://360th.wordpress.com/%D9%85%D8%AF%D9%8A%D9%86%D8%A9%D8%AF%D9%85%D8%B4%D9%82/ (accessed 20 February 2016).

Damascus has quickly established its role as the country's capital after the exceptional population growth from 423000 to 3 million between 1955 and 1980. Naito (1989) argues that this was caused by two main factors: the domestic centralization approach which caused rural-urban migration everywhere around the country, and the rush of Palestinian and Syrian refugees from Golan Mountains and Palestine. In order to counter the effects of rural-urban migration on the delicate balance between the city and Al-Ghouta, the PMs Declaration of

1977 forbade additional construction of new dwellings in Al-Ghouta but it has proved to be useless.

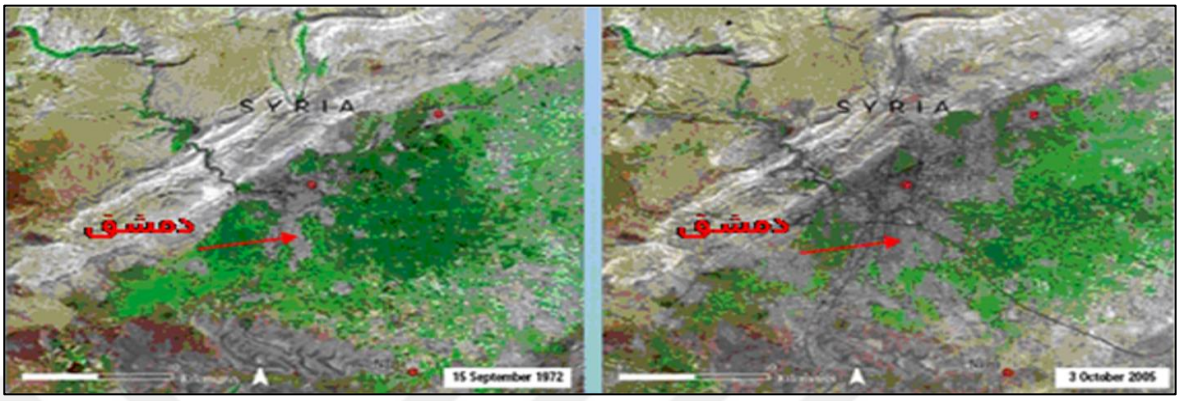
The ecological pollution that affected both the innate current of the Barada River and subsoil water was caused due to the fast industrialization approach. The water in the canals is instantly polluted by the chemical waste coming from the factories built around these canals. Not to mention that easy going rules that paved the way for bringing vehicles for personal usage since the 1980s have caused the "terrible state of air pollution in the city… As far as urban environments are concerned, the present stage of urbanization already exceeds the limits for sound development for the inhabitants" (Naito, 1989 cited by Lababidi 2008).

3.3.6. Contemporary Damascus

Unofficial slums or irregular settlements, which currently represent one-third of the households in the country and it can be easily constructed in only four days, was the primary factor in Al- Ghouta eradication as shown in figure 3.10. In 2000, the international diplomatic scene was altered after Bashar al-Assad took over after his deceased father. The Syrian regime has realized that "they had to change their economic model in order to remain in the global market... They departure from the socialist economy and adopted a social market economy, which put more emphasis on social aspects" (Habash, 2008 cited by Lababidi 2008).

However, the founder of the "Heart of Damascus" NGO, Waed al-Mhanna, has discussed that the slow paced financial growth in Syria was only natural saying that: "it is not surprising; the Syrian people have been living in a strict dictatorship for forty years, and they are just not used to or experienced in the private sector… On top of that, there is strong resistance to change from within, from a lot of politicians and public servants who have benefited from cronyism and corruption" (cited by Labadidi 2008).

Figure 3.10: Al-Ghouta Eradication between 1935 and 2005



Sources: https://360th.wordpress.com/%D9%85%D8%AF%D9%8A%D9%86%D8%A9%D8%AF%D9%85%D8%B4%D9%82/ (accessed 20 February 2016).

3.4. DEMOGRAPHY AND SOCIAL TEXTURE

As written above, most of Damascus's, and its surrounding suburbs like Douma, Harasta, Darayya, Al-Tall and Jaramana, residents settled there after countryside to city migration which eventually led the populace to reach up to 1,711,000 in 2011 and eventually to become 5 million today. Other than the Sunni Muslims majority, Kurds -the biggest minority-, Christians, who live in Christian districts such as Bab Tuma, Qassaa and Ghassani forming up to 15 percent of the populace and other groups such as Alawites and Twelver Shi'ites form a sizable minority. Damascus is known to have over 2000 mosques, including the famous Umayyad Mosque, and many churches as well such as the age-old Chapel of Saint Paul. The Jewish, who lived in Syria all the way back to the Roman age, had a footing in the small Jewish quarter (Haret al-Yahud) as well that the ended up by the migration of Jews after the declaration of Israel state in 1948.

After the recent developments of the war in Syria, Syria has become closer than ever to be divided into separate different states. This fact was even confirmed by Bashar Al-Assad in his speeches during 2015, stating that his army and his allies will only focus on taking over particular parts of Syria. These parts or the "Beneficial Syria" zones are spread from Zabadani Village close to the Syrian-Lebanese borders till the Mediterranean Sea, including Syrian main cities in between; Damascus, Homs, and Hama. Regardless if this project will be

accomplished or not, the Assad government along with his alleys' military groups have already started taking action and people under these areas have started witnessing serious changes in the demography of their cities. Most of the local citizens of Damascus have been living for the last five years in fear of their safety, kidnapping, high prices, unemployment, robbery… etc. under the Assad regime control. In addition, because of the compulsory military service and the arbitrary detention mostly on youth, a lot of people have escaped and fled out of the country leaving behind their properties and homes to be resettled by foreigners, which some are from other Syrian cities and some are from other countries like Iran and Lebanon. Also, in some neighborhoods, people were forced to leave their houses to be either demolished or resettled by others in order to change the demography and fulfill the control of Beneficial Syria.

3.5. ECONOMY

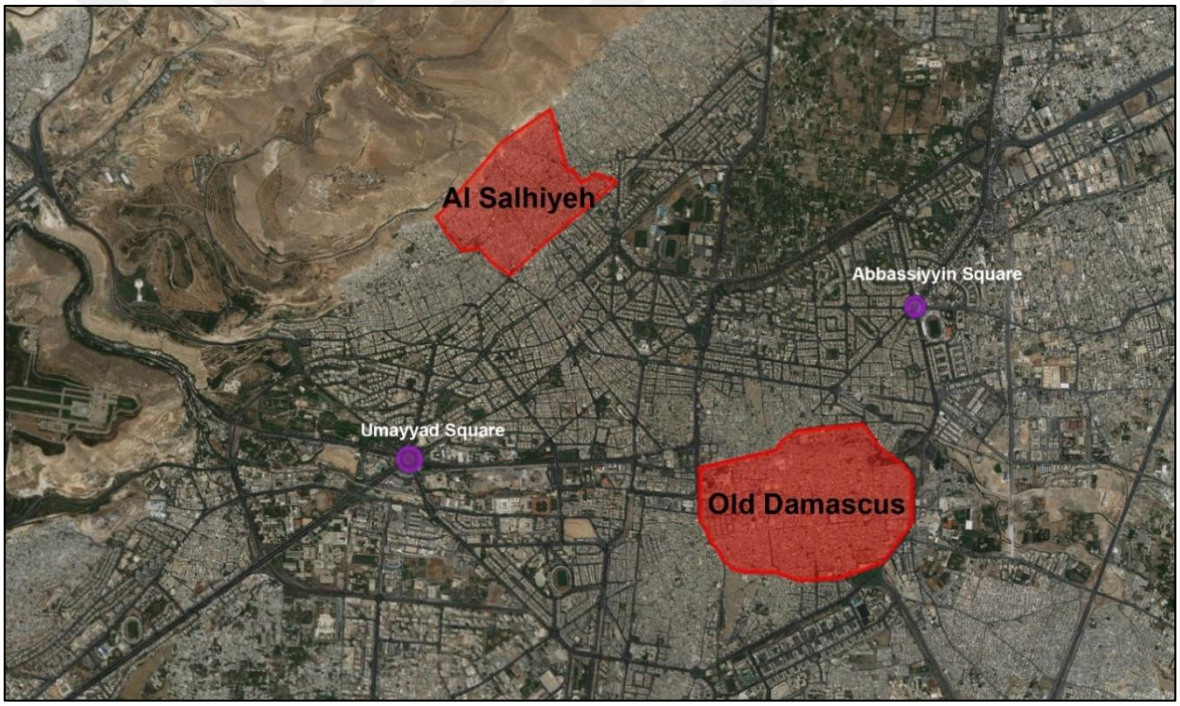
The economy of Syria is based on agriculture, oil, industry and services. Its GDP (gross domestic product) were around $65 billion in 2011. However, the Syrian economy had shrunk 45 percent since the start of the war and according to Nasib Gabriel the chief economist of Byblos Bank, the Syrian economy's losses were around $203 billion (in January of 2015), which is equal to 380 percent of the GDP of 2011 (cited by Mona Al-Alamy 2015). Moreover, the economist Jihad Yazaji stated that the most affected fields from the war were the tourism and the industry sectors, more than 80 percent of the industry sector was affected. Gabriel also expects the shrinkage of the Syrian economy by 6.4 percent annually from 2015 till 2019 because of the huge destruction of the infrastructure and the steady decline of living standards. He continued saying that the most benefited people from the war are those who have close relationships with the power centers of the Assad regime by giving them the authority to take control over selling primary products (cited by Mona Al-Alamy 2015).

The recent changes in Syria have damaged not only the social cohesion but also the economic unity since the country got divided into different regions controlled by various forces. These changes will also surely affect the process of rebuilding demolished areas in the future.

4. PLACE-MAKING FEATURES ANALYSIS OF DAMASCUS

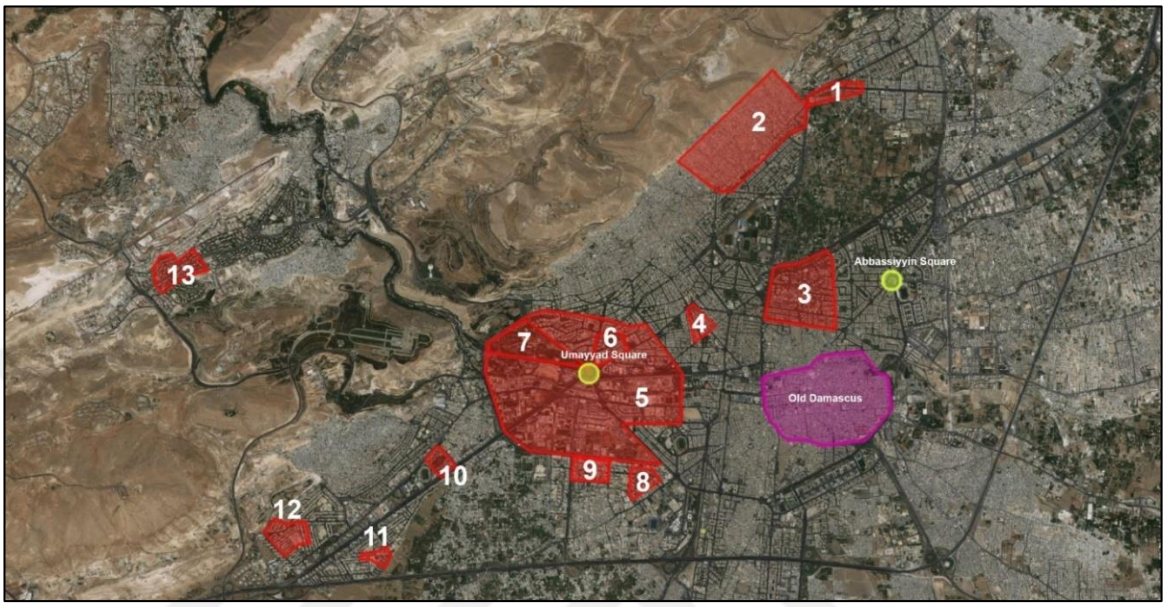
To analyze each district of Damascus City, which they are old Damascus, modern Damascus, and informal settlements and Damascus's outskirt, the study focused on neighborhoods that represent each district. Therefore, figures 4.1, 4.2, and 4.3 were made to demonstrate the location of the studied parts according to the main focal points of Damascus: Umayyad square in the western part, Abbasid square in the eastern part, and the old city in between.

Figure 4.1: The Location of the Studied Areas of the Old Damascus Urban Design



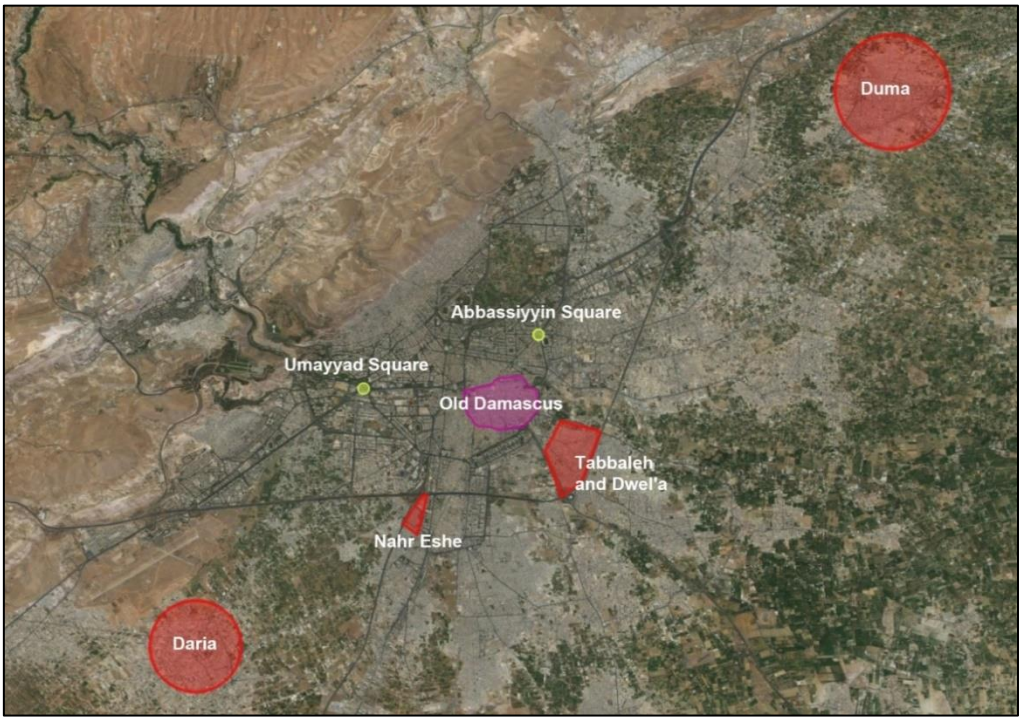
Source: Google maps, edited by the author.

Figure 4.2: The Location of the Studied Areas of the Informal Settlements and Damascus's Outskirt Urban Design



Source: Google maps, edited by the author.

Figure 4.3: The Location of the Studied Areas of the Modern City Urban Design



Source: Google maps, edited by the author.

4.1. PREWAR DAMASCENE HISTORICAL CORE (TRADITIONAL COURTYARD HOUSES)

The place-making capacity of three zones (historical city, the modern city and informal settlements) in Damascus will be studied according to the physical features of place-making: Sustainable urban design and decent housing. Furthermore, the non-physical features will include: Government policies, social capital (social interaction and participation), and sense of belonging and local identity. The analysis will start with the historical core of the city.

4.1.1. Physical Features

The urban pattern features which will be discussed are: Urban design schemes (visual and geometrical principles), urban building blocks, road systems and street pattern, and place capital. On the other hand, the housing design features which will be discussed are affordability, accessibility, morphology, and lifestyle.

4.1.1.1. Urban Pattern

In the urban pattern analysis, the urban pattern features are derived from mostly Leonard Schenk's book Designing cities (2013).

Urban Design Schemes

Under this title, these listed features will be analyzed:

a. Visual principles: The principle of figure and ground, the law of closure, the law of good continuation, the law of proximity, the law of similarity and symmetry, and the principle of contrast (uniqueness).
b. Geometric principles.

Analysis of Visual Principles

a. The Principle of Figure and Ground

We notice in figure 4.4 that the urban density (figure) is high compared to open empty spaces (ground). It is like huge big masses interspersed with a lot of openings (courtyards and pathways) to give a sort of balance between mass and open space.

Figure 4.4: Figure and Ground Scheme of Old Damascus's Studied Area

Source: The author.

b. The Law of Closure

The open spaces in the old city are clear and specific, and usually, they are private interior spaces surrounded by walls (in single house unit level). These spaces are represented by courtyards which embrace both plants and water. Mostly the courtyards are centralized in the

house and surrounded by rooms, and they are considered the core of the old Damascene house (see figure 4.5).

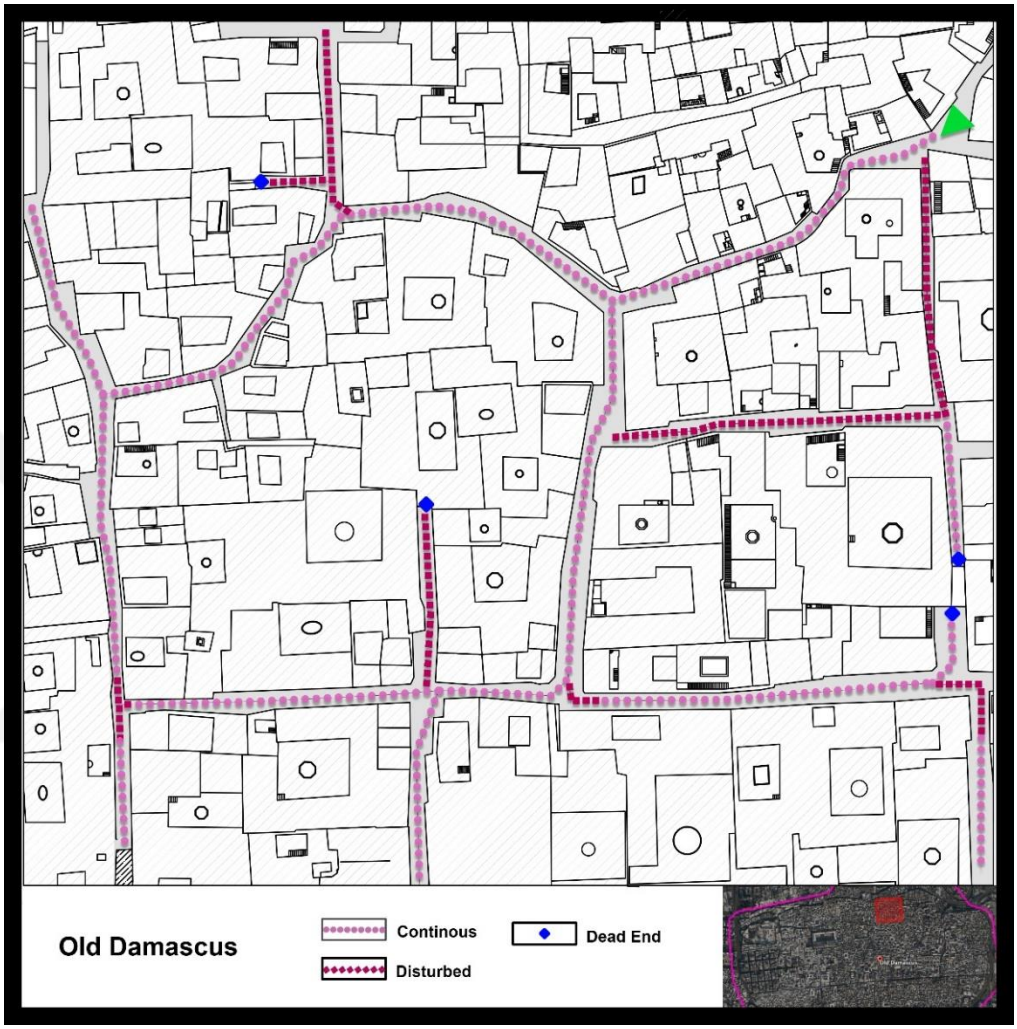
Figure 4.5: Law of Closure Scheme of Old Damascus's Studied Area

Source: The author.

c. The Law of Good Continuation

If we follow the starting point as shown in figure 4.6, we can see that the road's intersections during walking are either smooth, continued, and clear or appear suddenly and unnoticeable. Moreover, we notice that many of the pathways have dead ends. This creates a kind of excitement and renewable experience while walking in the streets since there is no routine and every pathway has its own identity. However, even though the pathways are diverse, the buildings and the architectural elements surrounding those pathways are much alike, which may confuse foreigners. That is why every part of old Damascus has its own point mark to guide people (solitary buildings).

Figure 4.6: Law of Good Continuation Scheme of Old Damascus's Studied Area



Source: The author.

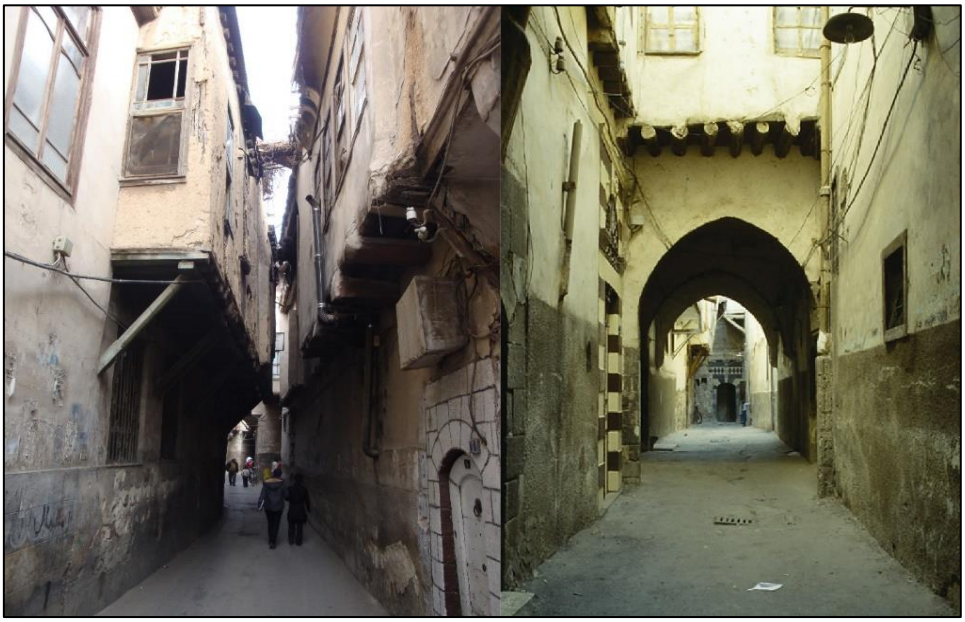
d. The Law of Proximity

We can clearly notice the distribution of buildings in groups where roads are the demarcating factor as shown in figure 4.7. Some of these groups may have a minor connection to each other, either visually expressed in the extruded parts of the houses or physically as shown in figure 4.8.

Figure 4.7: Law of Proximity Scheme of Old Damascus's Studied Area

Source: The author.

Figure 4.8: The Visual Connection (Left Picture) and the Physical Connection (Right Picture) in the Old City's Streets



Source: The left picture is taken by the author in 2012, the right picture: http://eldorar.org/showthread.php?t=1953 (accessed 23 March 2016).

e. The Law of Similarity and Symmetry

There are many architectural features that make the building unique on the outside, but the overall state is similar (Al-Ablaq stone; pattern particolored stone - Mashrabiyya; wooden lattice screen windows – Arches – Walls - Pergolas). We also find symmetry and similarity in the markets (Souq) sharing similar architectural elements such as the columns, shops' facades, and the copper covered ceilings (see figure 4.9).

Figure 4.9: Midhat Pasha Souq (Left Picture) and Al-Hamidiyah Souq (Right Picture)

Source: https://tr.pinterest.com/inakiizk/old-arcq/ (accessed 23 March 2016).

f. The Principle of Contrast (Uniqueness)

As mentioned previously the buildings especially houses have similar architectural features that make them look alike from the outside. However, there is some kind of uniqueness noticed in the entrances of some houses expressed with special architectural elements such as; decoration, ornaments, doors, and arches (see figure 4.10).

Figure 4.10: Entrance of House near Bab Al-Jabia (Left Picture) and Al-Azem Palace Entrance (Right Picture)

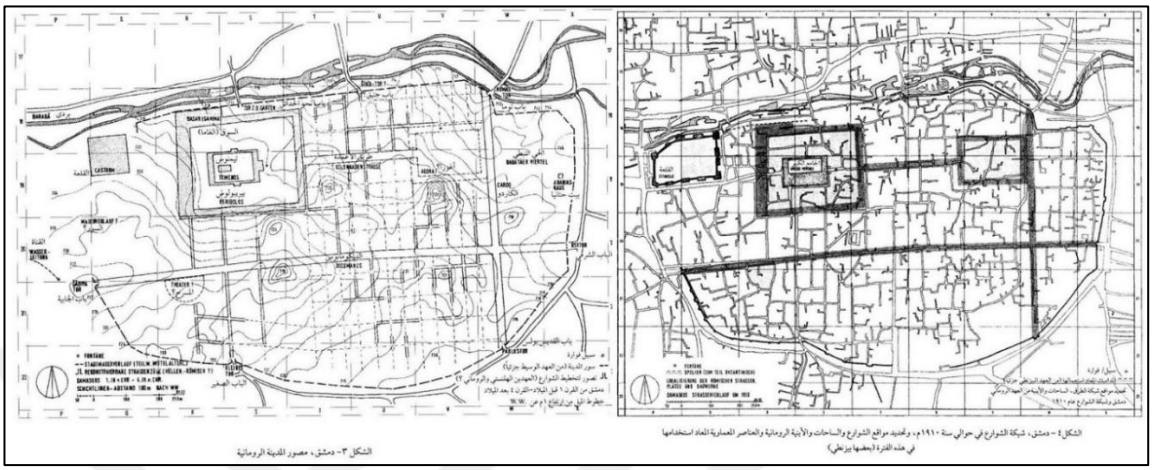
Source: The lift picture was taken by the author in 2012. The right picture: https://commons.wikimedia.org/wiki/File:%D8%A8%D8%A7%D8%A8_%D9%82%D8%B5%D8%B1_%D8%A7%D9%84%D8%B9%D8%B8%D9%85_%D8%AF%D9%85%D8%B4%D9%82_%D8%B3%D9%88%D8%B1%D9%8A%D8%A7.JPG (accessed 23 March 2016).

Analysis of Geometric Principles

a. Organic Grid

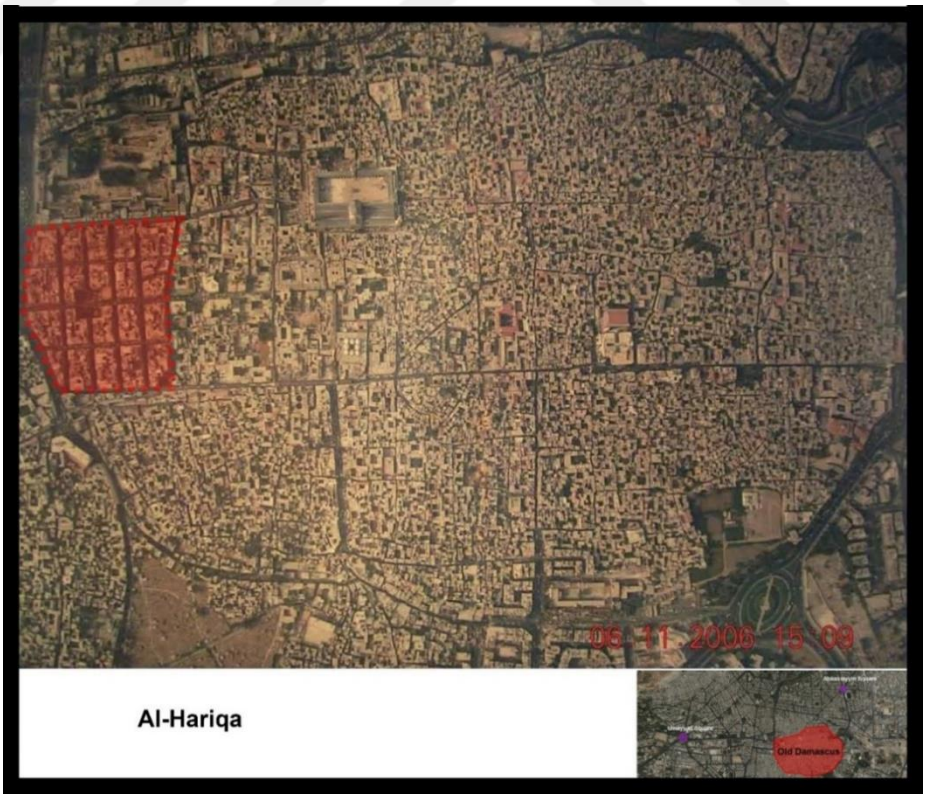
The streets' pattern of old Damascus is an organic grid because it has changed through time. It was regular in the Romanian and the Byzantine eras then it had transformed into an informal organic grid within the Islamic rule era. However, the famous "straight street" stayed straight the way it is and had kept its sacredness through time, because it was believed that St. Paul had passed this road on his well-known trip toward Rome (see figure 4.11). Moreover, if we look at the old city's site plan, we can notice a foreign regular grid in the Al-Hariqah neighborhood within the general organic texture of the old city due to the French bomb attacks on this neighborhood which caused a fire that demolished it. It was rebuilt by the French in this regular form and replaced some of the most beautiful Damascene houses in the old city (see figure 4.12).

Figure 4.11: Damascus in the Roman Era (Left Picture) and Damascus in 1910 (Right Picture)



*Source:*https://360th.wordpress.com/%D9%85%D8%AF%D9%8A%D9%86%D8%A9%D8%AF%D9%85%D8%B4%D9%82/

Figure 4.12: Al-Hariqah Souq Map



*Source:*https://360th.wordpress.com/%D9%85%D8%AF%D9%8A%D9%86%D8%A9-D8%AF%D9%85%D8%B4%D9%82/, edited by the author.

b. Deformed Grid

In the old traditional part of Al-Salhiyeh neighborhood which is located on the slopes of Mount Qasioun, the street pattern is an informal network (see figure 4.13). It was shaped this way to fit and harmonize with the topography of the mountain while keeping the identity of the Damascene house.

Figure 4.13: Al-Salihiyah Neighborhood Map

Source: Google maps, edited by the author.

Urban Building Blocks

Standard Building Blocks

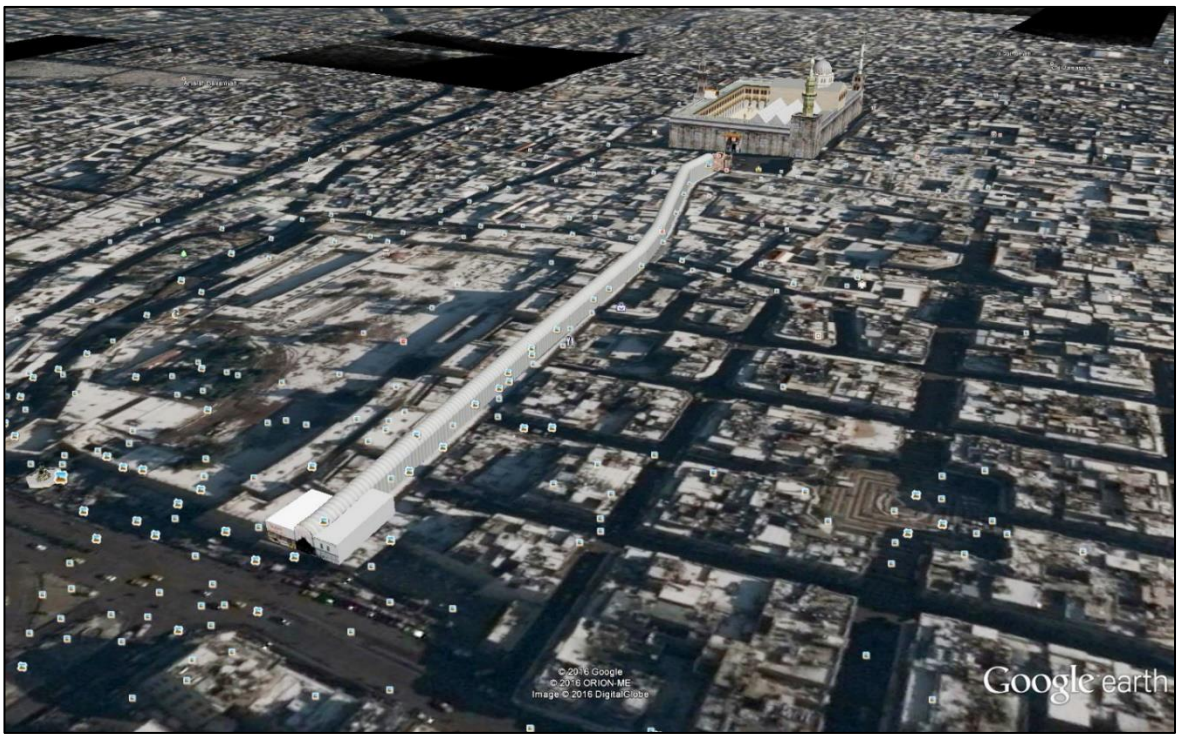
a. Carpet Development Blocks

The general type of the buildings is carpet development, which looks like connected houses interspersed with courtyards as shown in figure 4.12. That makes the old city from above looking like a carpet.

b. The Inner-City Urban Blocks

Within the carpet development, there are inner-city urban blocks such as markets and khans (figure 4.14).

Figure 4.14: 3D Perspective View of Al-Hamidiyah Souq



Source: Google Earth.

Large Building Blocks and Solitary Buildings

There are many buildings that are considered landmarks, which are spread all over the old city as shown in figure 4.15. These solitary buildings are usually part of the urban fabric but are different from the surrounding standard buildings by either their function or unique decoration treatments such like Bab-Toma, Bab-Sharqi, Khan As'ad Pasha, the Orthodox Armenian Church and Umayyad Mosque (see figures 4.16, 4.17 & 4.18). However, the Umayyad Mosque has still been considered the most dominant building in the old city (see figure 4.19).

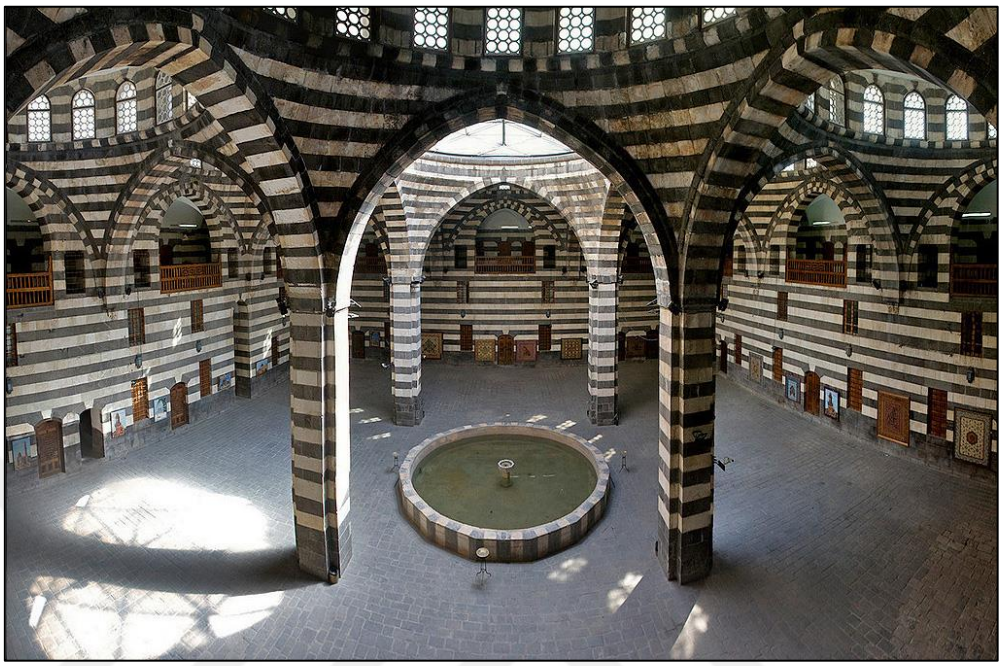
Figure 4.15: Some Solitary Buildings' Location in the Old City

Source: Google maps, edited by the author.

Figure 4.16: Bab Toma (Left Picture) and Bab Sharqi (Right Picture)

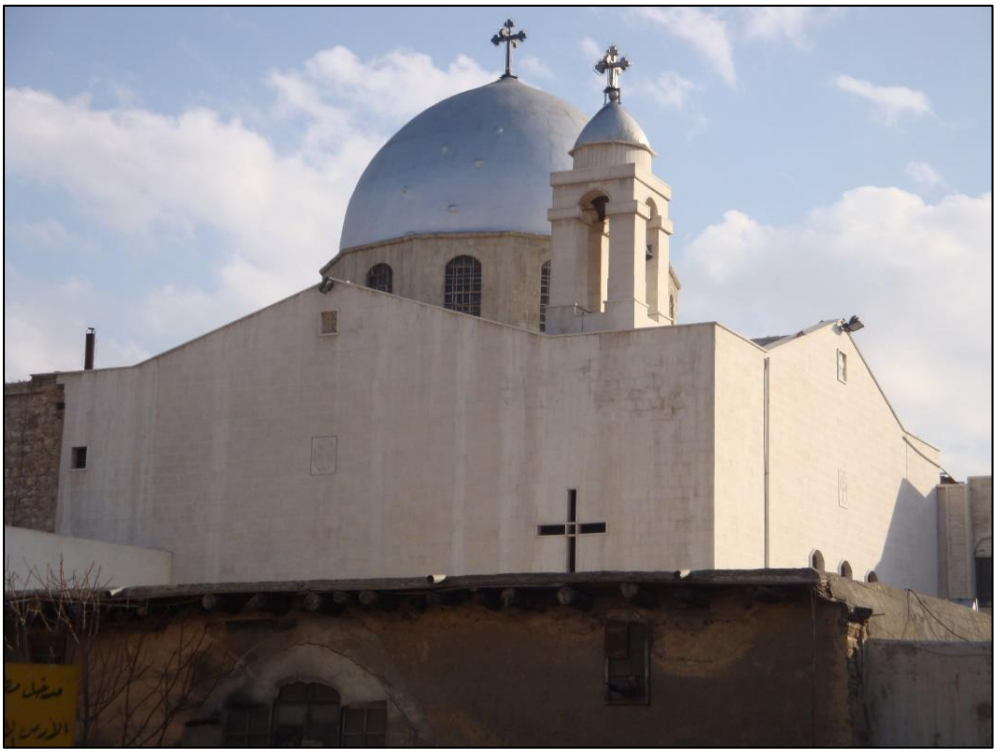
Source: https://www.flickr.com/photos/syriaisheregroup/12406638515 (accessed 23 March 2016).

Figure 4.17: Khan As'ad Pasha in Damascus



Source: http://traveling-limited.blogspot.com.tr/2016/02/syria-before-war.html (accessed 23 March 2016).

Figure 4.18: The Orthodox Armenian Church in Damascus



Source: Taken by the author in 2012

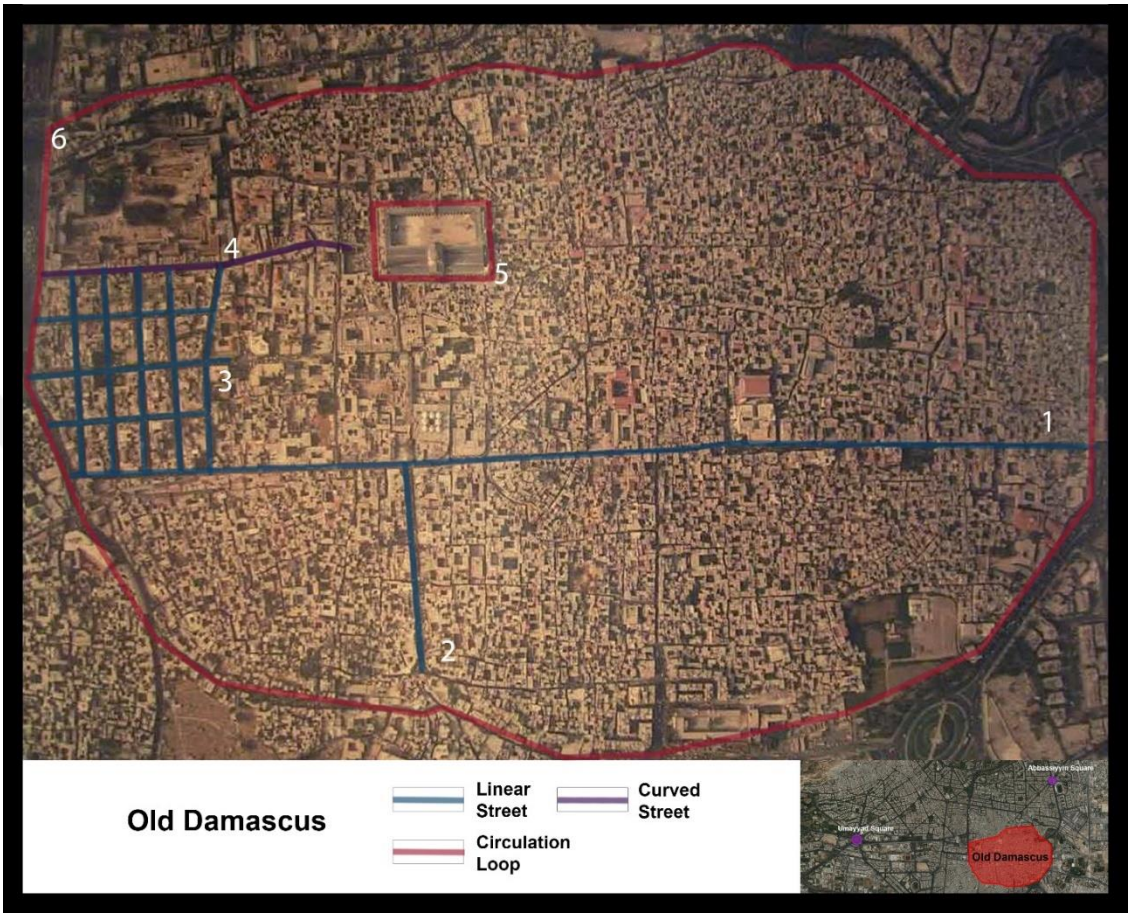
Figure 4.19: The Umayyad Mosque in Damascus

Source: https://global.britannica.com/topic/Great-Mosque-of-Damascus (accessed 23 March 2016).

Road Systems and Street Spaces

The old city consists of main roads, which have shops, khans, public hammams… etc. and they are mostly either linear streets, like the Straight Street (1) and Al-Hariqa Souq's streets (3), or curved streets like Al-Hamidiyah Souq (4) as shown in figure 4.20 and figure 4.21. Moreover, there are many circulation loop streets like in the surrounding streets of Umayyad mosque (5) and the old city (6). On the other hand, the streets which lead to the residential areas have mostly amorphous shapes with some dead ends. Such streets have some advantages, they provide more privacy, shade, and better air ventilation (see figure 4.22 & 4.23).

Figure 4.20: Map Showing Some Road Systems and Street Spaces in the Old City

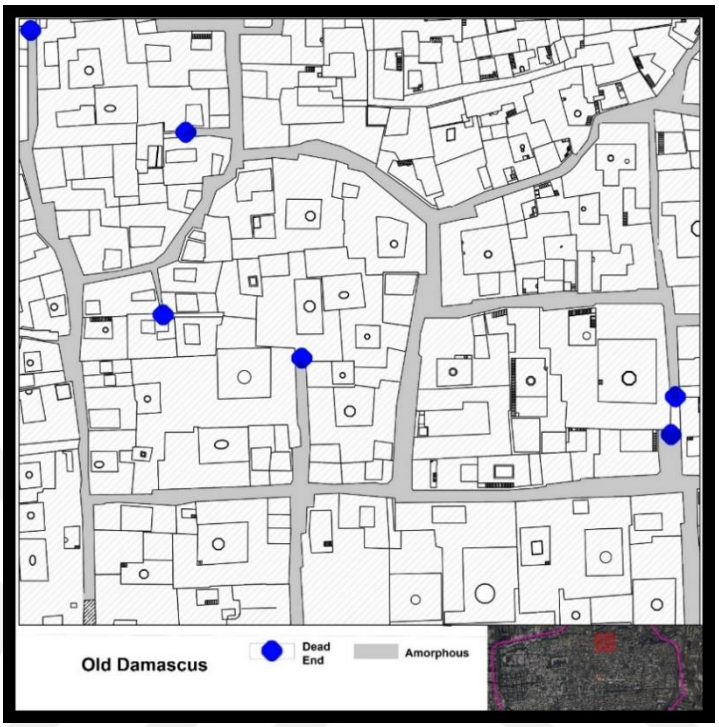


Source: Google maps, edited by the author.

Figure 4.21: The Straight Street (Left Picture) and Al-Hariqa Square (Right Picture)

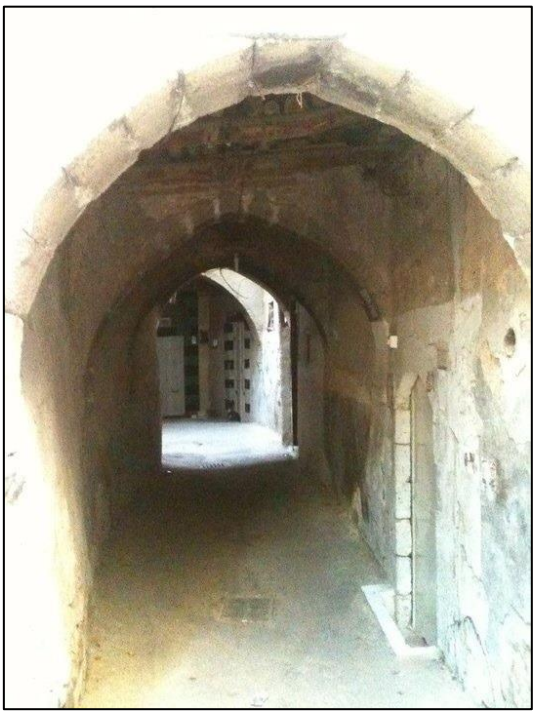
Source: The lift picture was taken by the author in 2012. The right picture: http://www.lovedamascus.com/ar/location/square/al-harika/005sq001/al-harika-square (accessed 23 March 2016).

Figure 4.22: Map Shows Amorphous Streets and Dead Ends



Source: Google maps, edited by the author.

Figure 4.23: Example of a Dead End (Cul-De Sac)



Source: https://www.flickr.com/photos/immortality00/8984853434 (accessed 23 March 2016).

Place Capital

Place capitals in the old city are either private open spaces represented with courtyards inside houses or public open spaces represented by also large courtyards like inside mosques and khans (see figure 4.24 & 4.25). Usually green spaces are only seen inside the courtyards in houses since the old city was surrounded with Al-Gouta, full of all green trees and grooves. That is why courtyards are essential component of the damascene houses because of their critical value in both social and environmental aspects.

Figure 4.24: The Courtyard of Maktab Anbar

Source: https://tr.pinterest.com/philippevitale/damascus/ (accessed 23 March 2016).

Figure 4.25: The Courtyard of Umayyad Mosque

Source: https://tr.pinterest.com/Sounad/syrie/ (accessed 23 March 2016).

4.1.1.1. Housing

The Damascene old houses had many types, designs, and different materials cladding following the social and economic state of the family along with climate, cultural, and geographical factors. Hence, the old houses according to Zakaria Kibrit in his book The Damascene House (2000, p.17) were categorized into five main types:

a. Multi-Courtyard House.
b. Multi-Courtyard and Multi-Story House.
c. Single Courtyard and Multi-Story House.
d. Single Courtyard and Single Story House.
e. Different from the above.

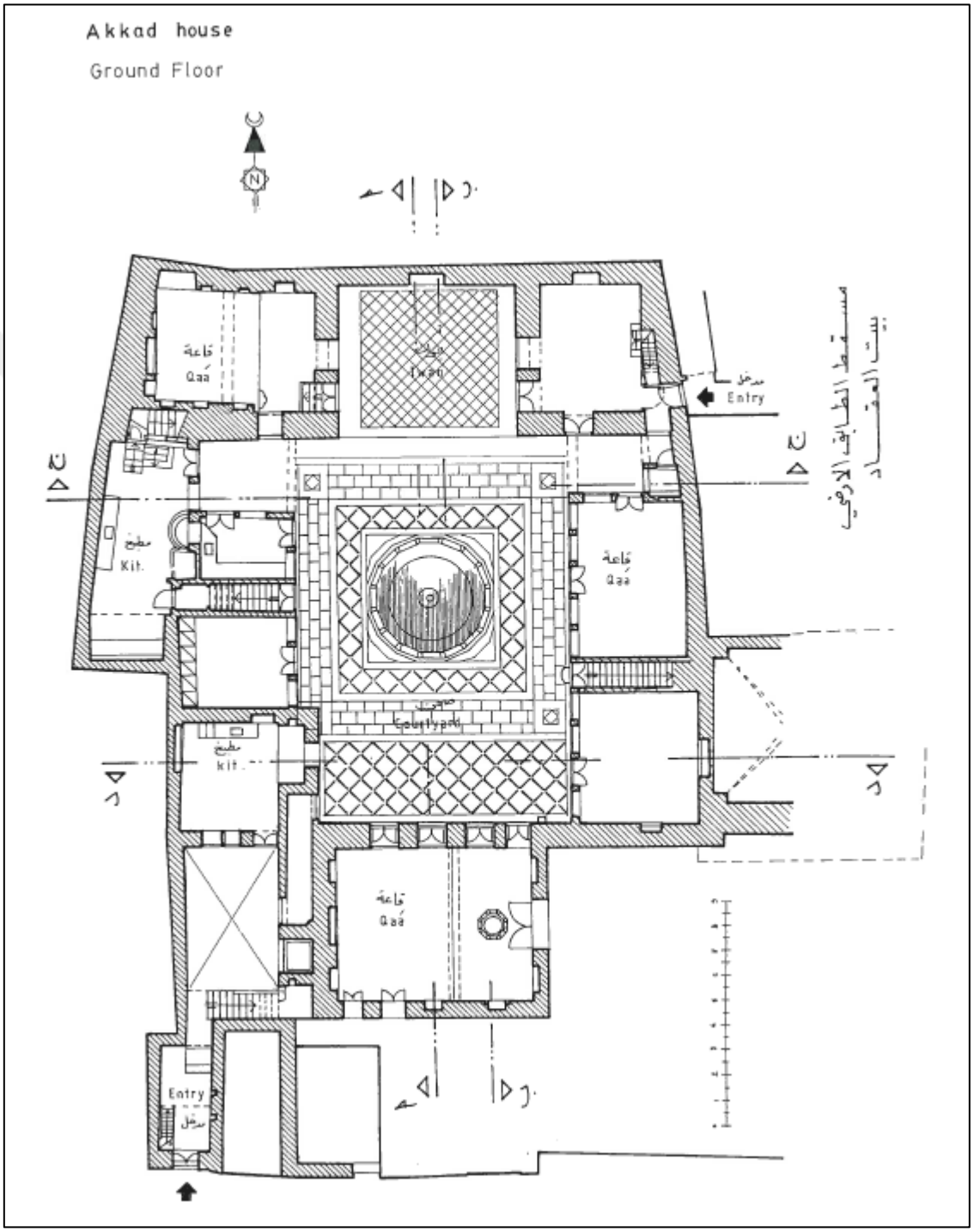
In all types, the courtyard is a domain feature where it represented the center of the family life. However, outside the walls of the ancient city, there were totally different type of houses (before the modern blocks started existing in Damascus) called “Al-Hush". They were built, along with the traditional type, to accommodate the poor rural immigrants. They were different from the traditional Damascene houses because they had rural features with different functions such as the courtyard itself. The courtyard here did not have to be central, and it has posed more functions than the traditional Damascene houses. It was the living area, social gathering, and cooking area altogether causing lack of privacy compared to the traditional Damascene houses. However, because this type did not develop its style from the old city itself (rural style) along with the fact of a lot of these houses were demolished and replaced by modern blocks, the study will not discuss this type.

The Damascene old houses consist of common main parts that characterize them. These parts differ in each house according to the financial condition of the owner. These parts are:

a. The Haramlik, which represents the family living section of the house.
b. The Salamlik, which represents the guests meeting section of the house.
c. The Khadamlik, which represents the service part of the house.

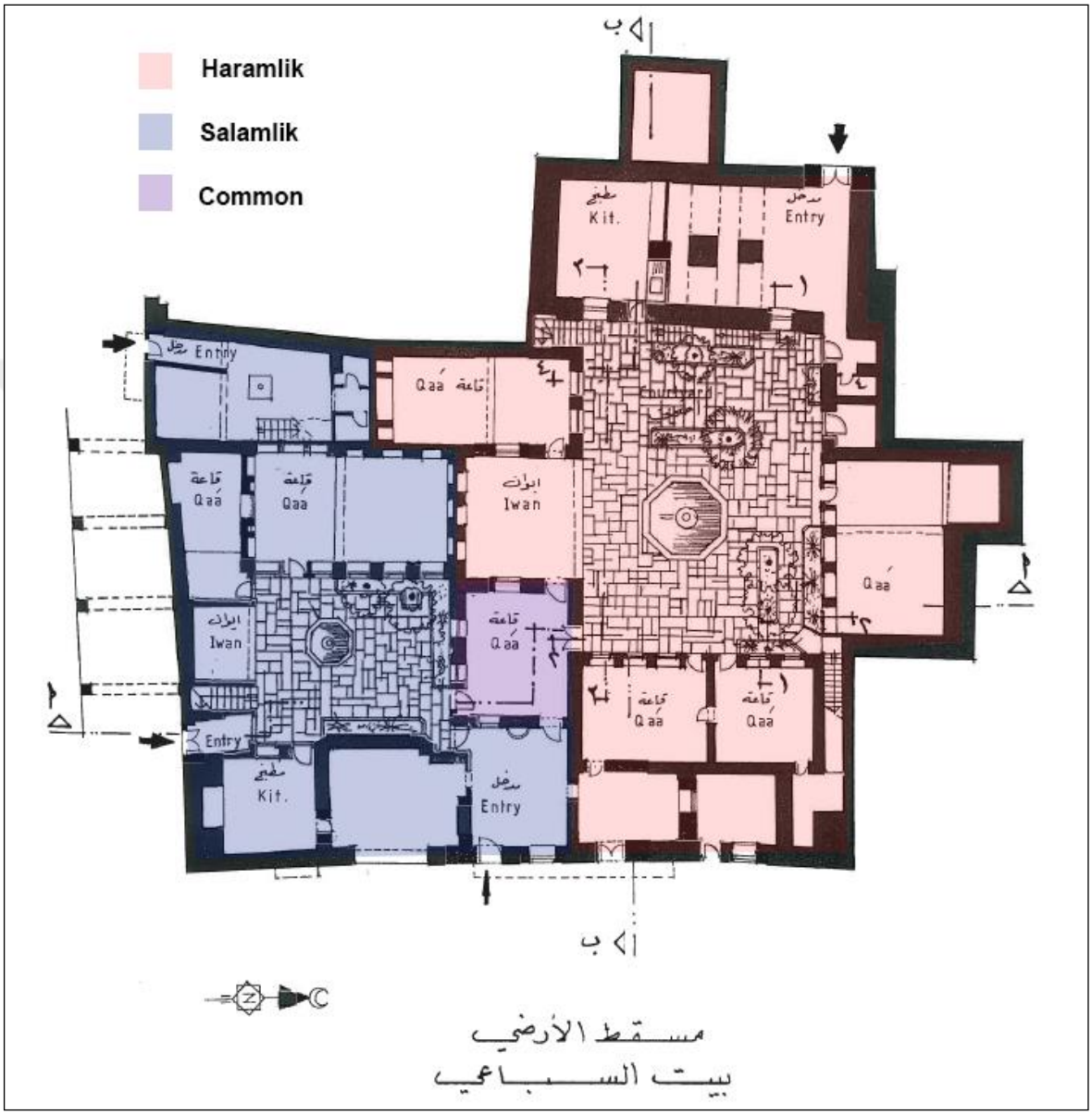
Most houses consist of only the Haramlik part, which functioned in this case also as Salamlik when guests come. That is why they are mainly two stories to make the first floor dwelled by the family when guests show up like in Al-Akkad House (see figure 4.26). Then there are the second most common houses accommodated by wealthier families, which consist of Haramalik and Salamlik parts like in Al-Sibaei House (see figure 4.27). And finally, there is the rarest type of houses, which consist of three parts; Haramlik, Salamlik, and Khadamlik, and are accommodated by governors or extremely rich families like in the case of Al-Azem Palace (see figure 4.28). In this section, the housing design features which will be discussed are affordability, accessibility, morphology, and lifestyle. These features are mostly going to be discussed through three cases (Al-Akkad House, Al-Sibaei House, and Al-Azem Palace).

Figure 4.26: The Ground Floor Plan of Al-Akkad House



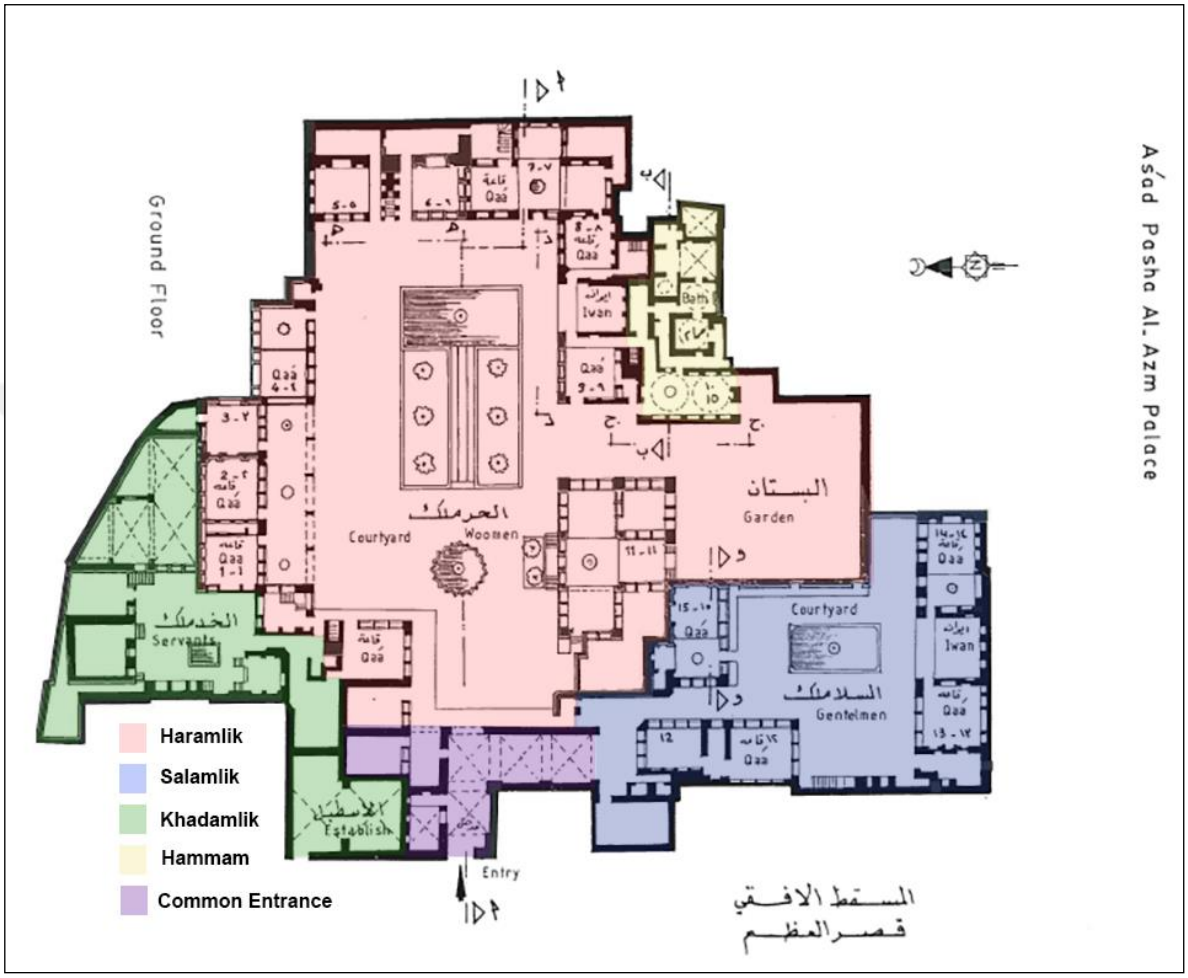
Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Figure 4.27: The Ground Floor Plan of Al-Sibaei House



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Figure 4.28: The Ground Floor Plan of Al-Azem Palace



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Affordability

In the past, before the Ottoman rule era, the traditional houses inside the old city used to be affordable by everyone. But by time the population had increased and the poor started living outside the city walls. Even some people from the middle class had to reduce big parts of their houses, including the courtyard, in order to stay living in the corners of the old city. However, by the time it became more affordable to some of them to sell their houses to the rich class and move out to the neighborhoods outside the walls and build their own common traditional houses (with courtyard). Hence, that explains the informal shape of many wealthy families' houses since they replaced these middle class's houses. And that also explains the

courtyard house type is the domain type in the old city regardless the courtyards number in the house.

The traditional houses inside the old city walls nowadays are not affordable at all, and some are still owned by families by heritage or have been takeover by the government. Also, the traditional houses outside the city walls, Mamluk/Ottoman origin neighborhoods like Midan, Saroujah, and Al-Salihiyah …etc., are not affordable. But still there is a lot of demand for these houses from people whom their origin is from these neighborhoods. Even these people find it difficult to inhabit in their neighborhood and start looking for houses outside their neighborhood in order to find houses which are more affordable or more luxurious.

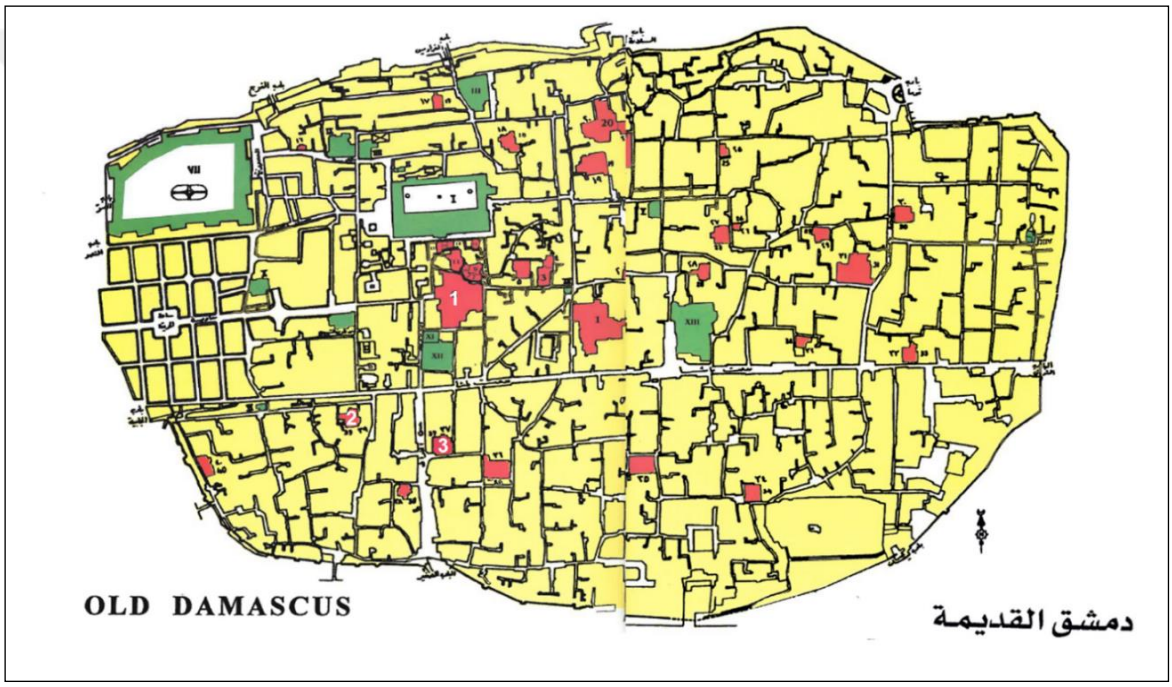
Accessibility

The traditional houses, in general, are accessed directly from the streets (pathways) where they align attached alongside them (see figure 4.29). And in order to reach the courtyard, which is the center of the house, most houses have long narrow passageway that connects the courtyard with the entrance to provide more privacy to the inhabitants. Yet, there are a lot of houses which have a hallway or big corridor instead of narrow passageway like in the case of Al-Azem Palace as shown in figure 4.30. The entrance level mostly is lower than the pathway level, and the entering doors are mostly simple and humble, so it would not represent or give an idea of the inner space. Moreover, the passageway corridor is either located at the corner of the house or at the center depending on the neighbor houses. Therefore, we notice that houses' entrances do not face each other alongside the street so that the privacy of each house would not get affected (see figure 4.31).

In the case of Al-Akkad House, there are two main entrances that each leads to different two rooms which function as guests' rooms called "Qaa" (see figure 4.26). And in the case of Al-Sibaei House, there are two main entrances, apart from other secondary entrances. One leads to the Salamlik's courtyard, and the other one leads to the Haramlik's courtyard as shown in figure 4.27. On the other hand, Al-Azem Palace surprisingly has only one entrance considering its big size which is around 5500 m2. The entrance leads to a hall which directs

to both the Salamlik and the Haramlik parts of the house as shown in figure 4.28. In all cases, we notice the hierarchy in movement between spaces from the public space (main streets) passing to the semi-public space (pathways) to the semi-private space (passageway and Salamlik part) and then finally to the private space (Haramlik).

Figure 4.29: The Location of Al-Azem Palace (1), Al-Akkad House (2), and Al-Sebaei House (3)



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Figure 4.30: Part of the Hallway Entrance of Al-Azem Palace

Source: https://tr.pinterest.com/sarahesquirel/islamic-architecture/ (accessed 23 March 2016).

Figure 4.31: Houses' Entrances not facing Each Other alongside the Street

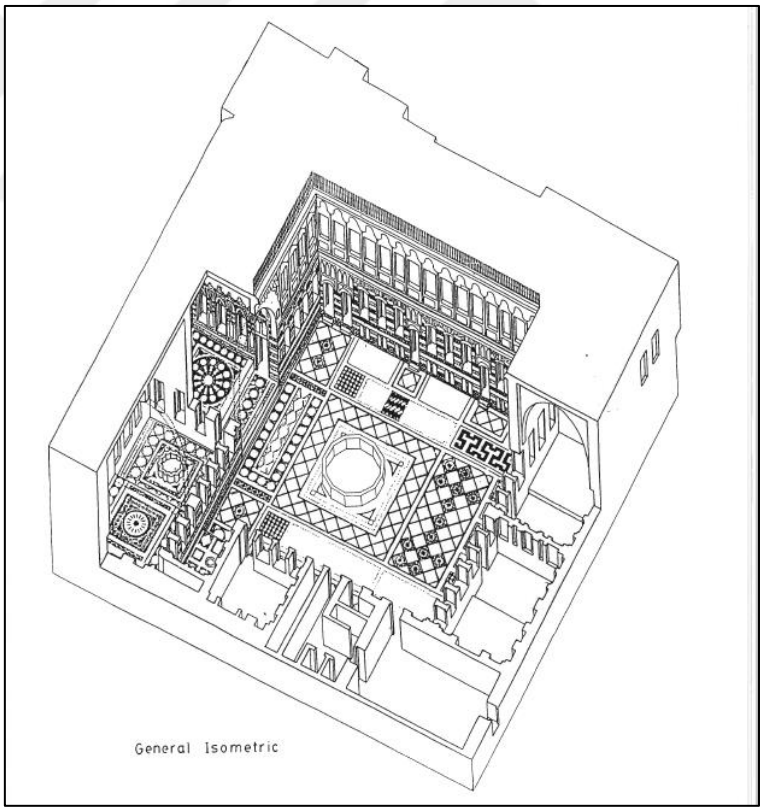
Source: Taken by the author in 2012.

Morphology

Geometry

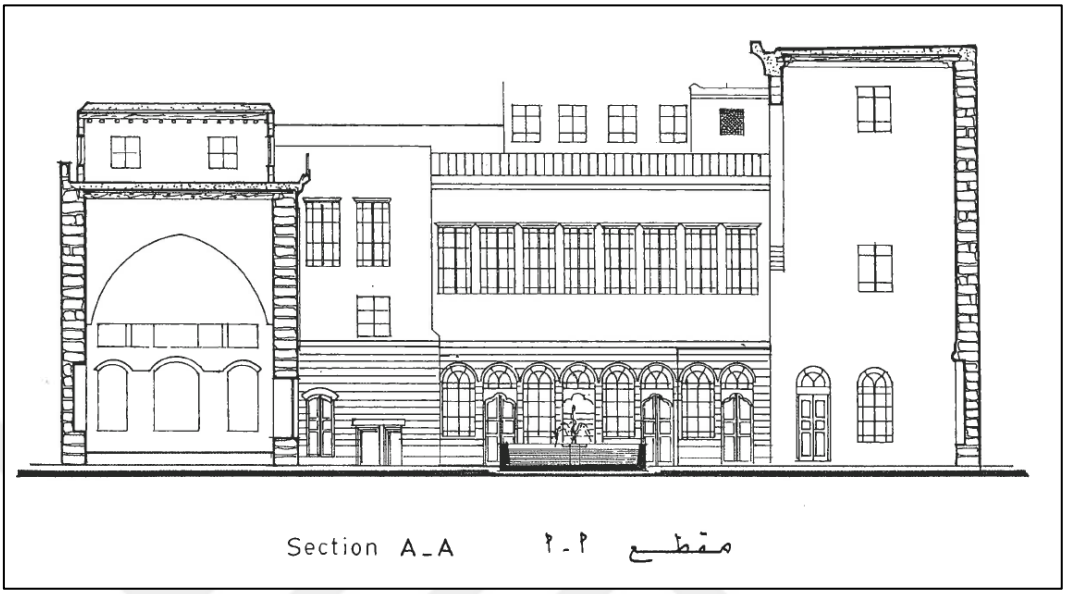
Because of the organic attachment between the old houses, there is no standard common form for the traditional Damascene house. Moreover, the houses were not built following a golden rule or some kind of standard proportion. Even though the courtyards look alike, they differ in size and dimension depending on the house's size and the general form (see figure 4.32). The height of the floor is around 5 meter; hence, a 2-story house height is around 10 meters as shown in the section of Al-Akkad house in figure 4.33.

Figure 4.32: 3D Perspective View of Al-Bikaei House



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 1.

Figure 4.33: A Section through Al-Akkad House



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Plan Typology

The traditional house consists of common essential components that probably exist in each main part of the house (Salamlik and Haramlik). These components are entrance and passageway, courtyard, Iwan, Qaa, kitchen, bathrooms, bedrooms, roof, and rarely hammam. Since the entrance and passageway are already discussed in the accessibility section, we will start with:

a. The Courtyard

As mentioned before the courtyard is always central and is the most dominate part of the house. It is centralized by fountain that differs in size and shape (see figure 4.34). The fountain is both a functional and aesthetic feature. It is connected to the water supply of the house which makes it one of the main water sources in addition to the fact that it cools the breeze in hot summer. The courtyard also contains green features and trees that provide shade and beautiful view to the inhabitants. And since the courtyard is surrounded by tall walls (approximately 10m) it is protected from strong wind and has more clean air; that is why all rooms surround it and are also open to it. We can say that the courtyard provides an

environment that is totally different from the outer environment in the streets and shops. It yields a small oasis of comfort and serenity.

The main reason behind building courtyard houses in this region was to adapt to the surrounding environment. It is true that Damascus was completely surrounded by a green wide belt (Al-Ghouta), but it still had a hot weather since it is in the middle of the desert. The courtyard design was also suitable for social life demands that mostly cherish privacy and follows Islamic instructions.

Courtyard form as mentioned before is not standard. Sometimes it is close to a square shape, and sometimes it is close to a rectangle shape. In case, it has a rectangular shape, the long sides usually are in the north-south direction so that sunlight can reach rooms in these sides. Therefore, main rooms like living rooms, guest rooms, and bedrooms are mostly located in the northern and southern sides of the courtyard. The southern side's rooms are mostly used in summer because they are under shade most of the day while the northern side's rooms are used in winter because the sun rays always reach them through the courtyard. In that sense, secondary and service rooms usually are located in the eastern and western sides.

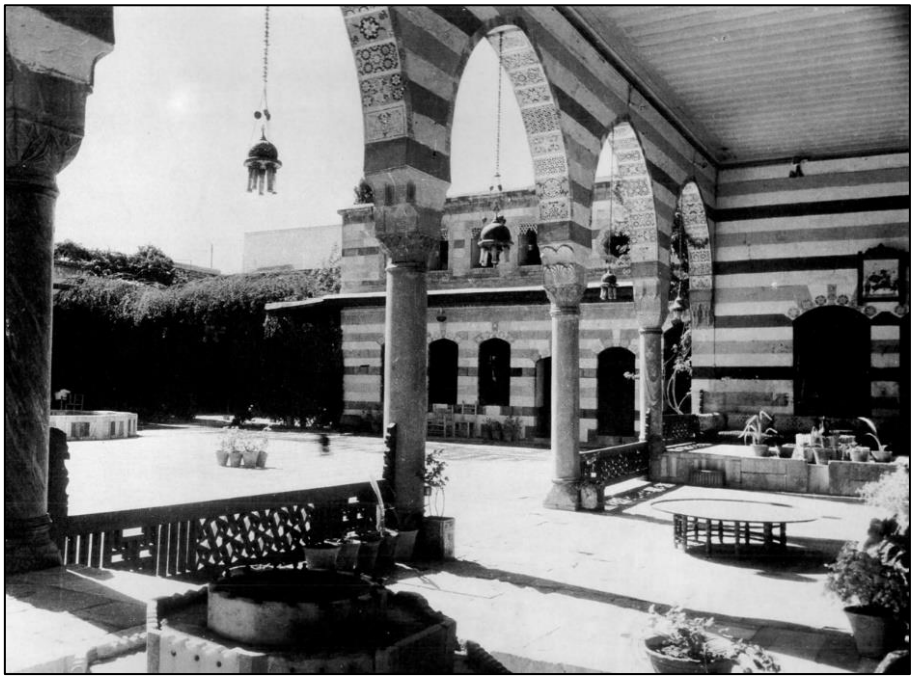
Figure 4.34: Part of the Haramlik Courtyard of Al-Azem Palace (Left Picture) a Courtyard of Maktab Anbar (Right Picture)

Source: http://www.gpsmycity.com/tours/old-damascus-cultural-tour-4435.html (accessed 23 March 2016).

b. Iwan

It is a semi-rectangular room located mostly on the southern side of the house and has one side open to the courtyard. However, some big houses also have another Iwan on the northern side as a winter living area like in the case of Al-Azem Palace as shown in figure 4.35. Iwan is characterized by an arch on the open-side and it is 5-10 m high depending on the house's height. The Iwan's ceiling reaches the roof of the house because this way it can discard hot, humid air from the top especially if it had upper windows (see figure 4.36). It is also mostly followed by two rooms on each side, which they work as closed guest rooms (Qaa), to form together with the Iwan as a guest gathering area. Just in front of the Iwan there is always a fountain in the courtyard, so it can get a cool breeze through water and provide a lovable scene to its surroundings. And in order to provide the gathered people in the Iwan a better view of the courtyard, the Iwan's level usually is one or two steps higher from the courtyard level.

Figure 4.35: The Northern Liwan of the Haramlik Courtyard of Al-Azem Palace



Source: http://www.syriaphotoguide.com/home/damascus-qasr-al-azem%D8%AF%D9%85%D8%B4%D9%82-%D9%82%D8%B5%D8%B1-%D8%A7%D9%84%D8%B9%D8%B8%D9%85/ (accessed 23 March 2016).

Figure 4.36: Liwan of Al-Akkad House's Courtyard

Source: http://www.discover-syria.com/photo/33269/6354 (accessed 23 March 2016).

c. Qaa

Since it is a closed guest room it used to be considered more formal than Iwan, hence it usually holds the main occasions and celebrations. That is why it has the most decorated gypsum walls and wood ceilings in the entire house (see figure 4.37). Just like Iwan, there is also summer and winter Qaa rooms and their level are mostly higher than the courtyard level. Qaa rooms always have upper windows to expel hot air in summer (when they are open) and trap it in winter (when they are closed). They also have lower windows in some houses to apply more light to the room, and some even have a small fountain at the center of the room. In summary, the wealthier the family is, the more luxurious and decorated the Qaa is.

Figure 4.37: Part of Al-Sibaei House's Qaa

Source: http://archnet.org/sites/6416/media_contents/76476 (accessed 23 March 2016).

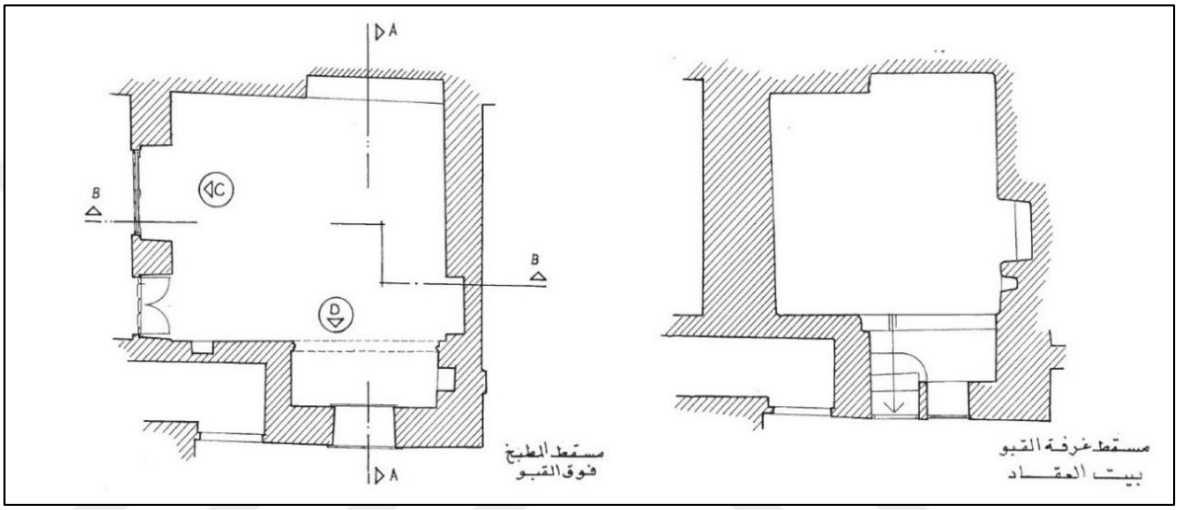
d. The Kitchen

It is always located on the ground floor at one of the courtyard's corners, so it would not take an important slot on the main sides. Usually, it takes place either on the northern, western corner or on the western sides since these locations are the least important ones, and they are the coldest parts of the house. The traditional kitchen consists of three main sections (Kabrit 2000):

a. "Al-Kanon" which is the cooking area, and it includes a chimney.
b. Water tunnels connected to the fountain to supply the kitchen with water.

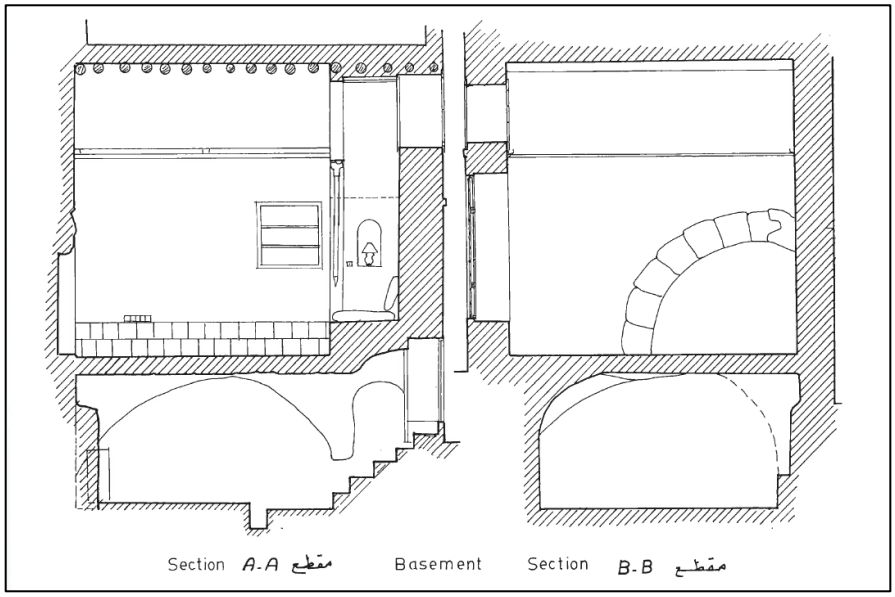
c. Storage room which is usually in the basement, and it has to be located on the coolest side of the house and has to be connected directly to the kitchen just like in Al-Akkad Houses (see figure 4.38 & 4.39).

Figure 4.38: Plan of the Kitchen on the Ground Floor (Left Picture) and Plan of the Storage Room in the Basement (Right Picture) – Al-Akkad House



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Figure 4.39: Sections through the Kitchen and the Storage Room in Al- Akkad House

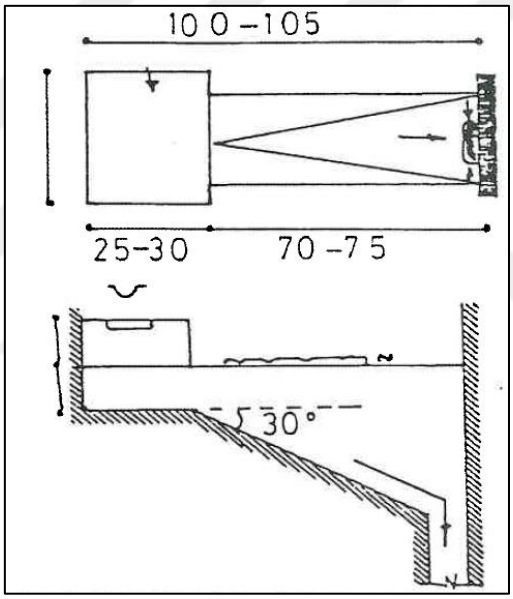


Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

e. Toilets

They all have the same design in all traditional houses. For example, they have one standard design with a 1-1.2 m2 area and always have unstoppable running water supply (see figure 4.40). They also must not be directed in the same direction of Kiblah (Mica's Direction) following Islamic rules. Thus they are perpendicular to the Kiblah.

Figure 4.40: Plan and Section of Toilet



Source: Zakariya Mohammad Kibrit (2000) The Damascene House – Part 1.

f. Bedrooms

They are mostly located on the upper floor and are, in some cases, fronted with open-corridor that connects between the upper floor rooms. They also have a large number of close fitting window facades towards the courtyard so they would allow maximum sunlight to in winter as shown in figure 4.41. However, in summer inhabitants usually prefer using the rooms on the ground floor instead, since they are much cooler during this time of the year.

Figure 4.41: Courtyard of Al-Akkad House

Source: http://www.discover-syria.com/photo/33437/6406 (accessed 23 March 2016).

g. Roof

It is mostly uncovered and not used so that the privacy of neighbors' houses would not be affected. Therefore, in some exposed parts of the roof they used to install high walls to solve the privacy issue. In some houses, there is one room called "Al-Tayyarah" in the roof built from wood and glass, but it used to be built only if it did not expose to neighbors.

h. Al-Hammam (Showers)

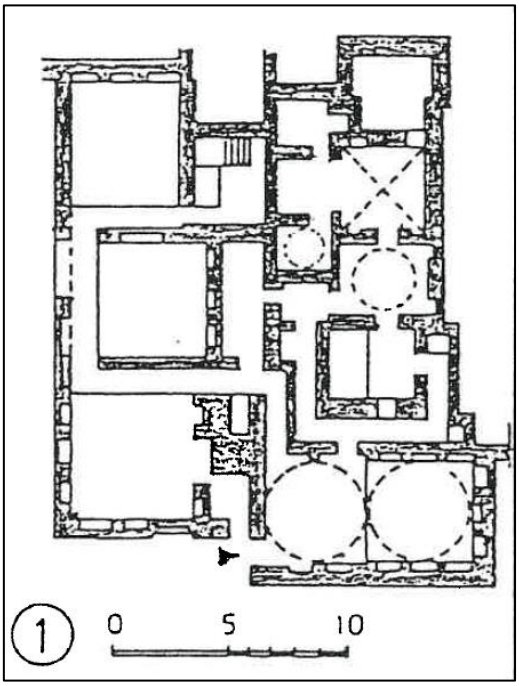
There were no showers generally in traditional houses because there were a lot of public hammams, which they are spread everywhere around the old city. However, they were also available in very rich families or governors houses such as Al-Azzem Palace. We can notice in Al-Azem Place that the hammam has the same sections of common public hammams but

on a smaller scale (see figure 4.42 & 4.43). It even has a similar design which is usually characterized mainly by its domed roofs with circular glazed openings plus pointed chimneys. The hammam usually consists of:

i. Outer section (Al-Barrani): A fountain located at the center usually and high dome covers it. The temperature is normal in this section.
ii. Middle section which is a small room in the case of Al-Azem Palace and it is hotter than the outer section.
iii. Inner section (Al-Jowwani) which is the most heated room and the walls usually have hot and cold water tabs to bathe and shower.
iv. The heating section where they heat the water, and it has a separate entrance to provide it with fuel.

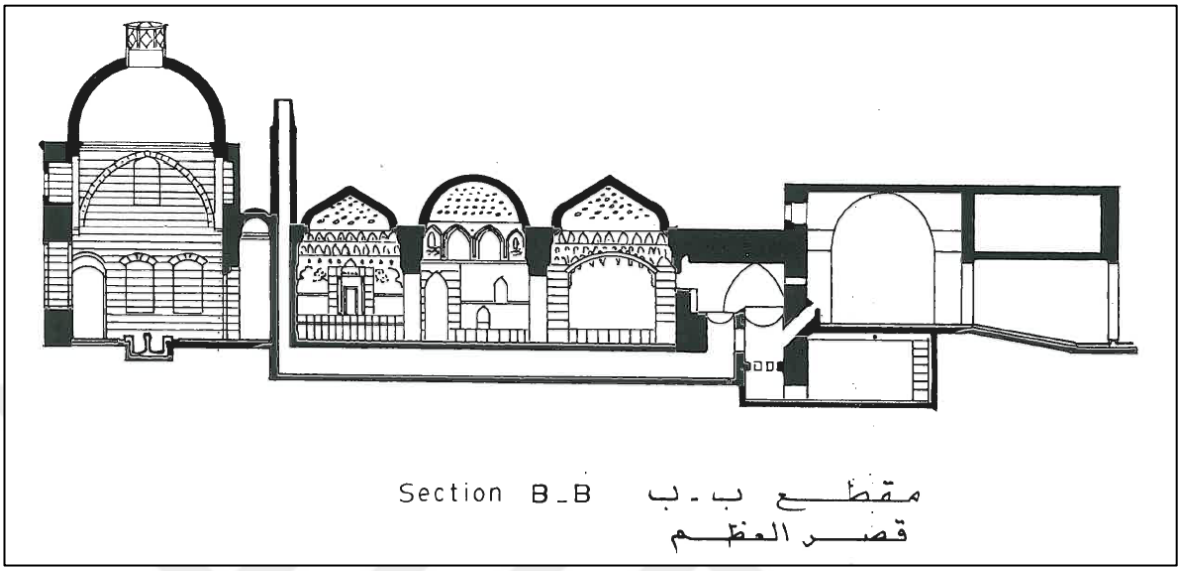
All these sections are connected by narrow zigzagged corridors to sustain and isolate the heat of each section (Kabrit 2000).

Figure 4.42: Plan of Al-Azem Palace's Hammam



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Figure 4.43: A Section through the Al-Azem Palace's Hammam



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Building Components

a. Openings

The exterior facades of the traditional houses lack openings and decoration. The openings are usually small and covered with thin wooden crisscrossed rods to provide privacy to the occupants while allowing them to look outside as shown in figure 4.44. There is also wooden lattice screens (Mashrabiyya) which is an extruded opening covered by fine wooden balusters with more decorative pattern. It allows air and light penetration and provides privacy at the same time as shown in figure 4.45.

On the other hand, the interior facades are way more decorative, and they have a lot of openings towards the courtyard. The windows are usually narrow and high to allow more light and air to the rooms. The guestroom and important rooms have upper and lower windows as shown in figure 4.46. Another common interior opening type is small circular opening which is usually located above windows and doors (see figure 4.47). In addition, columns and arches are common important interior features in the traditional houses as shown in figure 4.48.

Figure 4.44: A House with Small Wooden Covered Windows

Source: Taken by the author in 2012.

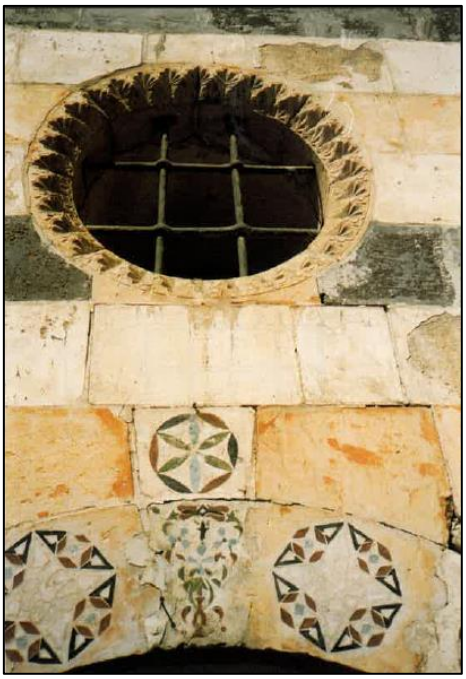
Figure 4.45: View of Mashrabiyah

*Source:*http://www.esyria.sy/edamascus/index.php?p=stories&category=arts&filename=201409240046232 (accessed 23 March 2016).

Figure 4.46: Upper Windows of a Liwan in Al-Baroudi House

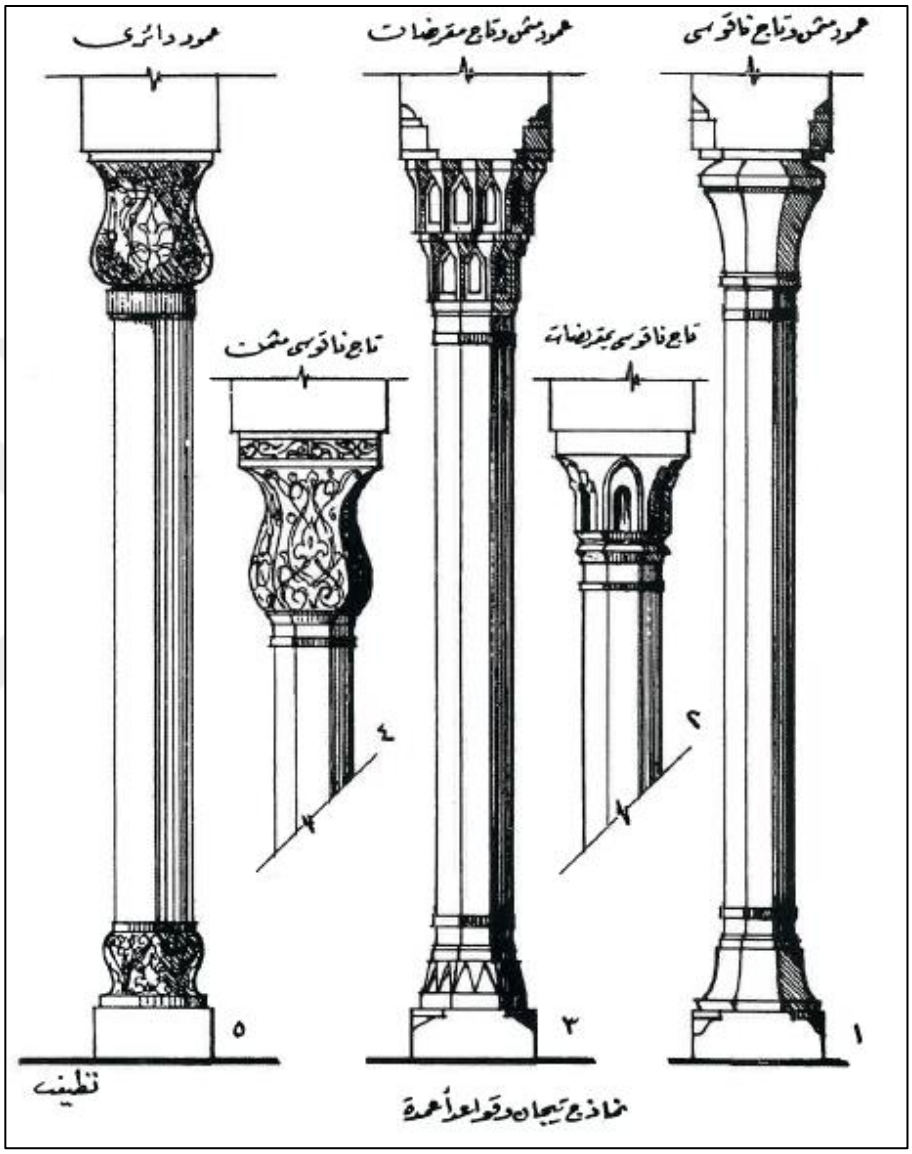
Source: https://www.facebook.com/DamascusUnderTheSky/posts/1360309490662593 (accessed 23 March 2016).

Figure 4.47: Circular Opening in Al-Sibaei House



Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 2.

Figure 4.48: Some Samples of Common Interior Columns in the Damascene Houses

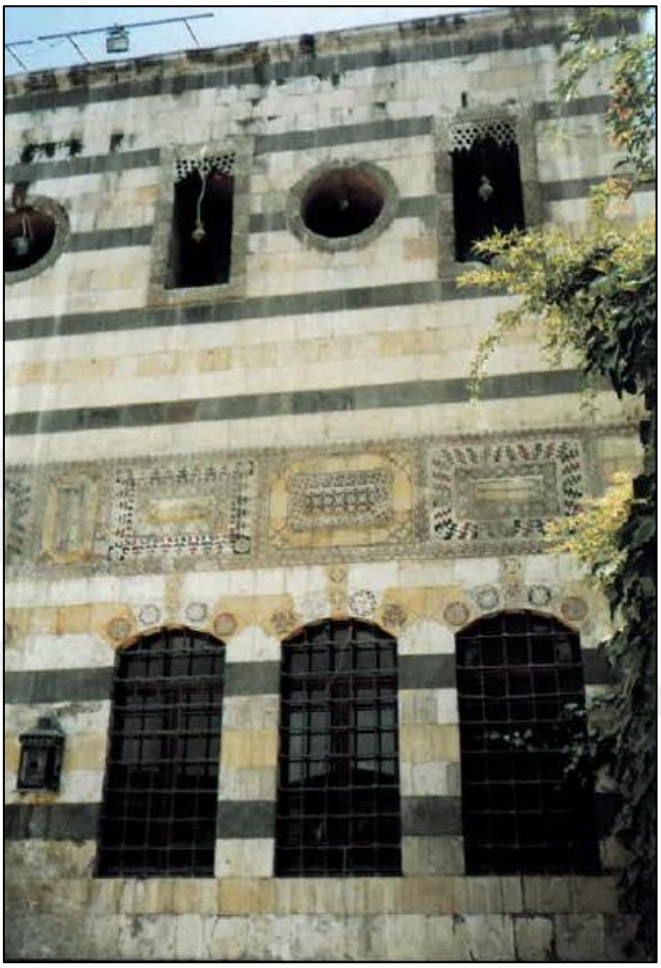


Source: Zakariya Mohammad Kibrit, (2000) The Damascene House – Part 1.

b. Security Features

Usually the lower windows of the guest rooms "Qaa" are protected with iron balusters to prevent these rooms from robbery since they possess a lot of valuable properties and antiques (see figure 4.49). Moreover, the passages in the upper floors and the roof are attached with guard rails to provide safety for the inhabitants and protect them from robbery.

Figure 4.49: The Lower Windows of Qaa inside Al-Azem Palace Protected with Iron Blusters



Source: Zakariya Mohammad Kibrit,(2000) The Damascene House – Part 2.

Lifestyle

Privacy

Privacy in the traditional Damascene houses is probably the most important principle in the design of spaces and details of the houses. It can be clearly noticed, for example, in:

a. Wooden lattice screens (Mashrabiyya) and small covered windows in the exterior facades.

b. The long narrow passageway that connects the entrance with the courtyard or with the guest rooms (Qaa).
c. Multi entrances to each part of the house (for Salamlik and Haramlik).
d. High walls in the roof.
e. Bedrooms in the upper floor.
f. The kitchen segregation mostly in the house's corner, where women can work freely.

Socializing

Due to the high value of family in the Damascene culture in the past, the courtyard house was the best plan typology to inhabit three generation in one house. Each small branch of the big family within the house has its own living room and bedrooms, but it shares with other small branches the courtyards, Liwan, and Qaas. The social life is also important in the Damascene culture, and it can be noticed in the great interest on guestrooms and Liwan decoration and even allocating Salamlik part for guests gathering in large houses.

Standardization and Diversity

It is clearly evident the diversity of houses in styles, designs, and decoration, which all were affected by the financial status of the families (see figure 4.50). However, there is some kind of standardization in plan typologies and rooms location, which are controlled by the social principles of the Damascene culture. Moreover, even though there is diversity in housing designs in general, there is also standardization in the urban pattern which is influenced by the social life. Hence, we can notice that there is a general standardization in the morphology of the urban texture and the housing design, but with a margin of diversity in houses' scale and interior decoration.

Figure 4.50: Decorated Wall in the Courtyard of Al-Akkad House

Source: http://www.syriaphotoguide.com/home/damascus-beit-al-aqad-%D8%AF%D9%85%D8%B4%D9%82-%D8%A8%D9%8A%D8%AA-%D8%A7%D9%84%D8%B9%D9%82%D8%A7%D8%AF/ (accessed 23 March 2016).

Flexibility and Continuity

Since Damascus old city is considered the oldest continuously inhabited city in the world, it indicates its flexibility and continuity through time. However, it is not like that anymore for many reasons such as:

a. It is not as inhabited like before since a lot of the houses, regardless shops and mosques, are possessed by the government, or transformed into to restaurants or museums.
b. Reserving the houses in their current state is required in order to save the old city's identity. Hence, that might not meet with the current lifestyle demands.

c. It has become more crowded than ever by people all around the city and even from other Syrian provinces since it has turned to an essential commercial and entertaining center.

The old city has a lot of potentials to improve and to be a better center of attraction, however a lot have to be also done to restore it and protect its identity and architectural memories. The old city in the last decades has witnessed a lot of neglecting and distortion caused by failed governmental policies in observing and improving it (see figure 4.51 & 4.52). For example, most recently on the 23th of April 2016 a fire has broken out in one of the most important and valuable Souqs in the old city called Al-Asrouniyeh, which meets with Al-Hamidiye Souq and really close to the Umayyad Mosque, causing the burn of 70 shops under the authority watch (see figure 53).

Figure 4.51: Some Neglecting Appearances in the Old City

Source: Taken by the author in 2012.

Figure 4.52: Neglected Space inside the Old Castle

Source: Taken by the author in 2012.

Figure 4.53: A View in Al-Asrouniyeh Fire on the 23rd of April 2016

Source: http://www.aljazeera.net/reportslibrary/pages/de7340b7-dbfa-4f0c-949b-34badb192738 (accessed 30 April 2016).

4.1.2. Non-Physical Features

4.1.2.1. Government Policies

Syria was one of the countries that started UNESCO33 in 1946, and by 1967, the old city of Damascus became a World Heritage Site. A site that needs to be protected and maintained in the interest of the global community. Thus, rebuilding, repairing and maintaining it was to be closely monitored and restricted to use only of original materials and agreed upon construction techniques. Also, restrictions were placed on bars and cafes such that they had to be at least half kilometer away from any holy site (Lababidi 2008, p.59).

The old city, with its World Heritage Site title, has a 5000-year long metropolitan history. Thus, it gains distinction for having preserved a complete urban fabric for so long along with its residential blocks. It is estimated that up to half of the 16,832 houses registered in the 1900 Ottoman yearbook of Damascus are still standing, as stated by the International Council on Monuments and Sites, ICOMOS (Weber 2002). Yet, the old city is riddled with various urban problems. According to Lababidi (2008), after he conferred with key figures, property contractors and scholars, and some members of Parliament, it was apparent that mismanagement and corruption were the main reasons for the city's decline.

A combined endeavor to redevelop old Damascus in the 1980's began after more than two decades of disuse and condemnation of the old town. The redevelopment efforts focused on cafes and hotels, with many old houses changed into luxurious cafes, bringing back the upper-class citizens to the area. In 1994 old Damascus had only three cafes; almost a decade and a half later the number has exceeded 130, with new cafes being built all the time. As declared by Waed al-Mhanna, UNESCO's World Heritage Site consultant and founder of the Heart of Damascus NGO, "They are spreading like a cancer." Lababidi (2008, p.60), explains the process as such: "There is no control. No management of these developments… In order to build a hotel or restaurant, you have to go into partnership with a member of the government or one of their relatives - that way you can build what you want, where you want, how you want". "The heritage value of these buildings is destroyed, but the government does not care because it gets rich from these enterprises." Even though heritage advocates do not have any

qualms with making old Damascus attractive to tourists and the upper-class, some have worries about the cumulative effect this will have on its poor residents. “These old city hotels are becoming even more expensive than staying at the Four Seasons… - the restaurants as well, so rents are going up, house prices are going up, and the poor residents who live here cannot afford to live here anymore. The biggest value of Damascus is that it is the oldest continuously inhabited city in the world. And now the poor are moving out. The rich will never move in [because of transport/pollution/water problems]. Soon it will only become like a museum. Not lived in. Just for show. What is this? This is not a city!” (Al-Mhanna, W. 2008 cited by Lababidi 2008).

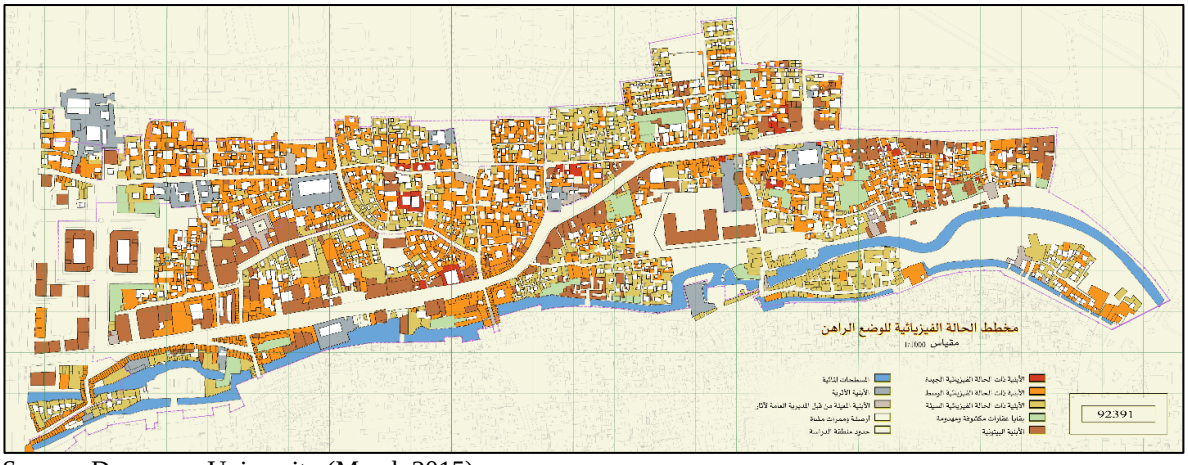
Architects have begun to focus on reconstruction, as part of the plan to upgrade old-city Damascus. Due to its maze-like roads built as far back as the Roman times, it has a high level of traffic jam and pollution. With the lack of a dominant city reconstruction scheme, and the deep-seated issues of corruption, some vital Heritage Sites have been neglected, and others have been inefficiently refurbished and conserved. Due to their decrepit nature, city officials have called for their demolition. “Garbage,” not heritage, was what the City Mayor, Bishr Sabban, called the buildings slated to be demolished, with the expectation that they will be replaced by the well-known indicators of a modern city in this century - high-rises and highways (Kabbani, 2008 cited by Lababidi 2008). Hence, the Syrian media used to bluster of newly developed opulent building plans including international shopping malls and five-star hotels, many disputed that such ventures are misguided, saying that they will only aggravate Syria’s ever present wealth gap issues, increasingly high house prices, and the pervasiveness of its urban slums. As shown by the threatened withdrawal of their World Heritage Status, there is a growing concern that these plans regarding the city will demolish the monuments on which Damascus is proud of and contingently the old city will lose tourists it depends on.

While the government redevelopment efforts focused on cafes and hotels, it had carelessly dealt with important renovation matters such like plumbing issues. Constructed during the Roman period, and having the earliest water system, Medhat Basha is the first street in Damascus. As mentioned by Waed al-Mhanna, the water pipes have not been updated in two

millennia. Even though the French mandate tried to update its infrastructure, the old city is still riddled with plumbing issues, compounded by the increased consumption by cafes and hotels. City magistrates tried to fix the plumbing problem by digging up Medhat Basha. Archaeologists and other heritage advocates were strongly against the Directorate of Antiquities and Museums on this decision because "this road covers a history – layers and layers which have never been studied" (Al Mhanna, W. 2008 cited by Lababidi 2008). The government acquiesced to hiring expert archaeologists and other technical engineers to assist the redevelopment of the street. However, Al Mhanna (2008) claims that "But no such expertise was brought in – instead, they brought in cheap unskilled laborers with JCB's to bulldoze the street" (cited by Lababidi 2008). The street was filled with destroyed Roman pillars, and several residential buildings were destroyed as a result of the work in progress.

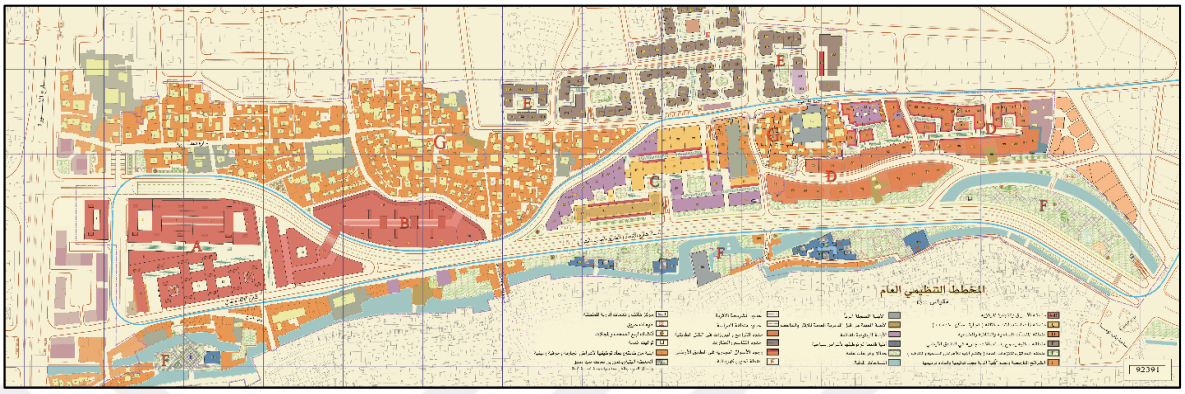
What led to UNESCO's threat to remove the area's World Heritage status was the outrage stemming from the planned construction of King Faisal Street. The plan involves building a highway in the protected safety areas of Old Damascus and demolishing King Faisal Street, an important area rich in history which stretches along the ancient walls of the city from Bab Al-Salam to Bab Touma (see Figures 4.54 & 4.55). Up to 67 percent of historical houses and public monuments are placed outside these walls. King Faisal Street has origins in the Ayyoubid (12th -13th century) and Mamelouk periods (13th -16th century), and more than 5000 families (residents and traders) will be affected.

Figure 4.54: The Current Plan of King Faisal Street North of the Old City



Source: Damascus University (March 2015).

Figure 4.55: The Proposed Plan for King Faisal Street

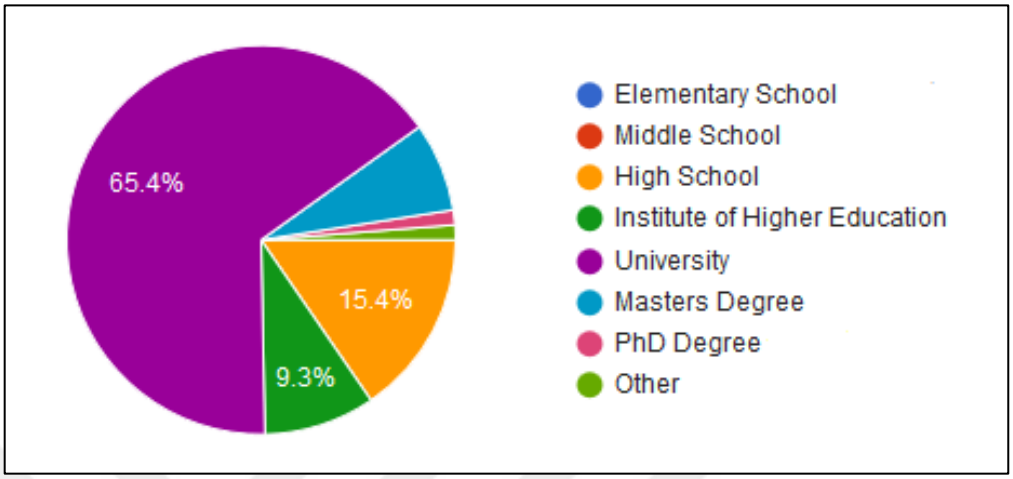


Source: Damascus University (March 2015).

4.1.2.2. Social Capital

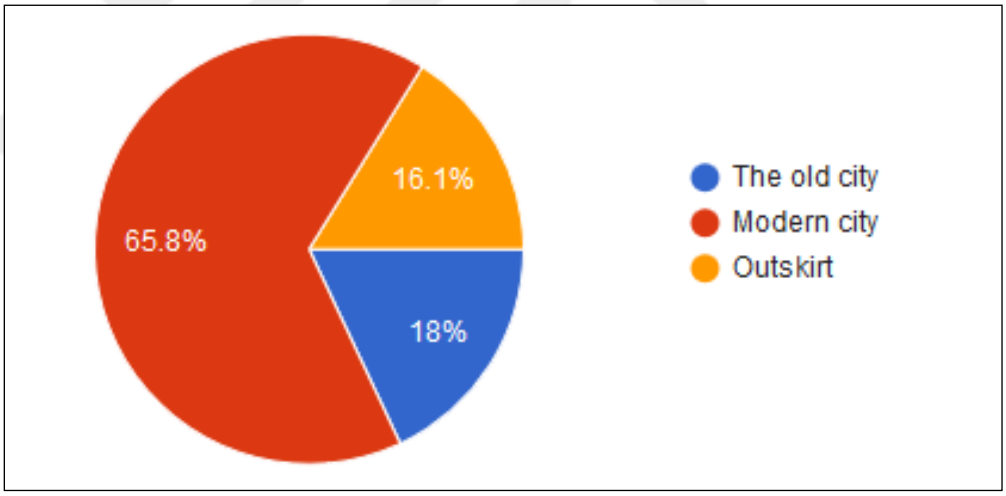
Since it is extremely difficult to make interviews with people in Damascus and its outskirts, this section and the sense of belonging and local identity section will be briefly discussed by covering a questionnaire result via Google Forms. 165 people have answered the questionnaire; 78.4 percent were females and 21.6 percent were males. More than 65 percent have a bachelor degree as shown in figure 4.56 and 70.8 percent of the respondents are still living in Damascus. Also, more than 65 percent of the respondents are living or used to live in the modern city while only 18 percent from the historic core and 16.1 percent from the outskirts (see figure 4.57). The distribution of the answers between the city's zones is not equal because of the difference in population density, which is the highest in the modern city now because of the war. In addition, due to a hard living condition in the outskirts, it is difficult to reach people over there. The responders were given the chance to comment and explain the reason behind their response on each question they answer in order to gain a better insight into the non-physical place-making condition of each zone.

Figure 4.56: The Education Level of the Respondents



Source: The author, April 2016.

Figure 4.57: The Distribution of the Respondents in the City's Zones



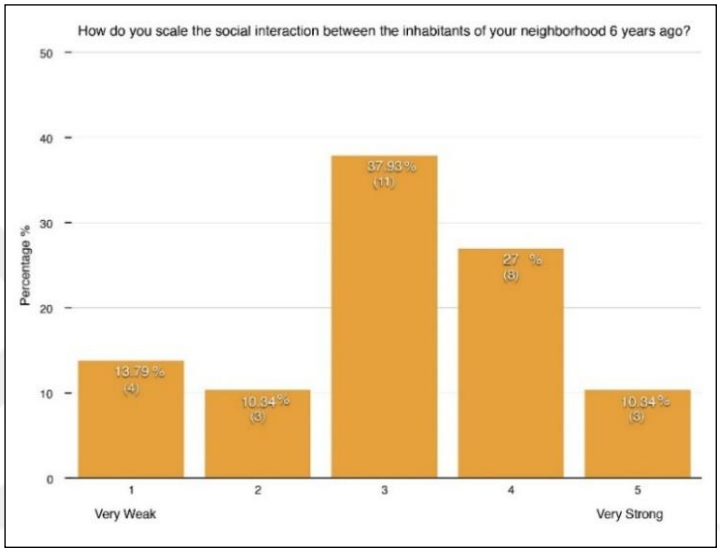
Source: The author, April 2016.

Social Interaction

Conducting from the answers, the social interaction is more stable in the old city compared with the other zones. The answers did not change a lot between 6 years ago and now as shown in Figures 4.58 and 4.59. Still we may say that war slightly weakened the social interaction. The social interaction is generally expressed by regular family visits, greeting, and mutual

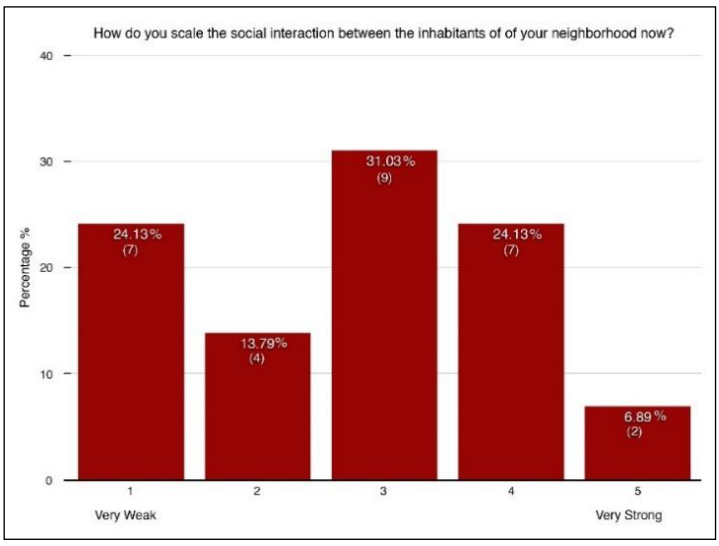
respect. There is a strong relationship between neighbors and friends and mosques are considered as an important regular meeting place for men.

Figure 4.58: Social Interaction in the Old City Six Years Ago



Source: The author, April 2016.

Figure 4.59: Social Interaction in the Old City Now

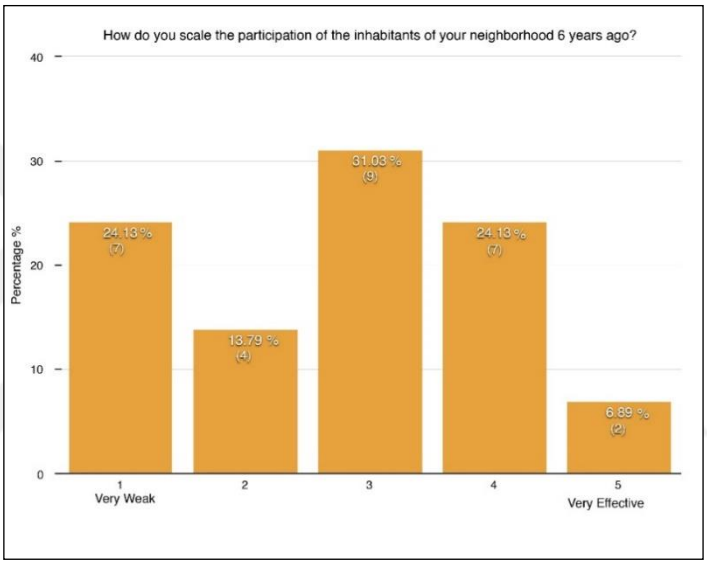


Source: The author, April 2016

Participation and Local Democracy

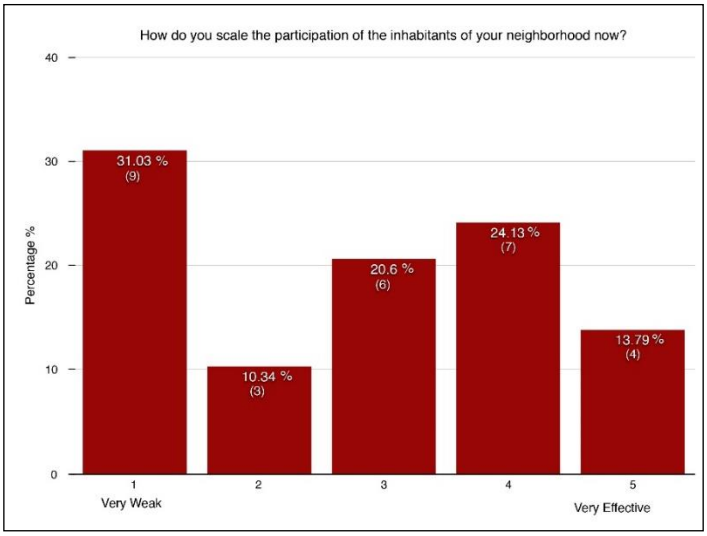
The participation in the old city, in general, is not very effective and is limited to charity and participating in neighborhood service (see Figures 4.60 & 4.61). Moreover, there is a lack of organized charity associations and social organizations because of the government restrictions on volunteer work.

Figure 4.60: Participation in the Old City Six Years Ago



Source: The author, April 2016.

Figure 4.61: Participation in the Old City Now



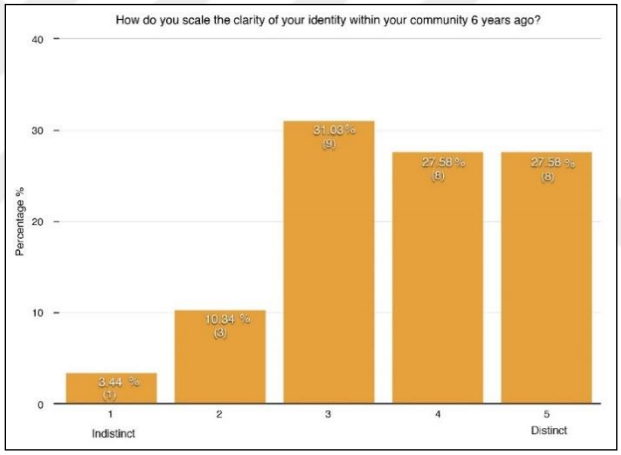
Source: The author, April 2016.

4.1.2.3. Sense of Belonging and Local Identity

Individual's Identity

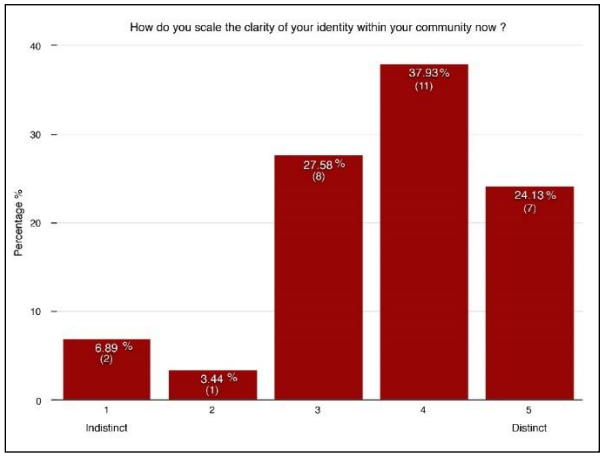
Individual's Identity is achieved in general by the society's perception of the individual and by the support of the surrounding family and friends (see Figures 4.62 & 4.63). Hence, according to the answers, if the individual has done good deeds in the eyes of the society, the individual will get indorsed and respected by other individuals. Moreover, being from famous family or from a certain neighborhood enrich the individual's identity. It is apparent that war did not affect much individual's identity within six years.

Figure 4.62: Individual's Identity in the Old City Six Years Ago



Source: The author, April 2016.

Figure 4.63: Individual's Identity in the Old City Now

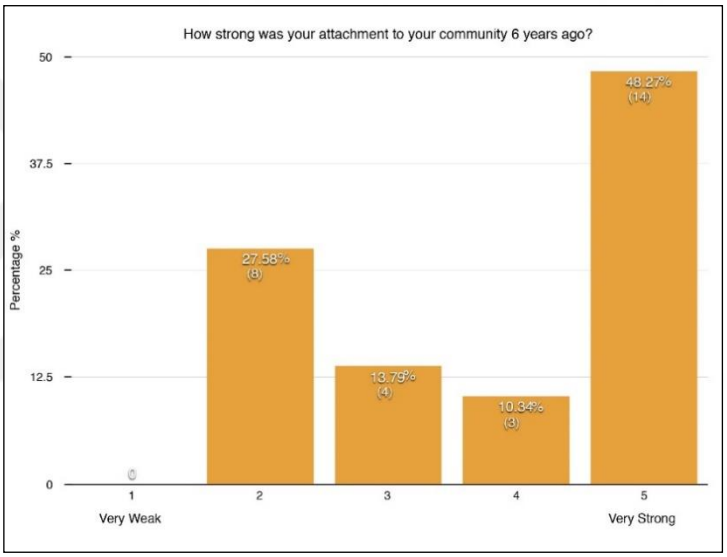


Source: The author, April 2016

Sense of Community

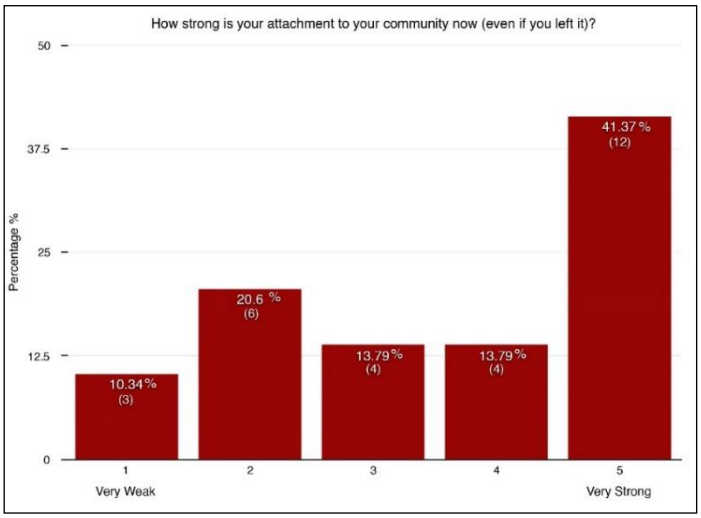
In the old city, it is the most stable and the strongest since it was not affected a lot by the war as shown in figure 4.64 and 4.65. On the contrary, war empowered the sense of community. It is expressed by a sense of respect and cordiality, feeling of safety, and sense of belonging to the community. It is also enriched by strong relationships between individuals and family members.

Figure 4.64: Sense of Community in the Old City Six Years Ago



Source: The author, April 2016.

Figure 4.65: Sense of Community in the Old City Now

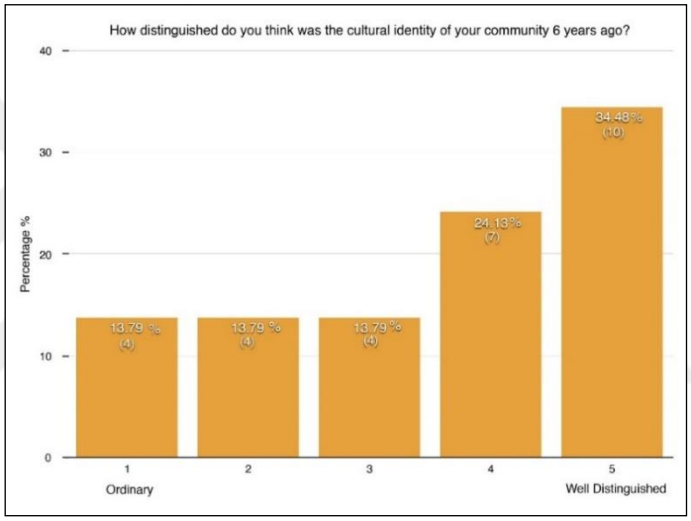


Source: The author, April 2016.

Cultural Identity

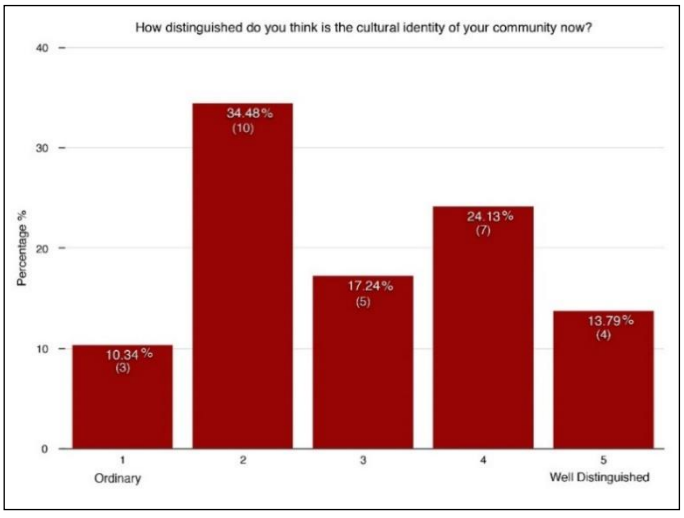
It used to be well distinguished in the old city expressed by the strong attachment to the local traditions (see figure 4.66). However, the old city is now the most affected zone by the demographic change policies led by the regime during the war in order to change the cultural identity of the old city (see figure 4.67). Such policies have damaged the cultural identity in the old city.

Figure 4.66: Cultural Identity in the Old City Six Years Ago



Source: The author, April 2016.

Figure 4.67: Cultural Identity in the Old City Now

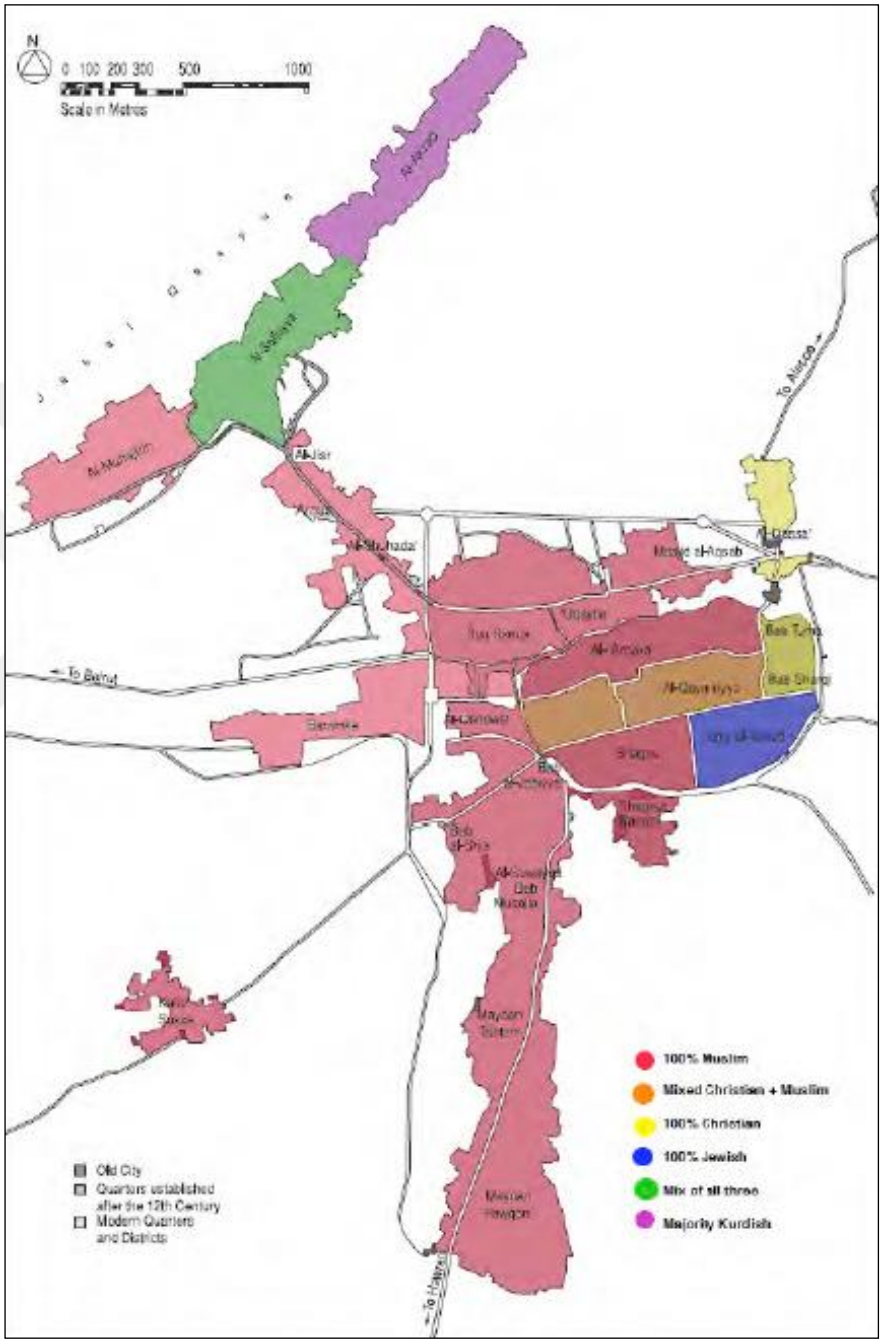


Source: The author, April 2016.

4.1.3. Post-War Condition

The old city was always a place where of people from different religious backgrounds can live together in tolerance. Muslims (Sunni and Shiites), Christians, and Jews used to live next each other in harmony as shown in figure 4.68. However, the Damascene people in the old city nowadays witness the change of the demography and the cultural identity of large parts of their will, led neighborhoods against their well lead by Shiite military groups who are foreigners (from Iran, Lebanon, Iraq, Afghanistan, and Pakistan). The surroundings of Umayyad Mosque along with Bab Touma and Al-Joura neighborhoods have turned into Shiite religious ceremony centers supported by the Iran embassy (see figure 4.69). Therefore, a lot of the locals have fled from these areas, and some have started to pretend to be Shiite in order to protect themselves and their properties from the military Shiite gangs. The locals have witnessed a lot of pressure and threats on selling their properties to these extremist military groups. Moreover, the disregard of the old sites has led recently to the fire of Al-Asrouniyeh Souq on 23th of April 2016.

Figure 4.68: The Residential Quarters and Their Inhabitants in 1936



Source: Al-Qattan 2002 cited by Lababidi 2008 The Urban Development of Damascus: A study of its past, present and future.

Figure 4.69: Shiite Religious Ceremonies in the Streets and Public Spaces of the Old City

Source: Kamal Saeed (December 2015), About Beneficial Syria, Dividing, and Demographic Change.

4.2. PREWAR MODERN DAMASCUS (APARTMENT BUILDINGS)

The analysis of the place-making capacity of the modern city in Damascus will be studied according to the physical features of place-making: Sustainable urban design and decent housing. The non-physical features will include: Government policies, social capital (social interaction and participation), and sense of belonging and local identity.

4.2.1. Physical Features

The urban pattern features which will be discussed are: Urban design schemes (visual and geometrical principles), urban building blocks, road systems and street pattern, and place capital. In addition, the housing design features which will be discussed are affordability, accessibility, morphology, and lifestyle.

4.2.1.1. Urban Pattern

Same as the old city, the urban pattern analysis will discuss features which are derived from mostly Leonard Schenk's book Designing cities (2013).

Urban Design Schemes

Under this title, these listed features will be analyzed:

a. Visual principles: The principle of figure and ground, the law of closure, the law of good continuation, the law of proximity, the law of similarity and symmetry, and the principle of contrast (uniqueness).
b. Geometric principles.

In the analysis of visual principles section, two neighborhoods will be discussed which represent the modern urban planning themes in the modern city. These two neighborhoods are Tanzeem Kafar Sousa and Abou Roummaneh. On the other hand, the geometric principles will discuss other parts of the modern city such as Umayyad Square and Ruken Al-Din neiborhood.

Analysis of Visual Principles

a. The Principle of Figure and Ground

In the studied area Kafar Sousah neighborhood, which is distinguished by its more than 7-stories buildings, as shown in figure 4.70, the percentage of mass is overwhelmed by open spaces. We find that the open spaces are almost equally distributed between the masses (buildings). On the other hand, in Abu Rummaneh neighborhood as shown in figure 4.71, in particular, the percentage of open space is overwhelmed by masses. Moreover, there is a large public space represented as a public park in modern Damascus. Hence, we may claim that there is no balance between the distribution of open spaces and masses.

Figure 4.70: Figure and Ground Scheme of Kafar Sousa's Studied Area

Source: Google maps, edited by the author.

Figure 4.71: Figure and Ground Scheme of Abou Roummaneh's Studied Area

Source: Google maps, edited by the author.

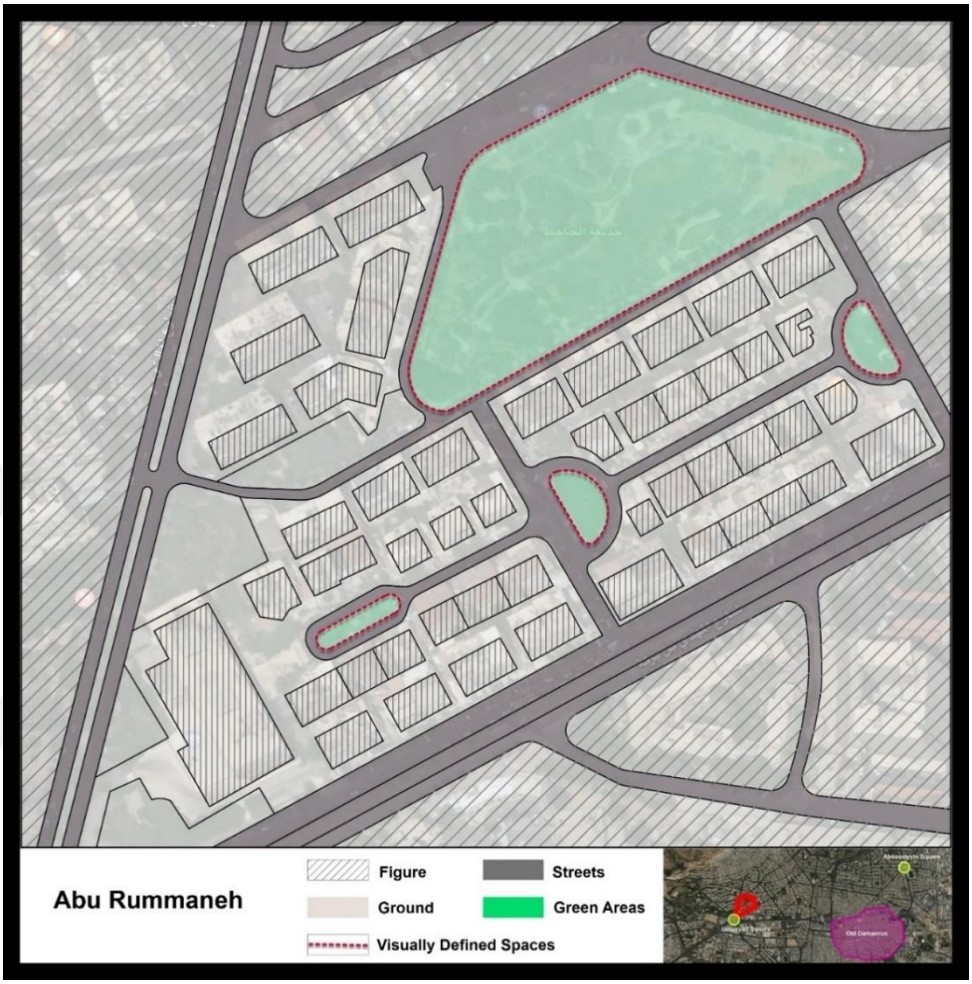
b. The Law of Closure

Kafar Sousah neighborhood, in the studied area, includes much larger open spaces than old Damascus. Those spaces are visually defined by buildings and considered public or semi-public spaces (community level). Usually, there is a fence surrounding an internal space for a building, which may be used as parking or as a garden in case the building has an underground parking or just unused spaces. (see figure 4.72). In Abu Rummaneh neighborhood, we also find open spaces that are visually defined by buildings whether they are large or small spaces, even the big park is surrounded by buildings (see figure 4.73). Public spaces here are mostly streets with sidewalks that intersperse the buildings (community level).

Figure 4.72: Law of Closure Scheme of Kafar Sousa's Studied Area

Source: Google maps, edited by the author.

Figure 4.73: Law of Closure Scheme of Abou Roummaneh's Studied Area

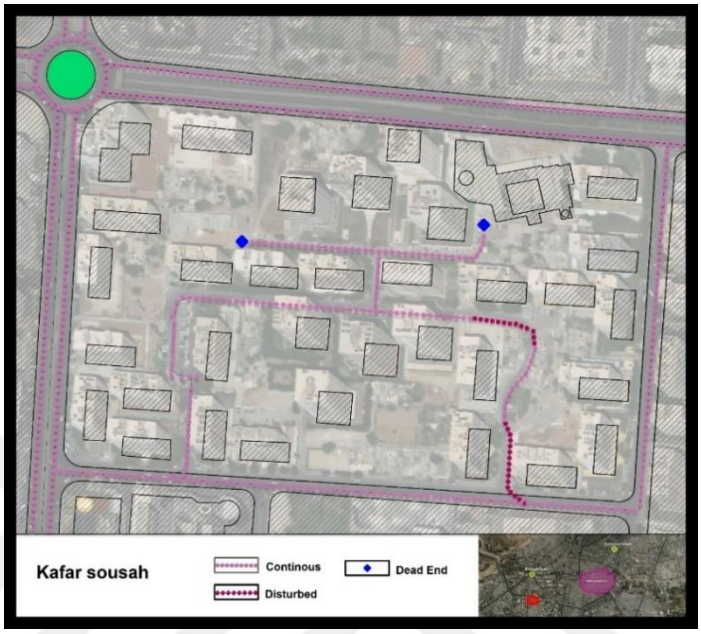


Source: Google maps, edited by the author.

c. The Law of Good Continuation

In the Kafar Sousah neighborhood's studied area the roads and the sidewalks harmonize with the buildings' pattern even though some streets have dead ends (see figure 4.74). Also, in the studied area of Abu Rummaneh neighborhood, we find the same continuity and routine as the roads have clear paths even though the pattern is different from the Kafar Sousah (see figure 4.75).

Figure 4.74: Law of good continuation schem of Kafar Sousa's studied area



Source: Google maps, edited by the author.

Figure 4.75: Law of good continuation scheme of Abou Roummaneh's studied area

Source: Google maps, edited by the author.

d. The Law of Proximity

The buildings of Kafar Sousah neighborhood in the studied area do not form groups in a clear explicit way, but they resemble in shape and orientation to form unphysically close groups in visual terms (see figure 4.76). On the other hand, the groups of buildings are clearer in Abu Rummaneh neighborhood, not only they have similar shapes and orientation but also are defined by the roads in groups as shown in figure 4.77.

Figure 4.76: Law of Proximity Scheme of Kafar Sousa's Studied Area

Source: Google maps, edited by the author.

Figure 4.77: Law of Proximity Scheme of Abou Roummaneh's Studied Area

Source: Google maps, edited by the author.

e. The Law of Similarity and Symmetry

Buildings look alike in Kafar Sousah neighborhood where they just look like boxes with few attempts to make diverse exterior finishing (see figure 4.78). Also, there is no clear symmetry since the owners of each building had the freedom to place the buildings the way it suits them, unlike Abu Rummaneh neighborhood where the symmetry is very clear with similar shaped buildings (see figure 4.79).

Figure 4.78: A View of Kafar Sousah Neighborhood

Source: http://www.panoramio.com/photo/31816922 (accessed 23 March 2016).

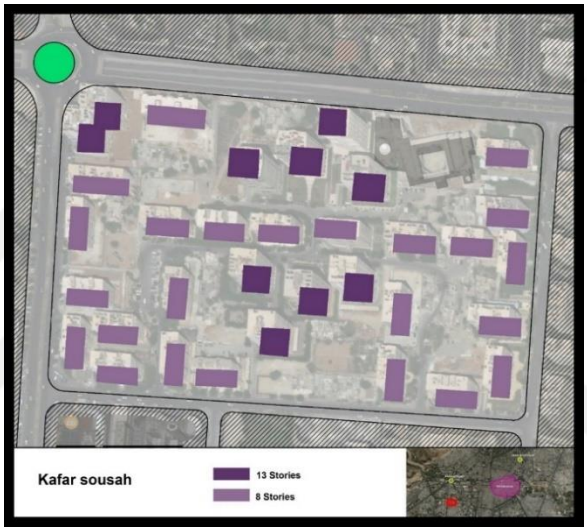
Figure 4.79: A View of Abou Roummaneh Neighborhood

Source: http://placeandsee.com/s?as=foto&fp=39338260 (accessed 23 March 2016).

f. The Principle of Contrast (Uniqueness)

Uniqueness is only expressed in the building's finishing or in the standard heights of the buildings in both Kafar Sousah and Abu Rummaneh neighborhoods (see figure 4.80 & 4.81). That is also the general case of block buildings in the modern city, where they are mostly look like clusters as shown in figure 4.82.

Figure 4.80: Building's Height in Kafar Sousah



Source: Google maps, edited by the author.

Figure 4.81: Building's Height in Abo Roummaneh

Source: Google maps, edited by the author.

Figure 4.82: General View of Part of Modern Damascus

Source: http://tasks.hotosm.org/project/1694 (accessed 23 March 2016).

Analysis of Geometric Principles

a. Orthogonal Grid

The Orthogonal grid is the general pattern of the modern city's layout especially in the new planned settlements such as Kafar Sousah (see figure 4.83).

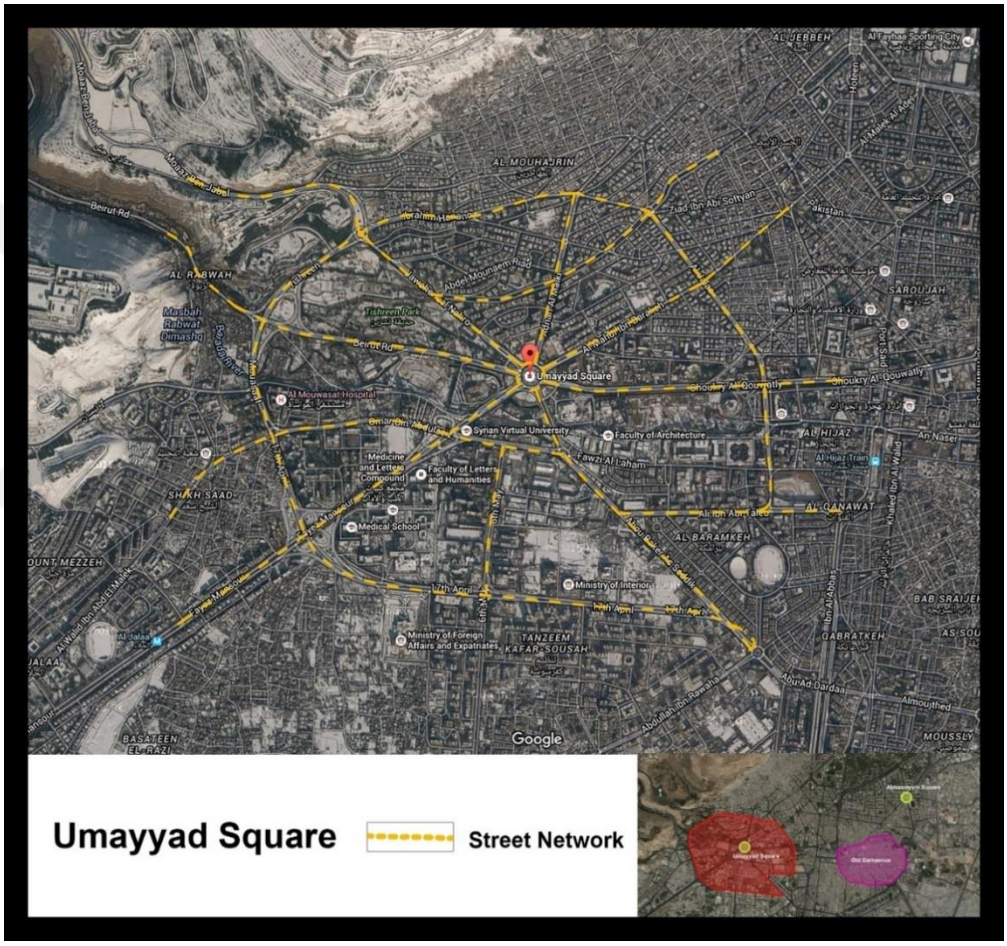
Figure 4.83: The orthogonal grid of Tanzim Kafar Sousa

Source: Google maps, edited by the author.

b. Circular Shapes

Circular shapes in the city's street pattern are derived from the French city planning, where there are a lot of streets branching out from circular squares such as the Umayyad Square as shown in figure 4.84.

Figure 4.84: Streets Branching from Umayyad Square



Source: Google maps, edited by the author.

c. Deformed Grid

In Ruken Al-Din just like any neighborhood on Mount Qasioun the street network is irregular (see figure 4.85). However, what differentiate it from Al-Salihiyah, the traditional part of the neighborhood on Mount Qasioun, is the height and the type of the buildings which are more modern than the Al-Salihiyah ones.

Figure 4.85: The Deformed Grid of Ruken Al-Din

Source: Google maps, edited by the author.

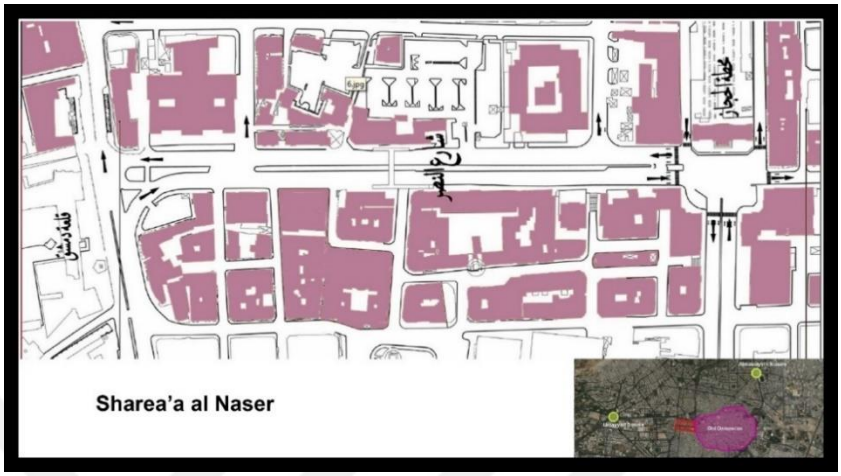
Urban Building Blocks

Standard Building Blocks

a. The Inner-City Urban Blocks

This type of buildings is developed model of the courtyard houses, but with a larger scale for administrative and governing functions. The activities and rooms are oriented towards the center like in the case of Al-Naser Street's blocks in front of the Damascus castle (see figure 4.86).

Figure 4.86: Inner-City Urban Blocks alongside Al-Naser Street



Source: https://360th.wordpress.com/%D9%85%D8%AF%D9%8A%D9%86%D8%A9%D8%AF%D9%85%D8%B4%D9%82/, (accessed 23 March 2016), edited by the author.

b. The Opened-Up City Blocks

These type of buildings are, unlike the inner-city blocks, directed towards the outside. Their orientation usually follows the sun's path, air ventilation, or a nice view. In the figure of 4.87, an example of residential buildings in Kafar Sousah oriented toward a park and surrounding it.

Figure 4.87: Opened-Up City Blocks Surrounding a Park in Kafar Sousa

Source: Google maps, edited by the author.

c. The Row

This type of buildings has strong connections with the surrounding streets, which are the basic elements of the urban fabric. The walking pathways along the streets are sometimes covered with the row blocks' roof for the passing people since most of the ground floor areas are shops and offices just like in the case of Al-Hamra Street (see figure 4.88 & 4.89).

Figure 4.88: Row Blocks alongside Al-Hamra Street

Source: Google maps, edited by the author.

Figure 4.89: View of Al-Hamra Street

Source: https://plus.google.com/116131905330411706296/posts (accessed 23 March 2016).

d. High-Rise Towers

This type is the most used type by the government in most of the new urban and housing projects in promising neighborhoods in the last 30 years. They present a profitable favored solution for the upper middle class and the high class of society, who can afford to live in these blocks like in the newly planned zones of Dummar neighborhood, which is considered the "modern Sham" district (see figure 4.90).

Figure 4.90: High-Rise Buildings in Dummar Neighborhood

Source: Google maps, edited by the author.

e. Points

This type of blocks are characterized by having maximum 4-5 stories, which are mostly residential buildings or embassies and administrative quarter buildings. They usually exist in the luxurious districts of the city and consist of one apartment only per floor like in the case of western Mazzeh neighborhood (see figure 4.91).

Figure 4.91: Points Buildings in Western Mazzeh

Source: Google maps, edited by the author.

f. Clusters

Clusters, which consist of 4-5 stories, are the most common type of buildings in Damascus city. They usually are either really close to each other or directly attached and provide the most affordable choice for the government to present to the middle and the poor classes (see figure 4.92). Hence, some are in good shape and others are in bad shape depending on the neighborhood and its inhabitants' social class.

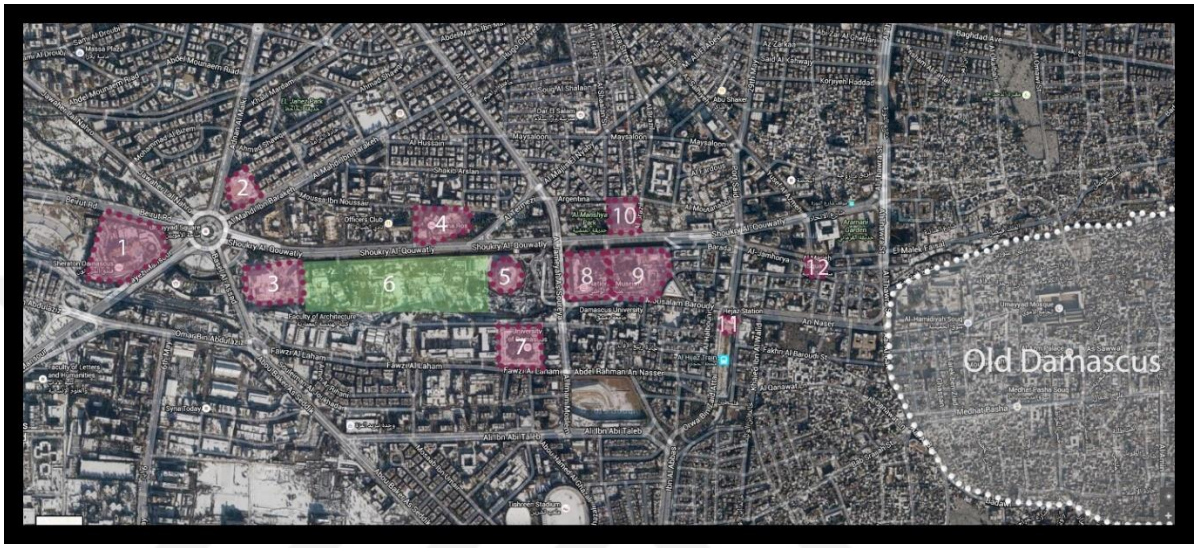
Figure 4.92: Clusters in Masaken Barzeh

Source: Google maps, edited by the author.

Large Building Blocks and Solitary Buildings

Usually, every neighborhood has its own landmark buildings like mosques, parks, sports stadiums, governmental buildings, or hotels… etc. The most famous solitary buildings in the city are built along the cultural axis suggested by the French urban planner Ecochard, starting from Umayyad Square and ending up with the old city, where there are museums, state library, opera house, and major hotels as shown in Figures 4.93, 4.94, 4.95, 4.96 & 4.97. However, large and solitary buildings in the new planned neighborhoods have become basically either mosques, malls, or governmental buildings like in Kafar Sousah neighborhood, which become most known for Abdulkarim Rifaei Mosque, malls, and the prime minister/ foreign ministry building (see figures 4.98 & 4.99).

Figure 4.93: The Cultural Axis which include: (1) Sheraton Hotel, (2) Al-Assad Library, (3) opera house, (4) Dedeman Hotel, (5) Masar Rose Center (unfinished), (7) Damascus University's main building, (8) The national museum, (9) Tekkiye Mosque, (10) Four Season Hotel, (11) Al-Hijaz Station, (12) Al-Marjah Square



Source: Google maps, edited by the author.

Figure 4.94: Sheraton Hotel

Source: http://wikimapia.org/64824/Sheraton-Damascus-Hotel (accessed 23 March 2016).

Figure 4.95: The Opera House (Left Picture) and Al-Assad Library (Right Picture)

Source: http://www.discover-syria.com/photo/44919/9553 (accessed 23 March 2016).

Figure 4.96: Tekkiye Mosque Built by Mimar Sinan Faced by Four Season Hotel

Source: https://tr.pinterest.com/pin/524176844111244423/ (accessed 23 March 2016).

Figure 4.97: One of the Main Buildings of Damascus University (Left Picture) and Al-Hijaz Station Built by the Ottomans (Right Picture)

Source: http://www.airwing.gr/booking/index.php?lang=en&pid=264 (accessed 23 March 2016).

Figure 4.98: Main Focal Points of Tanzim Kafar Sousah Neighborhood Including (1) The Prime Minister/ Foreign Ministry Building, (2) Sham City Center Mall, and (3) Abdulkarim Rifaei Mosque

Source: Google maps, edited by the author.

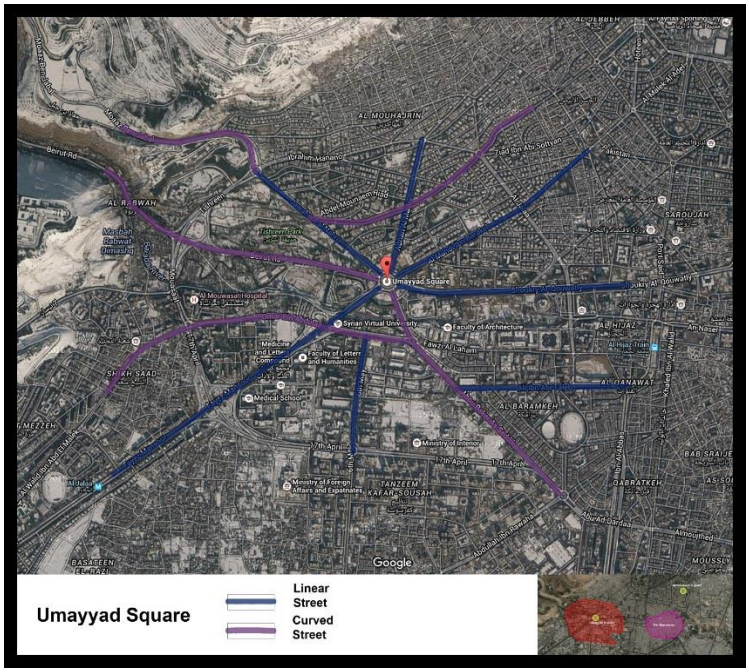
Figure 4.99: Sham City Center Mall (Left Picture) and the Prime Minister/ Foreign Ministry Building (Right Picture)

Source: http://conexaoarabe.blogspot.com.tr/2012_05_01_archive.html (accessed 23 March 2016).

Road Systems and Street Spaces

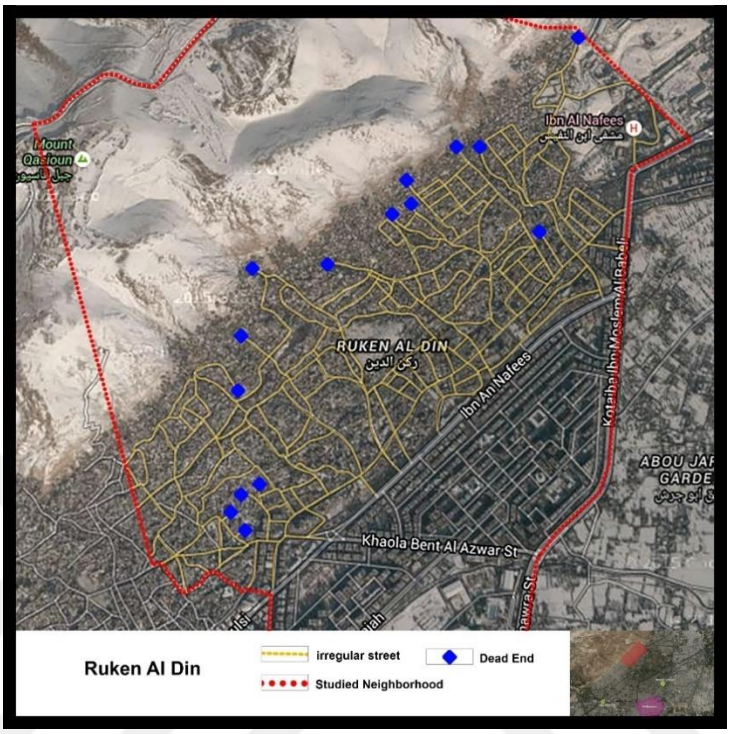
Modern city's streets are mostly either linear streets or curved streets and they are mostly branched from main circular squares just like the case of Umayyad square as shown in figure 4.100. There are also many circulation loops in complete road networks and small networks (see figure 4.101). Moreover, there are amorphous streets with dead ends in the deformed grid neighborhoods such as Ruken Al-Din (see figure 4.102).

Figure 4.100: Streets Branching from Umayyad Square



Source: Google maps, edited by the author.

Figure 4.101: Deformed Grid of Ruken AL-Din Neighborhood



Source: Google maps, edited by the author.

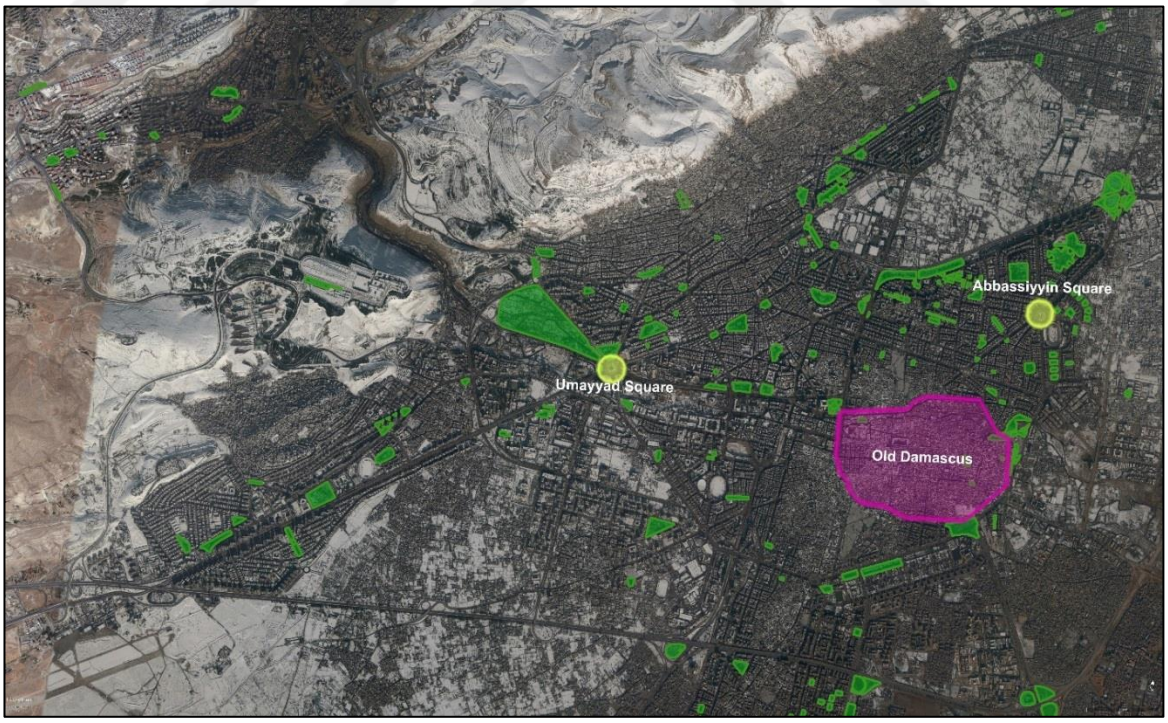
Figure 4.102: Circulation Loops in Mazzeh Neighborhood

Source: Google maps, edited by the author.

Place Capital

Place capital in the modern city is different than it is in the old city, which was mostly within the courtyard of houses, mosques, and souqs. Since there are no courtyards in the modern building blocks, place capitals have become urban spaces represented in parks, shopping areas, and squares. Green spaces in the modern city are few and mostly small as shown in figure 4.103. There is only one 33-hectare city-wide park called Tishreen Park, which is still considered small (see Figures 4.104 & 4.105). Green parks are either district level parks or community level parks in the luxurious neighborhoods (see Figures 4.106 & 4.107). Beside parks, there are squares where people meet and shop, and there are mostly street spaces like Al-Salihiyah Souq, which leads to one of the most famous place capital squares Arnous Square (see Figures 4.108 & 4.109).

Figure 4.103: Total Green Spaces in the Modern City



Source: Google maps, edited by the author.

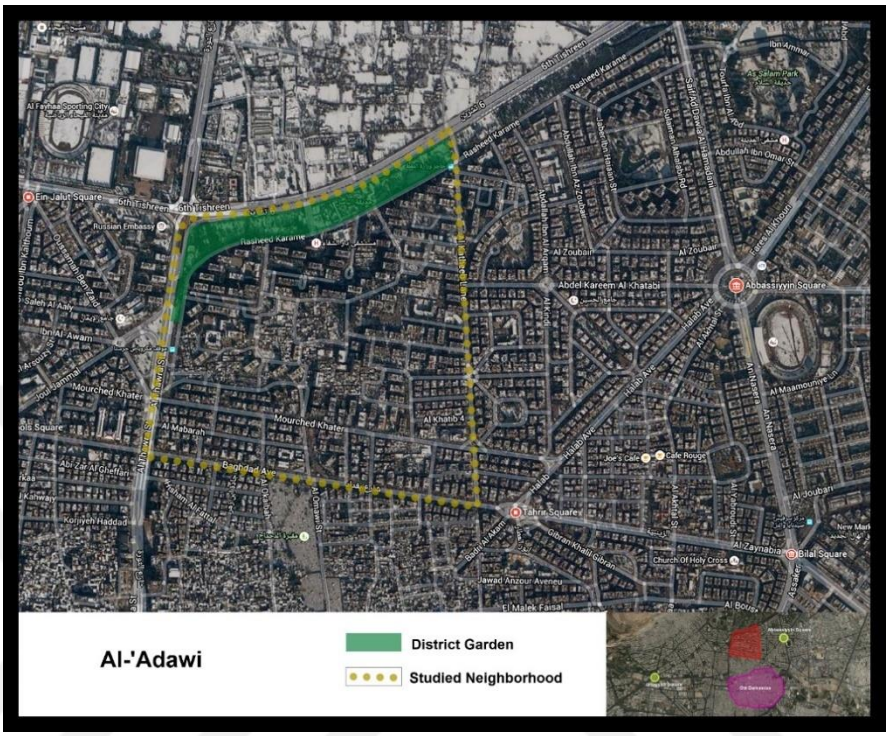
Figure 4.104: City-Wide Tishreen Park

Source: Google maps, edited by the author.

Figure 4.105: Tishreen Park

Source: http://www.panoramio.com/user/4660130?with_photo_id=37785678 (accessed 23 March 2016).

Figure 4.106: District Level Park in Al-Adawi Neighborhood

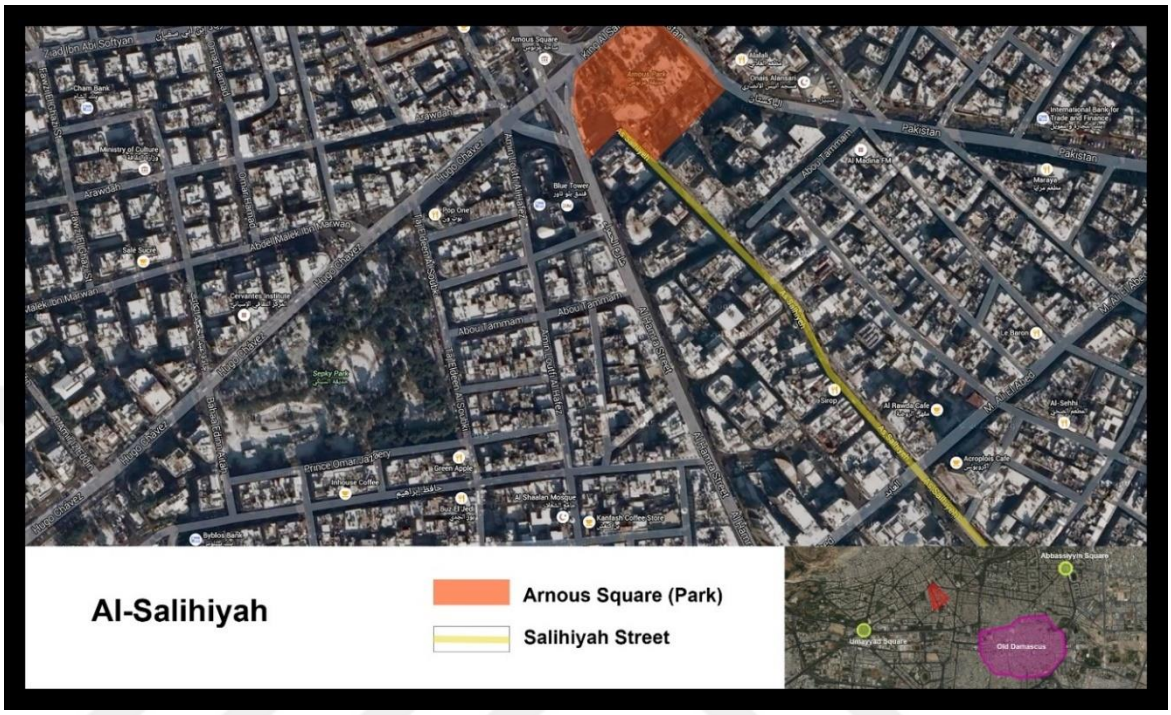


Source: Google maps, edited by the author.

Figure 4.107: Community Level Gardens in Eastern Mazzeh Neighborhood

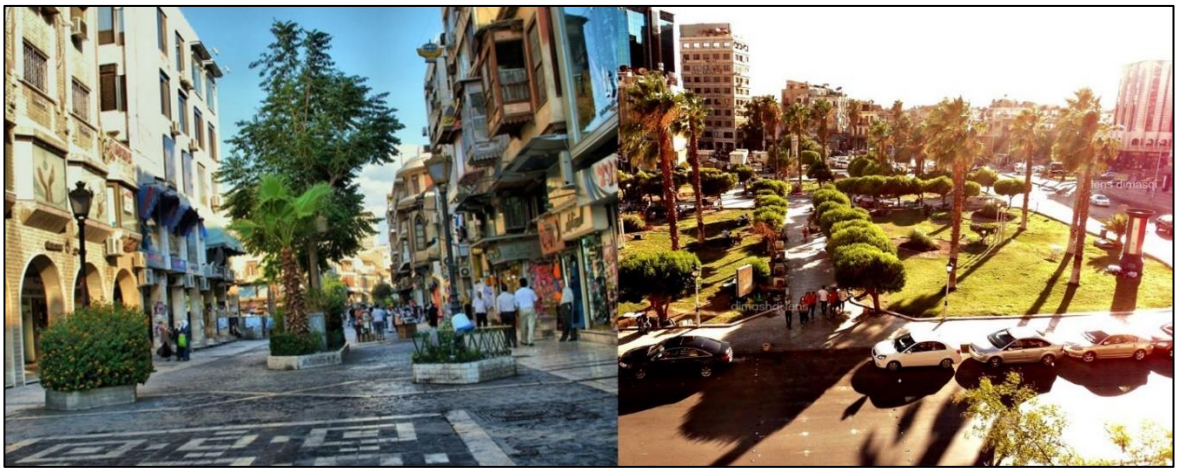
Source: Google maps, edited by the author.

Figure 4.108: Salihiyah Street and Arnous Square



Source: Google maps, edited by the author.

Figure 4.109: View of Salihiyah Street (Left Picture) and Arnous Square (Right Picture)

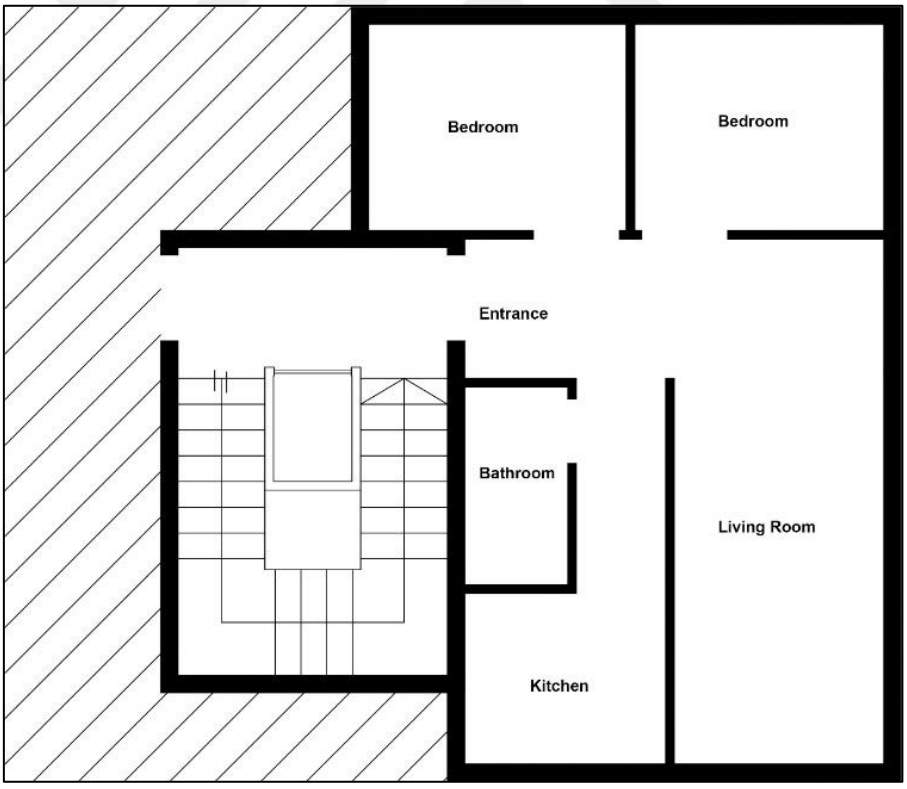


Source: http://dimashqilens.com/en/photos/691-Arnous-square (accessed 23 March 2016).

4.2.1.2. Housing

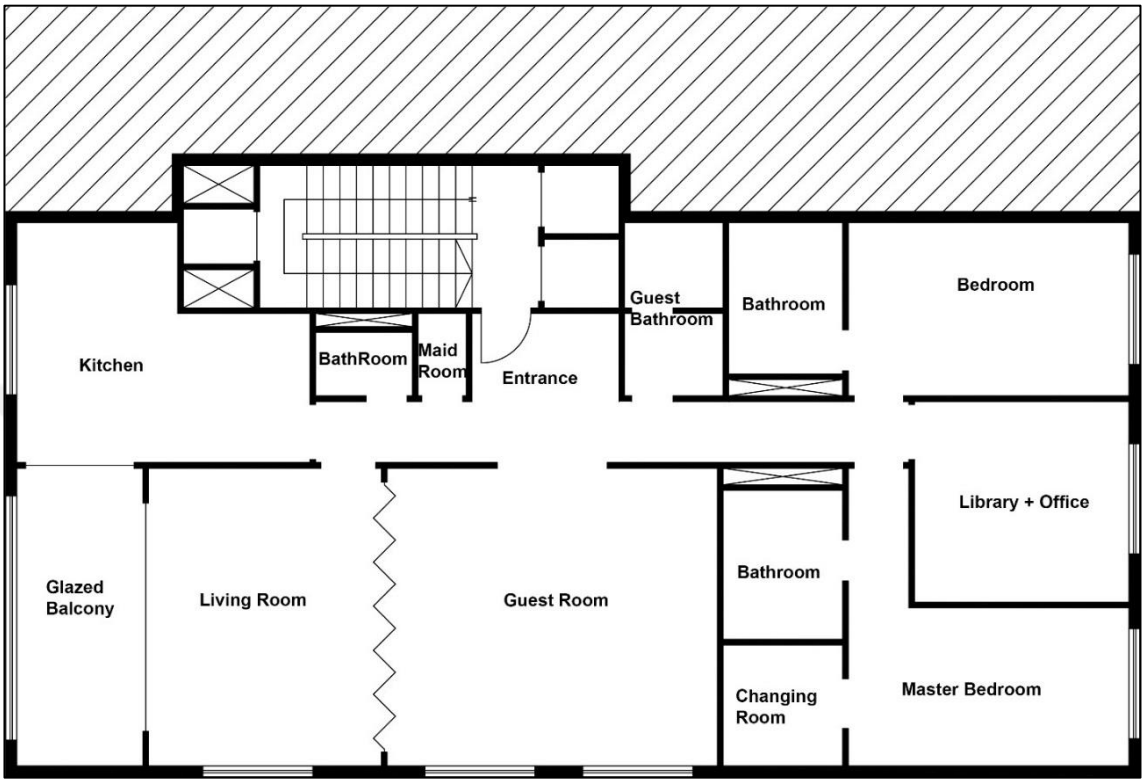
The modern block buildings started to appear during the French mandate in an attempt to modernize Damascus city. The most common residential building types among the standard building blocks are clusters, high-rise buildings, and points. The area of cluster's apartments in Damascus usually range from 80m2-130m2, high-rise building's apartments from 140m2-250m2, and point's apartments from 180m2-400m2. The case studies of these residential building typologies will be from Takhded Kafar-Sousah, Tanzeem Kafar-Sousah, and Western Mazzeh as shown in figures 4.110, 4.111 and 4.112.

Figure 4.110: A Cluster Apartment Floor Plan in Takhded Kafar-Sousah Neighborhood



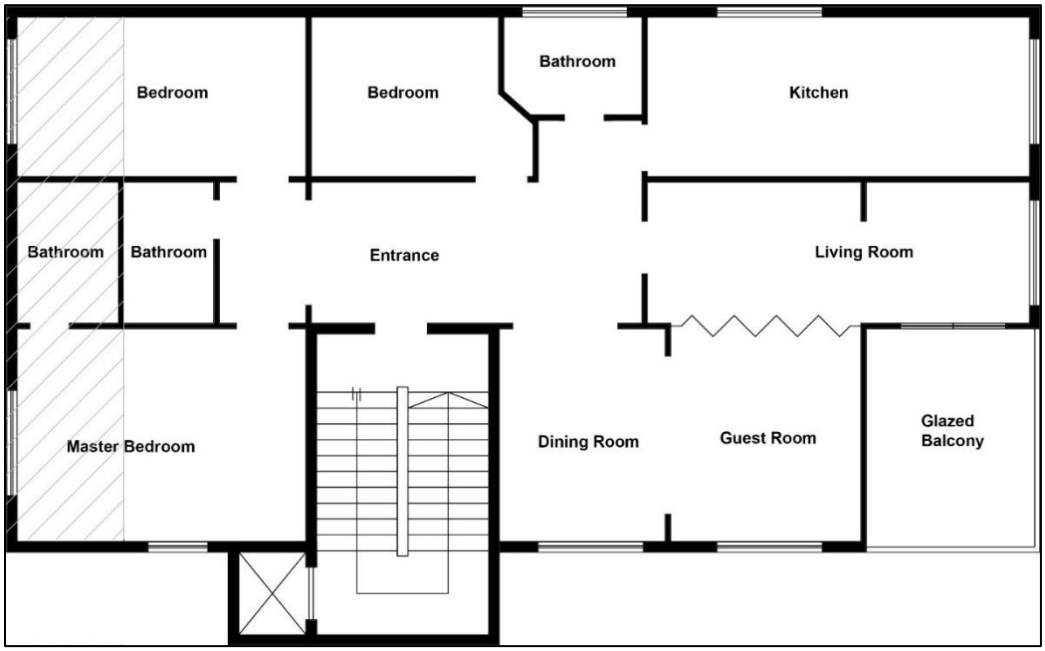
Source: The author.

Figure 4.111: A High-Rise Building Apartment Floor Plan in Tanzeem Kafar-Sousah



Source: The author.

Figure 4.112: A High-Rise Building Apartment Floor Plan in Western Mazzeh



Source: The author.

Affordability

Affordability in the modern city as in any modern city around the world depends on the same factors such as the quality of living in neighborhoods, buildings typologies, distance from city center, and social classes …etc. Hence, for example, some neighborhoods which are far from the city center are much more expensive than some neighborhoods which are closer to the city center because of the difference in services and quality of infrastructure and superstructure. Therefore, logically neighborhoods with high-rise buildings or point buildings are less affordable than clusters, which are the most common type, in most cases. Another key factor that affects the price of houses in certain neighborhoods are realtors who have nearly no restricts on controlling prices. Since Damascus city is mostly unaffordable for new families from the poor and middle classes, a lot of them had moved to the outskirts of Damascus which are way more affordable.

Accessibility

In the case of clusters usually, the street (public space) is connected directly to the building block entrance, which in some cases opens directly to the building's staircase (semi-private) as shown in figure 4.113. In other cluster cases, the street is connected to an open hallway (semi-public) that leads to the building's staircase (semi-private). Points also usually have the same hierarchy in movement with the second option of clusters (see figure 4.114). In high-rise buildings like in Tanzeem Kafar-Sousah neighborhood, the hierarchy between spaces is better since the buildings are mostly surrounded by gated closed gardens separating street (public) from building's hallway (semi-private) as shown in figure 4.115.

Figure 4.113: Site Plan of Takhded Kafar-Sousa's Studied Block (Cluster)

Source: Google maps, edited by the author.

Figure 4.114: Site Plan of Western Mazzeh's Studied Block (Point)

Source: Google maps, edited by the author.

Figure 4.115: Site Plan of Tanzeem Kafar-Sousa's Studied Block (High-Rise Building)

Source: Google maps, edited by the author.

Morphology

Geometry

Both clusters and points in Damascus usually are 4-6 stories box buildings with around 3.5-4m floor height, but they differ in number of apartments per floor, services and life style (see Figures 4.116 & 4.117). High-rise buildings also have a box shape but consist of 7-14 stories.

Figure 4.116: A Point Block in Western Mazzeh

Source: Google Earth.

Figure 4.117: Some Clusters in Takhded Kafar-Sousah

Source: Google Earth.

Plan Typology

Modern block buildings in Damascus have similar plan typologies to other common modern buildings around the world, but with some differences. They consist of mainly two parts: The "day" part where are the living room, guest room, and kitchen, and the "night" part where are the bedrooms and the main bathroom. In the modern apartments, there is no longer the separation between the Salamlik and the Haramlik as seen in the traditional houses, but they still, if possible, have some kind of separation between the guest room (Salamlik) and the other rooms (Haramlik). Hence, in some apartments the guest room is close to the entrance to provide the maximum possible privacy like in high-rise building and point's examples as shown in the floor plans. However, in a lot of apartments because of the lack of space, the living room functions as a guestroom as well. The same applies to a lot of small cluster apartments as shown in figure 4.110.

The kitchen usually is connected directly to the living room or to the dining room in order to provide the best movement. Most Damascene families prefer bigger kitchen in their houses since it is considered the most daily used space, where the cooking, storing, and even eating take place like in the high-rise building and points cases. It is also considered a private space for the family hence the more isolate it is from the guestroom or the entrance, the better it is for the comfort of Damascene family in general. Also, it is usually preferred to be located on the northern eastern or eastern part of the houses to avoid the smell of the cooking to reach other rooms, since the wind direction in Damascus is mostly either western or southern western. As for the bedrooms they are usually preferred to be located on the western side of the house. More features come with bedrooms with bigger deluxe houses such as a bathroom for each bedroom, dressing rooms, and storage rooms.

Building Components

a. Openings

The buildings facades in all examples are quite simple with mainly large fixed frame windows made of aluminum mostly covered with aluminum or wooden shutters (see figure 4.118). The only difference is that the exterior finishes of most of the high-rise buildings are marble tiles.

Figure 4.118: Large Fixed Windows Covered with Aluminum Shutters

Source: Google Earth.

b. Security Features

A lot of clusters do not have a periphery walls, but they usually have a door entrance to provide some security to the occupants. On the other hand, points and high-rise buildings mostly have better security features such as periphery walls, door entrances, and security cameras. In some high-rise buildings, they also have a janitor.

Lifestyle

Privacy

Privacy is still important and considered in the houses' design even if it is not as important as in the traditional houses. It can be seen, for example, in:

a. The separation between the "day" part and the "night" part of the house if possible.
b. The attempt to locate the guestroom directly near to the entrance.
c. Installing window shutters in all windows.

Socializing

Even though large families' members do not live together like they used to do in the traditional houses, they still visit each other in their modern apartments. Mostly, family bond is still strong, and the social life is still essential in the modern Damascene lifestyle even though they are not as strong and essential as they used to be in the past. Therefore, guest rooms usually are the most decorated rooms and in a lot of high-rise buildings, there is a private garden to the occupants to meet and socialize.

Standardization and Diversity

There is a simple diversity in the standard building blocks types, but it can be noticed clearly the standardization and the big resemblance of the building's interior and exterior designs. This lack of diversity is the result of:

a. The rudimentary regulations on the architects and the urban planners of the public sector, which limit the diversity in design and producing creative solutions.
b. The weak influence of architecture in buildings' design compared to civil engineering.
c. The profit policy of a lot of real estate offices and contractors, which includes building the same standard designs in the cheapest way, and then highly profiting from them.
d. The high corruption in the building sector.

Flexibility and Continuity

Because of the overpopulation and the high cost of living, both the current modern building blocks and the new planned projects will not be able to house the locals or the inhabitants from other Syrian provenances. Hence, the current modern building blocks are neither flexible nor continuous. It is evident that apartments' inhabitants tend to try to change a lot of the rooms' distribution and size in order to take advantage of the house space in the most possible way. For example, a lot of balconies are glazed and even added to the space of attached rooms as shown in figure 4.118.

4.2.2. Non-Physical Features

4.2.2.1. Government Policies

The modern city has experienced a rapid urban development since the population has increased from 1.5 million in 1990 to 5 million in 2009. Even during the recent war, the city is still highly populated because a lot of people has immigrated to Damascus escaping from the surrounding battle sites. Hence, the government has developed a "strategic urban plan" in an attempt to regulate new urban projects, accomplish some kind of balance between the green areas and the urban areas, and to harmonize between the new urban textures and the traditional urban texture laying in the old heritage areas. However, according to Shaker Al-Tounisi (2012) many factors have led to the failure of this strategic urban plan, such as:

a. The slow process of developing and finishing the urban studies.
b. A limited number of qualified staff/ urban planners.
c. The oversight of developing informal settlements by the concerned administrative authorities.
d. The lack of flexible and practical urban and housing strategic plans.
e. Coordination problems between the administrative authorities, who are responsible for planning, and the regional commissions.

f. The process of building new informal houses is way faster than the development of strategic urban plans. Therefore, it is way easier and cheaper to build informal houses within the city and its outskirts.
g. The corruption of the regional commissions and the administrative authorities' staff, who failed to do their tasks and following their responsibilities.
h. People's attempt to flee paying formal building license.
i. Failing to provide practical solutions for people.
j. The high expenses of war which led to a chaotic urban reality.

Due to these factors, many problems have occurred such as the spread of informal settlements, the high increase in pollution rates, the trend toward desertification, the shortage of water supply, and the lack of aesthetic and cultural identity.

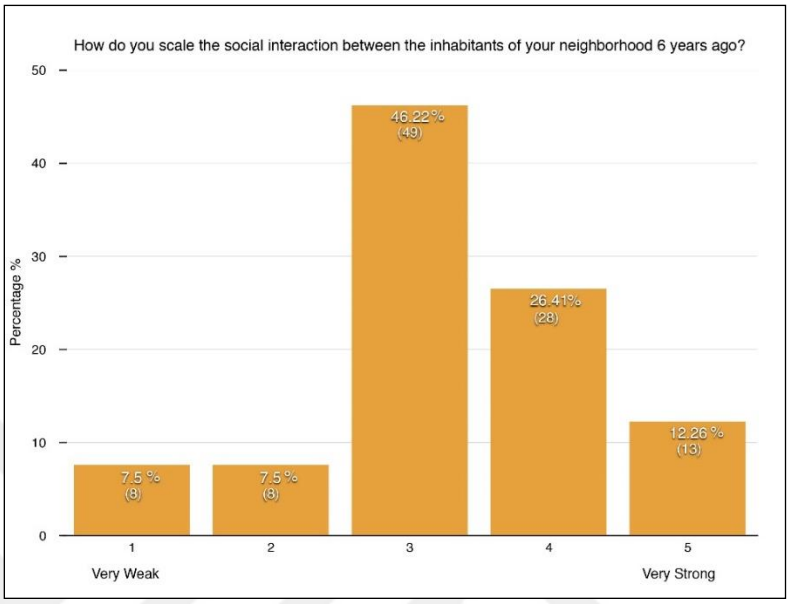
4.2.2.2. Social Capital

Social Interaction

Six years ago, the social interaction used to be ordinary and limited to social visits and greeting (see figure 4.119). However, according to the answers the interaction has weakened now as shown in figure 4.120 for various reasons such as:

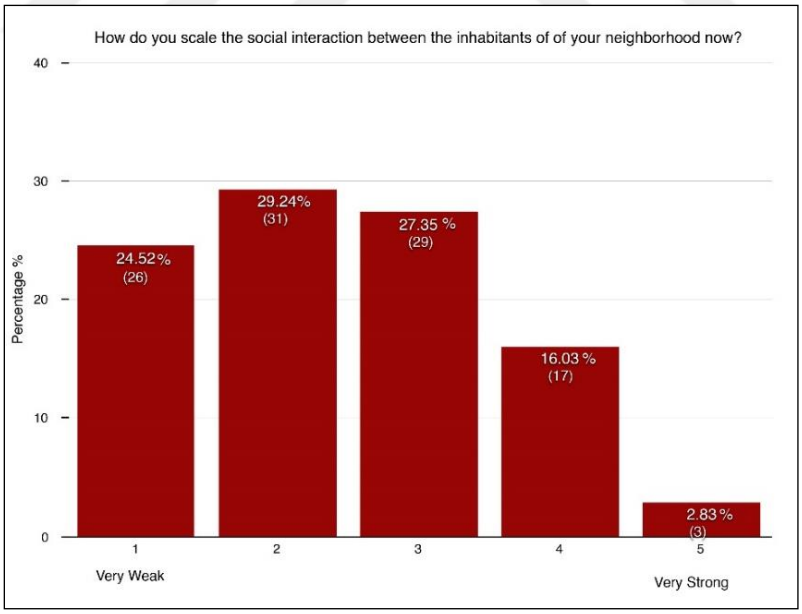
a. The negative effect of the internet and the social media on the social life.
b. The immigration of a lot of relatives and friends which have increased the social isolation.
c. The social division caused by the split and the general political opinion in the modern city.
d. The social visits have decreased because of the lack of safety in the streets.

Figure 4.119: Social Interaction in the Modern City Six Years Ago



Source: The author, April 2016.

Figure 4.120: Social Interaction in the Modern City Now

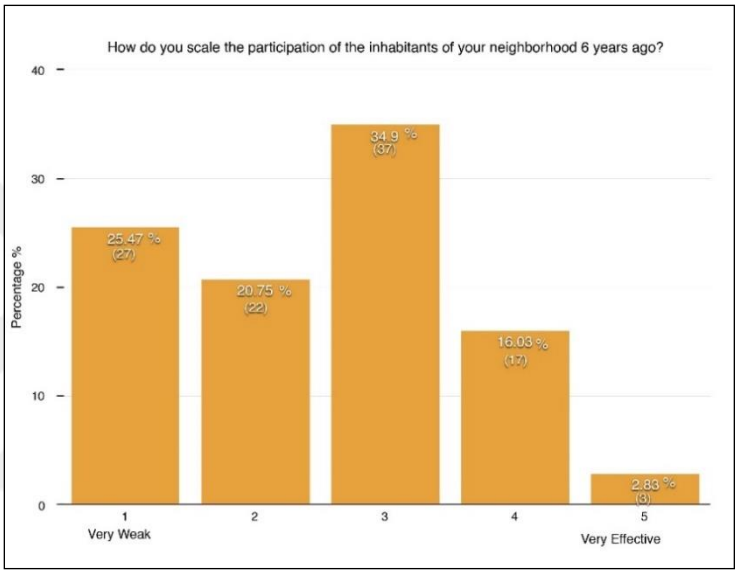


Source: The author, April 2016.

Participation and Local Democracy

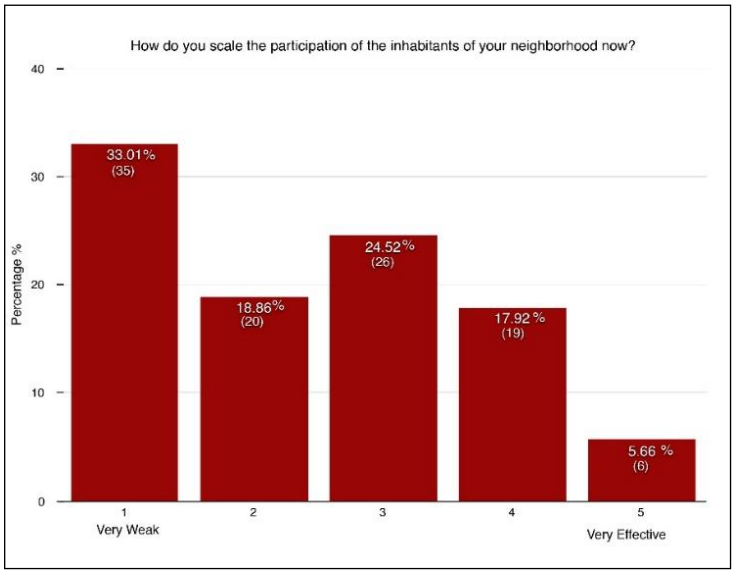
The participation in the modern city is not very effective just like in the old city, which is in general limited to unorganized charity and simple volunteer work (see Figures 4.121 & 4.122). There might also be participation in the building services in some buildings.

Figure 4.121: Participation in the Modern City Six Years Ago



Source: The author, April 2016.

Figure 4.122: Participation in the Modern City Now



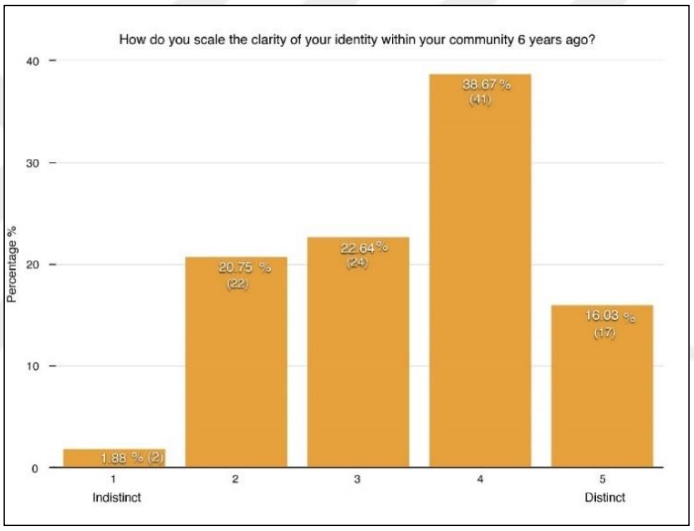
Source: The author, April 2016.

4.2.2.3. Sense of Belonging and Local Identity

Individual's Identity

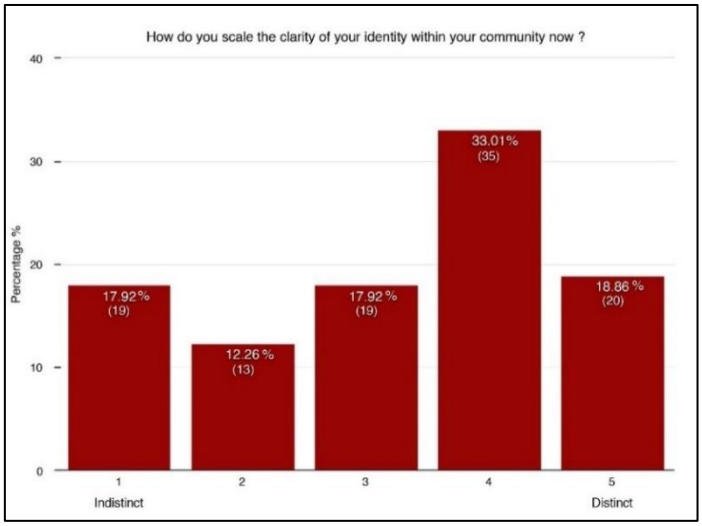
It is generally mediocre and achieved by financial or educational achievement, and by the society's perception (see figure 4.123). The social view is not as important as in the traditional neighborhoods but is still essential. Nowadays, the war has negatively affected the individual's identity as shown in figure 4.124.

Figure 4.123: Individual's Identity in the Modern City Six Years Ago



Source: The author, April 2016.

Figure 4.124: Individual's Identity in the Modern City Now

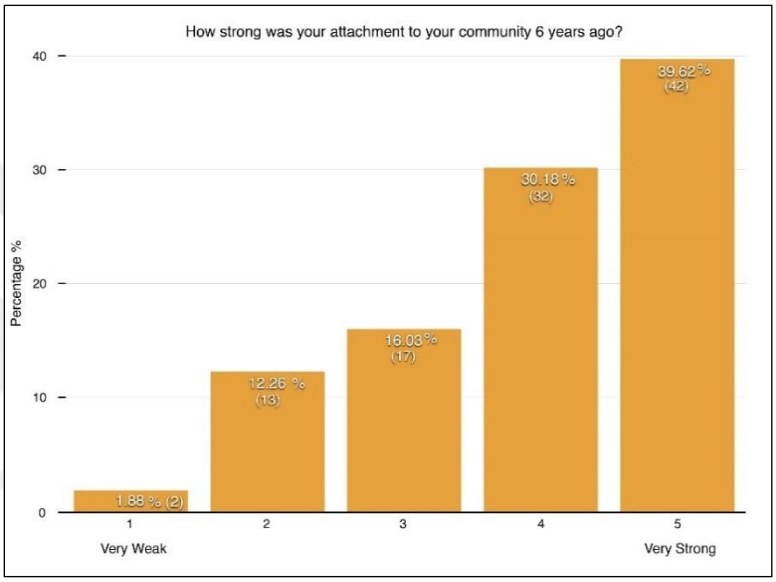


Source: The author, April 2016.

Sense of Community

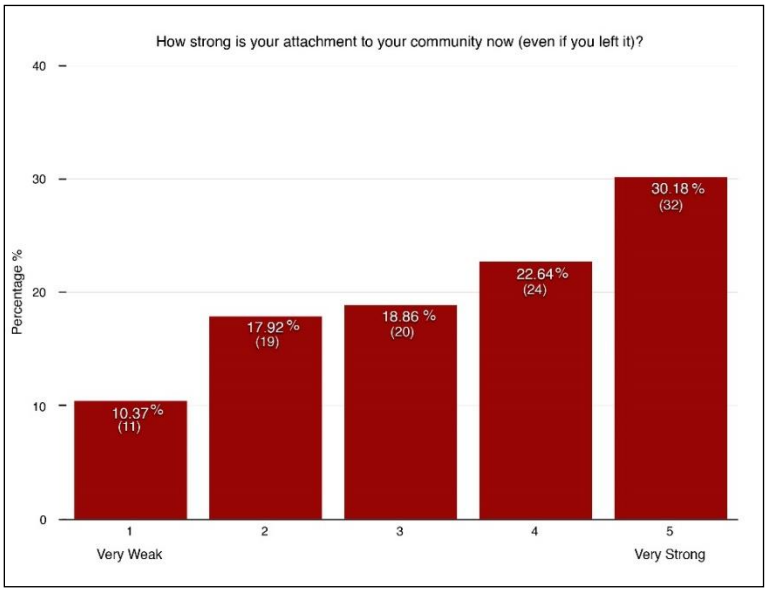
It used to be very strong powered by good relationships between family members and friends (see figure 4.125). However, it has been affected by the war since a lot of people have immigrated leaving behind a social void (see figure 4.126).

Figure 4.125: Sense of Community in the Modern City Six Years Ago



Source: The author, April 2016.

Figure 4.126: Sense of Community in the Modern City Now

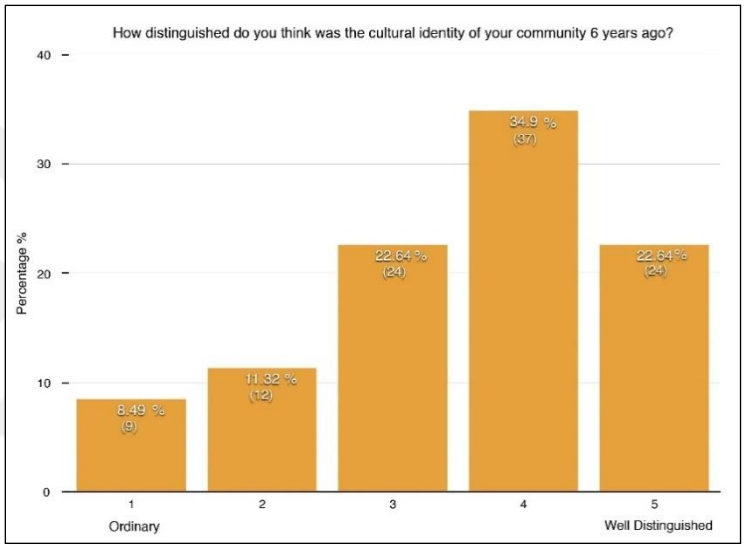


Source: The author, April 2016.

Cultural Identity

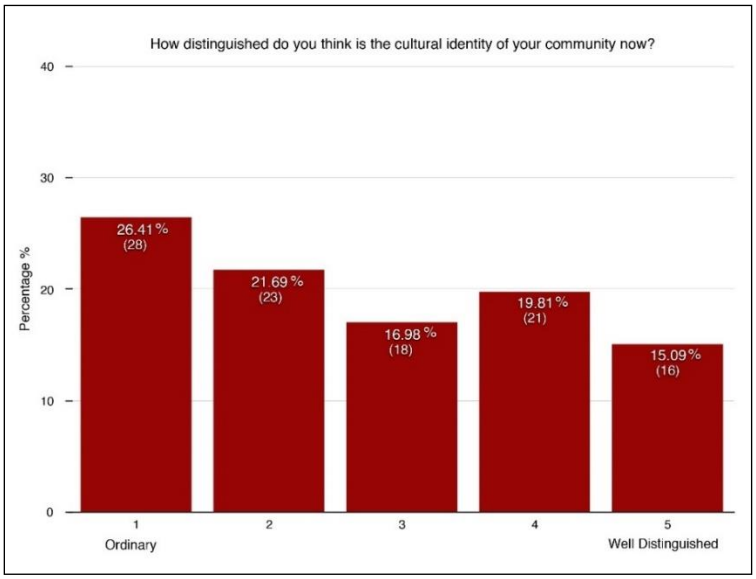
It used to be distinguished and expressed by mostly following traditions in general (see figure 4.127 & 4,128). Yet, there are minor individual efforts of cultural reading and scholar searching for the local culture, but the cultural identity has been affected negatively in the modern city.

Figure 4.127: Cultural Identity in the Modern City Six Years Ago



Source: The author, April 2016.

Figure 4.128: Cultural Identity in the Modern City Now



Source: The author, April 2016.

4.2.3. Post-War Condition

One of the adopted methods by the recent government to change the demography of the city is starting demolishing the informal settlements in the modern city like in the Basateen El-Razi in Mazzeh neighborhood (see figure 4.129). The project was announced by Bashar Al-Assad in 2012 stating that Basateen El-Razi and other areas in Damascus are informal settlements that "need to be planned again." The total planned project area is around 10100 hectares, which will include 186 high-rise buildings, 12 administrative buildings, 50 buildings for investment, four gas stations, four mosques, one church, two clinic centers, and 17 educational institutes. The government, which is in financial crises because of the war, has started working on the project in 2015, and it is expected to be finished in 5 years (Damascus 2022, 2015).

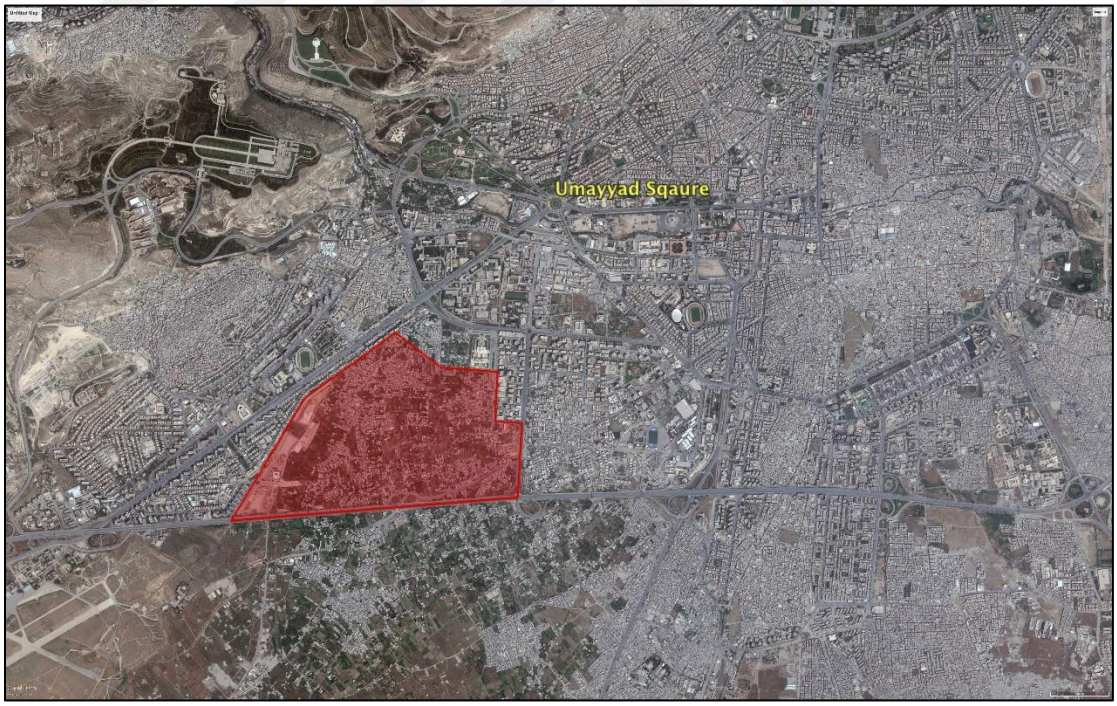
Unlike the declared intent behind the project, a lot of people consider that there are various reasons behind the project:

a. The location of the project is close to the western Gouta districts in the outskirts (mainly Daria and Muadamiyat Al-Sham), which are under the rebels and "Free Army" control and are getting bombed and attacked daily by the regime and his allies in the last five years. These districts are close to the modern city and have upmost significance in terms of its location. The regime despite all attempts, including bombing them in chemical weapons in 2013, could not take them over.
b. The project's location is also close to the military airport of Mezzah, which is the main launching center to bomb the western outskirts of Damascus. Considering the high importance of this airport, this project will help to secure it.
c. Basateen El-Razi, which is part of Mazzeh neighborhood, is considered a vital region since the embassy of Iran, the Presidential Palace, and a lot of security centers are located in this neighborhood.
d. The regime's fear of the locals who were one of the first to go out in protests against it in 2011-2012. These locals probably will not be able to afford to live in this neighborhood after the completion of the project and they will get replaced by selected people by the government or by foreigner allies (Kamal Saeed 2015).

Such concerns reveal that the government decided to implement such a project in this location even though there are other areas in worse urban condition and housing like Mezzeh 86, which is inhabited mostly by Alawites and government officials (see figure 4.130). Since the start of the project, a lot of locals have displaced giving each family only 20,000 S.L. ($40) per month for house renting, which is not enough since houses' rents are at least 50,000 S.L.

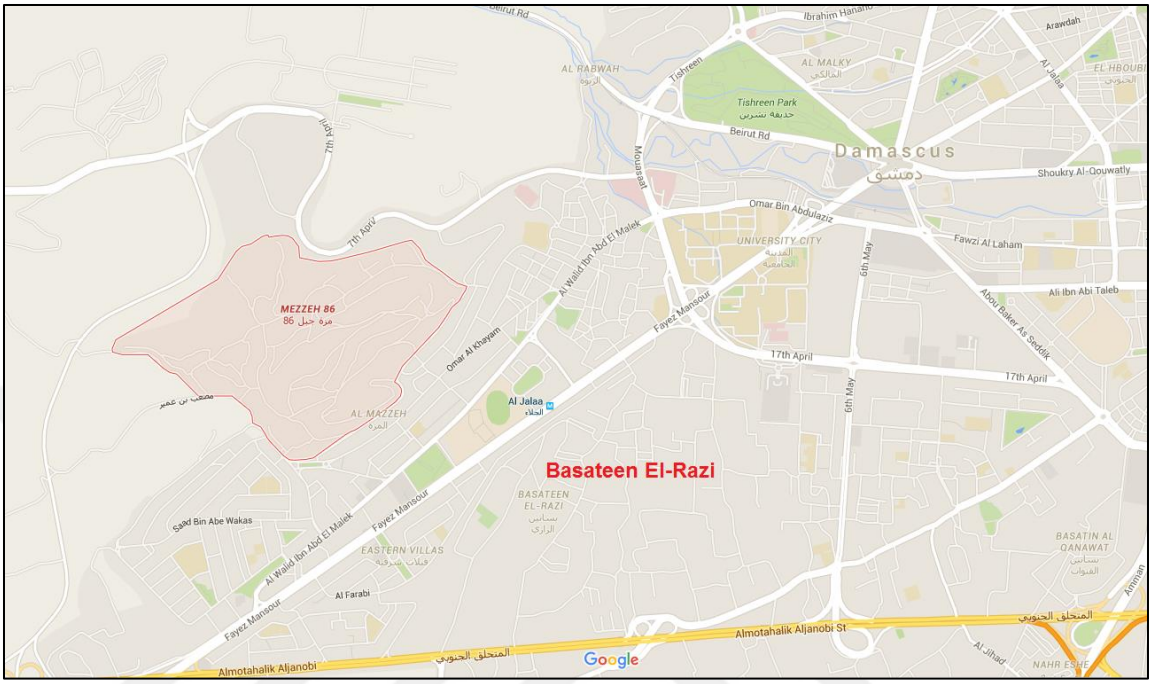
A lot of Damascene people have suffered from the destruction and bombing by the regime and its allies in Al-Tadamon, Jobar, Qaboun, and Al-Qadam neighborhooods in modern Damascus in the last five years. The prices are in constant increase, and the lack of essential life demands such as electricity and gas is worsening the living conditions of inhabitants of these neighborhoods.

Figure 4.129: The Location of Basateen El-Razi



Source: Google maps, edited by the author.

Figure 4.130: The Location of Mezzeh 86 Which Is Close to Basateen El-Razi



Source: Google maps, edited by the author.

4.3. PREWAR INFORMAL SETTLEMENTS AND DAMASCUS OUTSKIRTS

The analysis of place-making capacity of the informal settlements and Damascus outskirts will be studied according to the physical features of place-making: Sustainable urban design and decent housing. Also, the non-physical features will include: Government policies, social capital (social interaction and participation), and sense of belonging and local identity. The analysis will start with the historical core of the city.

4.3.1. Physical Features

The urban pattern features which will be discussed are: Urban design schemes (visual and geometrical principles), urban building blocks, road systems and street pattern, and place capital. On the other hand, the housing design features which will be discussed are affordability, accessibility, morphology, and lifestyle.

4.3.1.1. Urban Pattern

In the urban pattern analysis, just like is previous studied zones, the studied urban pattern features of the informal settlements are derived from mostly Leonard Schenk's book Designing cities (2013).

Urban Design Schemes

Under this title, these listed features will be analyzed:

i. Visual principles: The principle of figure and ground, the law of closure, the law of good continuation, the law of proximity, the law of similarity and symmetry, and the principle of contrast (uniqueness).
ii. Geometric principles.

Analysis of Visual Principles

a. The Principle of Figure and Ground

Usually, there are two different types of informal settlements found in the city and the outskirts. In the city, mostly they have overstocked buildings due to the lack of land. In the outskirts, on the other hand, they have more available land generating a less stacked building types compared to the informal settlements of the city. However, in both types, we notice that the urban density is extremely high (see figure 4.131).

Figure 4.131: Figure And Ground Scheme of Nahr Eshe's Studied Area

Source: Google maps, edited by the author.

b. The Law of Closure

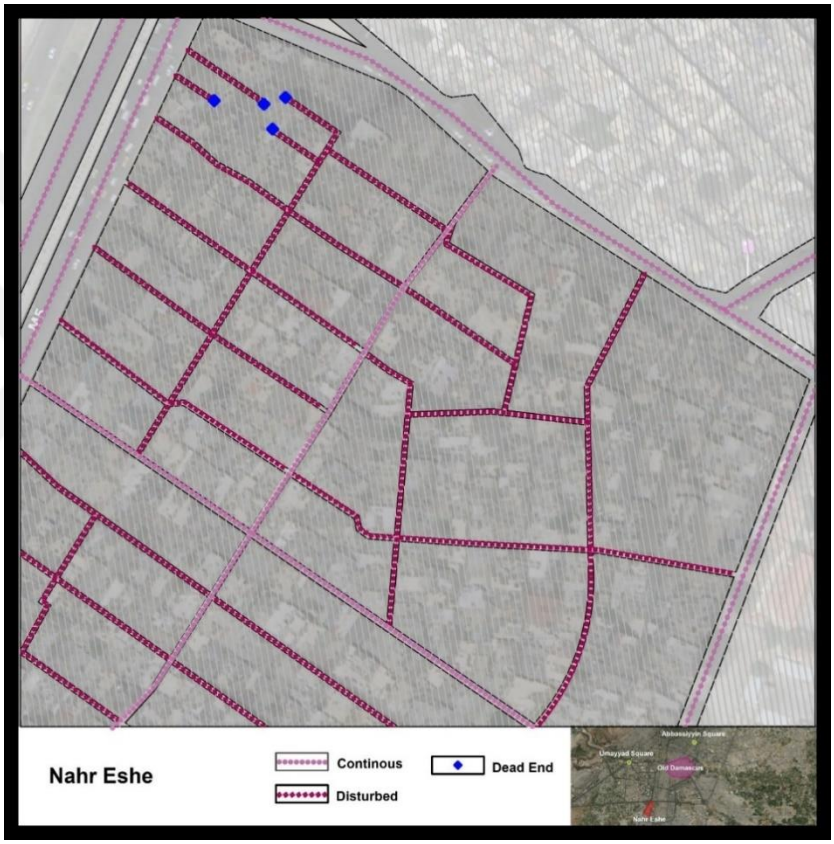
Open spaces are almost non-existing in the informal settlements they are expressed by main or secondary roads, only a few houses in the outskirts far from the city have small internal space defined by building walls (courtyard).

c. The Law of Good Continuation

The roads have nearly the same rhythm and pattern cutting through the over stacked buildings, and they are mostly narrow, zigzagged, and have a lot of visual intersection with a lot of dead-ends, which makes it hard to navigate in with such disturbed continuity (see

figure 4.132). However, the main roads in the area are in a better shape and have good continuity.

Figure 4.132: Law of Good Continuation Scheme of Nahr Eshe's Studied Area



Source: Google maps, edited by the author.

d. The Law of Proximity

Just like the old city of Damascus, when looking from above the building blocks form clear groups as shown in figure 4.133. However, when we look at the facades of the buildings they look like they are significantly incompatible with each other because of their random chaotic distribution and arrangement, which are shown clearly by the random height differences.

Figure 4.133: Law of Proximity Scheme of Nahr Eshe's Studied Area

Source: Google maps, edited by the author.

e. The Law of Similarity and Symmetry

We notice a lack of identity since the buildings are so similar to each other form and external finishes that we barely see any uniqueness or symmetry (see figure 4.134).

Figure 4.134: View of Al-Tabbaleh and Dwel'a Region

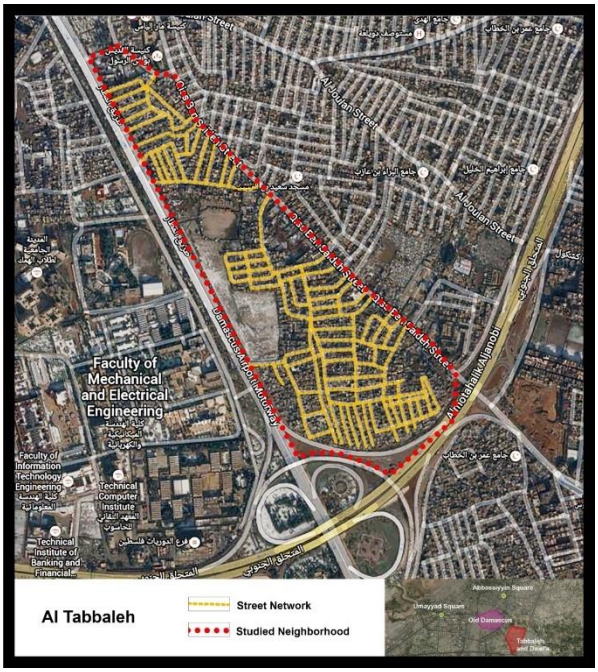
Source: http://www.panoramio.com/photo/85652258 (accessed 23 March 2016).

Analysis of Geometric Principles

d. Informal Grid

Informal settlements have mostly informal grid with some minor resemblance with the orthogonal network system as shown in figure 4.135.

Figure 4.135: Informal Grid of Al-Tabbaleh Neighborhood



Source: Google maps, edited by the author.

Urban Building Blocks

Standard Building Blocks

a. Carpet Development Blocks

The informal settlements' blocks have similar carpet development with the old city in the dense areas, but are denser and have different building types and materials (see figure 4.136).

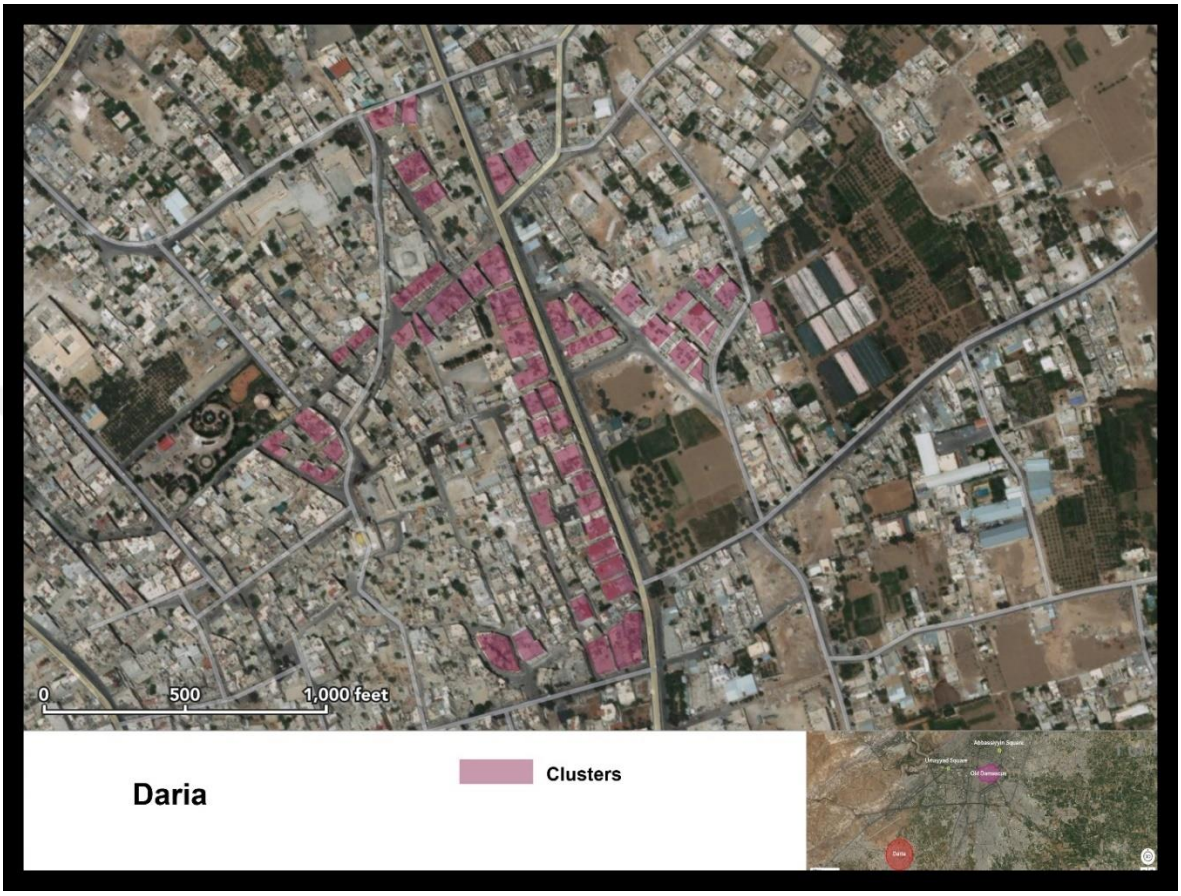
Figure 4.136: Carpet Development Blocks of Al-Tabbaleh and Dwel'a Region

Source: Google maps, edited by the author.

b. Clusters

Clusters are the second most common type after the carpet development type in the outskirts of Damascus. Usually, people with better financial condition tend to build and live in such blocks, and they are either local people or people from the city who could not afford the living conditions in the city (see figure 4.137). These building blocks are usually approved and registered by the government.

Figure 4.137: Clusters between Carpet Development Blocks in Daria Neighborhood



Source: Google maps, edited by the author.

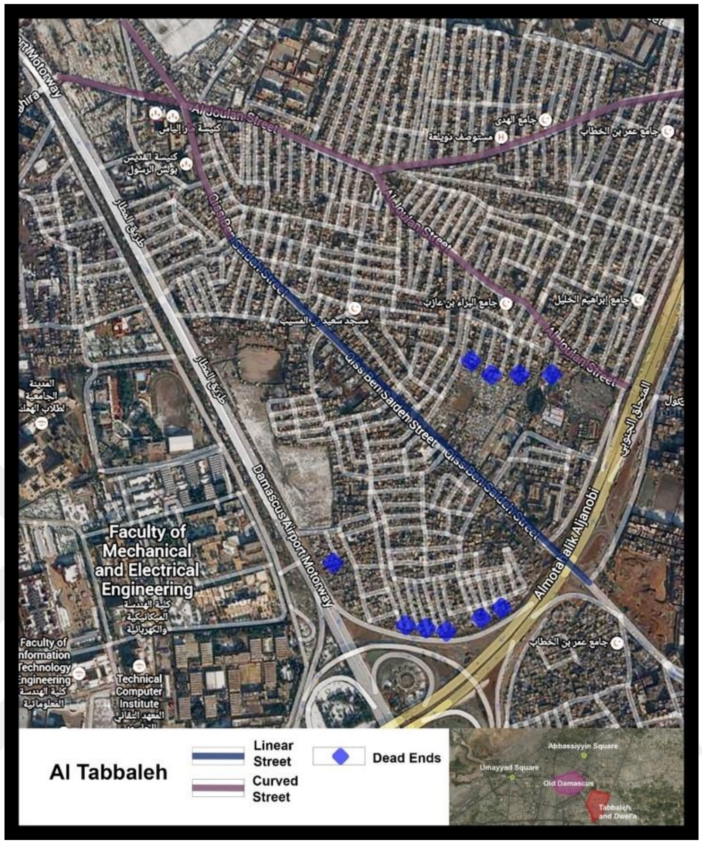
Large Building Blocks and Solitary Buildings

Generally, there are not much landmark buildings other than mosques and governmental buildings.

Road Systems and Street Spaces

The streets in the informal settlement are mostly amorphous spaces with dead ends, infiltrated with some linear or curved main roads (see Figures 4.138 & 4.139).

Figure 4.138: Street Network in Al-Tabbaleh and Dwal'a Region



Source: Google maps, edited by the author.

Figure 4.139: Linear Road Connecting Damascus City and Daraa Providence and Crossing through Nahr Eshe Neighborhood

Source: http://play.tojsiab.com/Uk9aME5sby1POWMz (accessed 23 March 2016).

Place Capital

Usually, there are no defined place capitals in the informal settlements within the city. However, the case is different in the outskirts, which have community and district levels parks in the clusters areas (see figures 4.140 & 4.141). There are also famous squares in large regions such as Duma, which is considered one of the largest districts in Eastern Gouta (see figure 4.142).

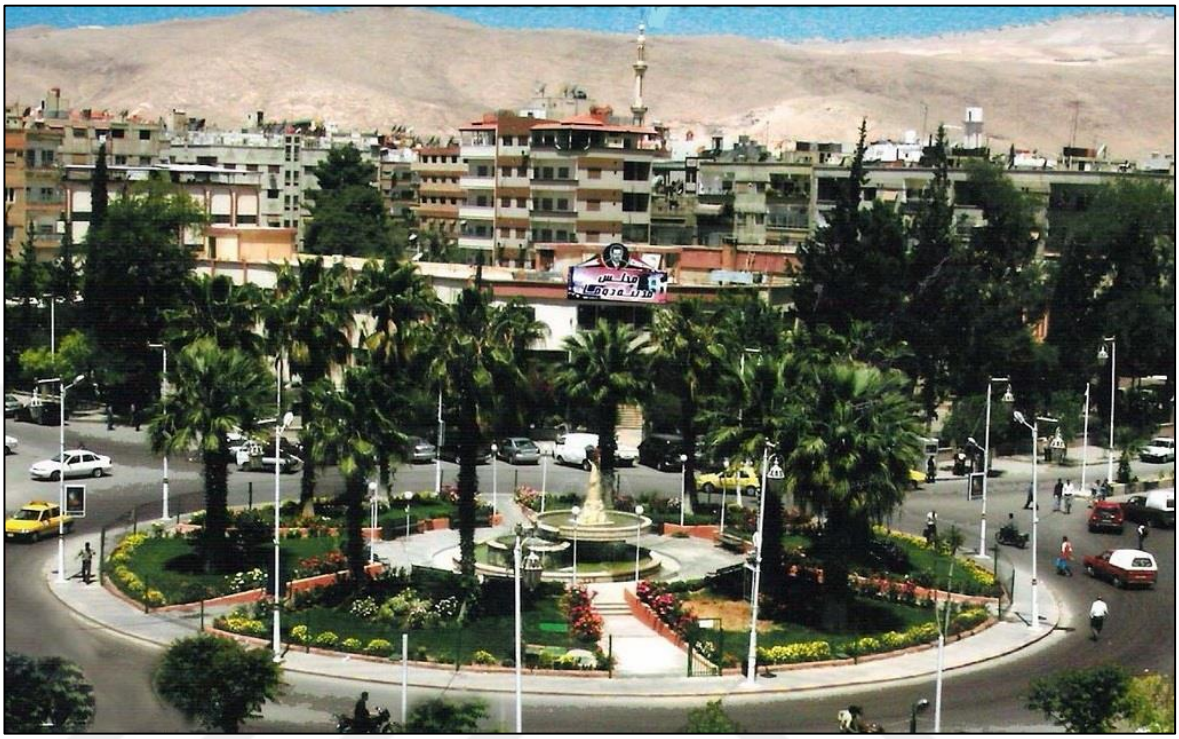
Figure 4.140: District Park and Community Gardens in Duma City

Source: Google maps, edited by the author.

Figure 4.141: A District Park in Daria City

Source: http://www.tripmondo.com/syria/rif-dimashq/darayya/picture-gallery-of-darayya/ (accessed 23 March 2016).

Figure 4.142: Al-Baladiye Square in Duma City



Source: http://www.panoramio.com/photo/13047746 (accessed 23 March 2016).

4.3.1.2. Housing

According to Etienne Lena in her article Mukhalafat in Damascus: The Form of Informal Settlement, the emergence of informal settlements in Damascus was first noticed by Rene Danger in 1937 (2012, p.1). He was worried about this new phenomenon that started to exist in the Al-Gouta the green belt surrounding the city. A lot of attempts were done to stop the spread of informal settlements such as the proposal of the urban planners Ecochard and Banshoya to keep 500m green belt around the city safe from demolishing, however it did not work out. Now it has become a fact that there are lot of informal settlements regions within and all around the city built quickly using low-quality concrete blocks masonry.

In order to study the informal housing types in Damascus's outskirts, houses from "Daria" region was taken from Lena's analysis. In her study, 67 houses were scanned, and three types of houses were inducted:

a. Courtyard Houses
b. Villa Houses
c. Speculative Houses

The first two types are the most widespread types in the studied area because these types demand wide spaces, and they are usually single house units. On the other hand, the third type, speculative houses, is the most common type in the informal settlements in the city where there is usually a lack of land and huge demand for houses. In some regions in the outskirts, in addition to the three mentioned types, there are a lot of clusters spread among the informal settlements. One apartment in a cluster located in "Al-Hajar Al-Aswad" region will also be studied. Both the speculative houses and clusters are similar to apartment buildings type.

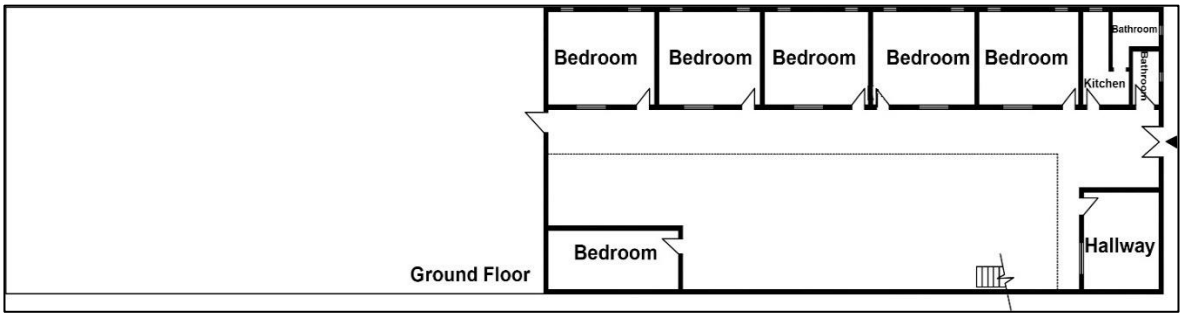
Affordability

In general, informal settlements are affordable on the outskirts of Damascus and new informal houses can be built easily and quickly. However, the informal settlements within the city are less affordable since they are closer to the city center. Clusters within the outskirts come last in affordability since they are in better condition and usually are located in prime locations or near to main streets.

Accessibility

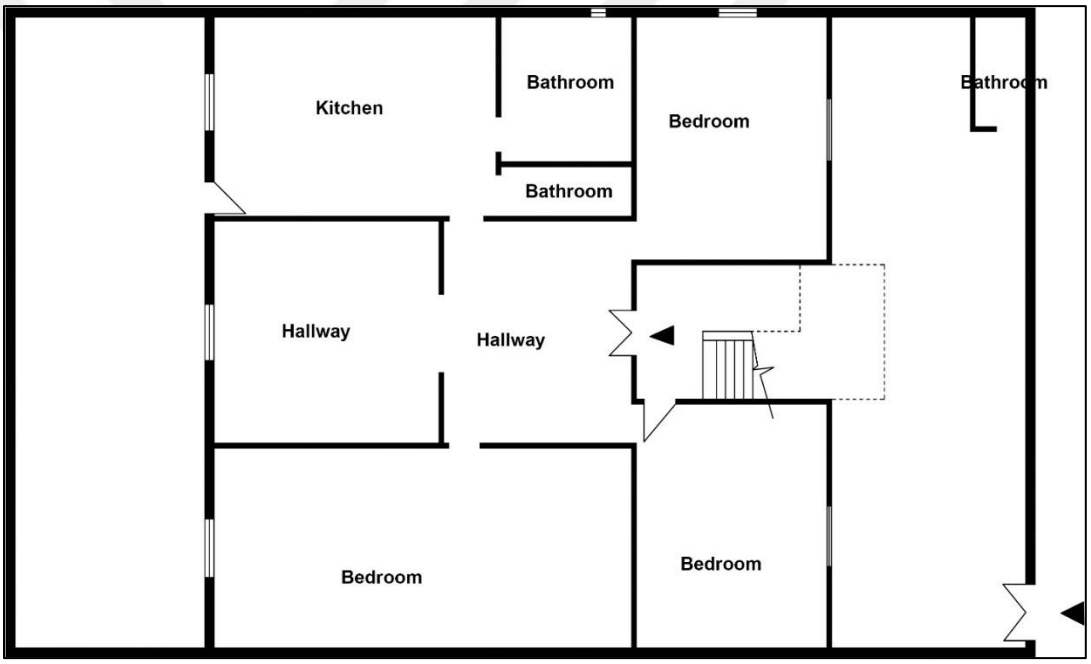
The informal courtyard houses are just like the traditional Damascene houses accessed directly from the streets where they align attached alongside them. However, the houses usually are not attached to each other like in the old city and the entrance leads directly to the courtyard in the informal courtyard house type as shown in the ground floor plan in figure 4.143. The entrance also leads directly to the front yard of the house in the villa houses as shown in the ground floor plan (see figure 4.144). However, in the speculative houses and the clusters, the entrance leads to a distribution space, which includes a stair that leads to the upper apartments.

Figure 4.143: Ground Floor Plan of the Studied Informal Courtyard House



Source: Etienne Lena, (2012) Mukhalafat in Damascus: The Form of Informal Settlement.

Figure 4.144: Ground Floor Plan of the Studied Villa House



Source: Etienne Lena, (2012) Mukhalafat in Damascus: The Form of Informal Settlement.

Morphology

Geometry

There is no particular shape for informal settlements, but their plans usually have a rectangular or square shapes. The courtyard and villa houses type are usually built individually closed to each other, but in the speculative and cluster houses building units are built closer to each other and in a lot of cases they are attached to each other. Also, since the

informal settlements were built illegally, each unit has different height and design depending on the available land and the financial condition.

Plan Typology

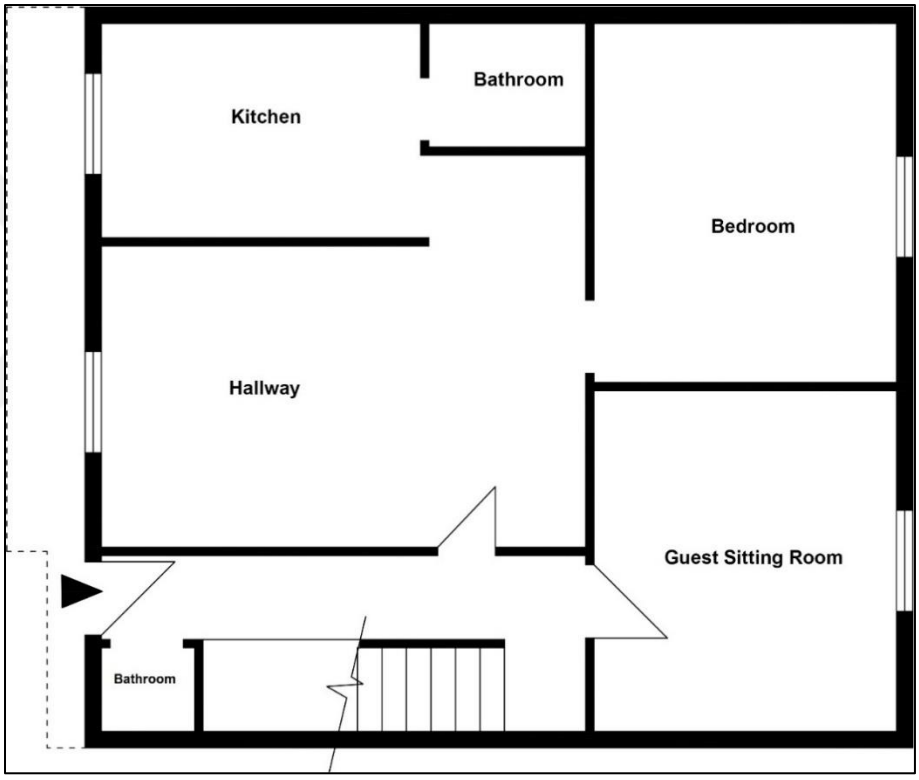
The informal courtyard houses type are the oldest type of the informal houses. It has the same design of the country houses in the Syrian villages, which were designed to simulate the traditional houses. They consist of rooms oriented towards the courtyard, which is not located at the center of the house like in the traditional houses in a lot of cases. The rooms also differ in number, area, and have no decoration. Moreover, they usually consist of maximum two stories without a Liwan and the stair is located near to the entrance (in case there is an upper floor). The courtyard's area is usually 50 percent - 75 percent of the total house area, which ranges from 150m2 to 350m2. The kitchen and the toilets always come together since it is easier to install plumbing for both this way, and they are usually located in front of the entrance. Typically, the house also consists of bedrooms and living room which are originated towards the courtyard.

The villa houses type are different from the courtyard houses type since the building units do not have a courtyard and are usually located at the center of the land. According to Lena, this type has started spreading in Syria from the late of the nineteenth century to the beginning of the twentieth century. Villa houses are usually only one floor at the beginning, and then they add more floors to the house when the family gets bigger. Therefore, the stairs are usually located near the entrance since it is the best location in case if more floors were added. The villa houses also have hallway room "Sala" which centers the house and function, like the courtyard, as a distributor to all rooms. The design of the houses is closer to the modern city types than the courtyard houses.

The speculative houses are mostly informal apartment buildings, which are overstocked and small compared to the previous types (see figure 4.145). The stairs are located directly in front of the entrance and lead to the hallway of each apartment, which is central and function as a distributer as in the villa houses. The bathrooms are mainly located under the staircase and in some houses, which are more than 85m2, have another bathroom inside the house. The

guest room in most cases are located near the entrance to provide more privacy to the occupants. The rooms area is related to the apartment area hence in the 3-rooms house the apartment area is usually between (50m2–110m2), the 4-rooms house the area is between (100m2-185m2), and the 5-rooms house the area is between (125m2-165m2).

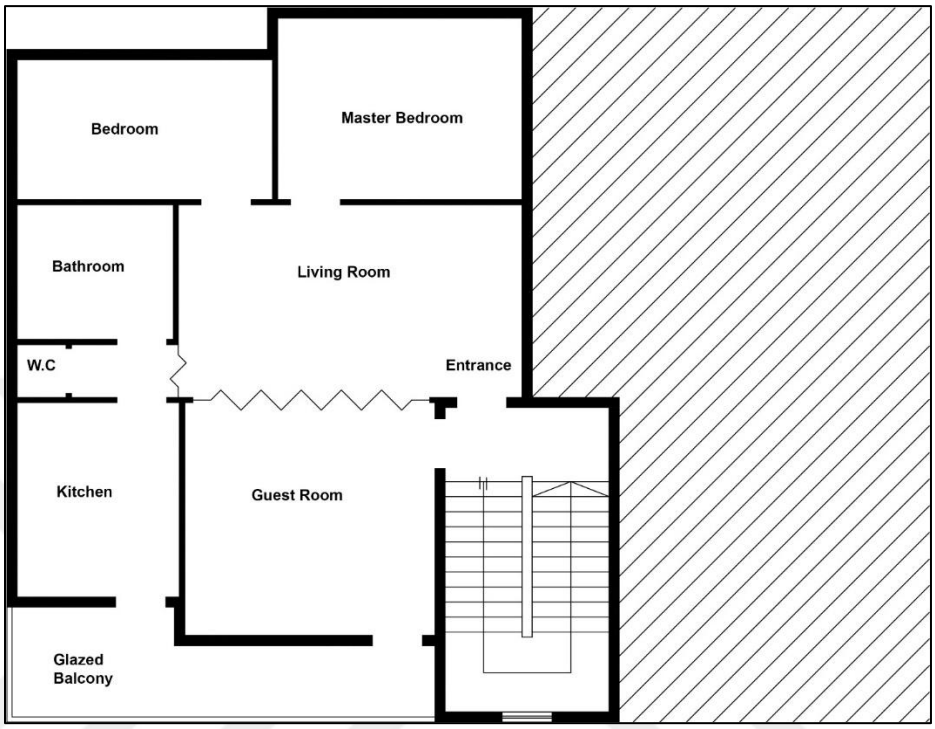
Figure 4.145: Floor Plan of the Studied Speculative House



Source: Etienne Lena, (2012) Mukhalafat in Damascus: The Form of Informal Settlement.

The clusters are very similar to the clusters in the city in terms of plan typology and a number of rooms (see figure 4.146). They both have small apartments compared to other types of modern blocks, and the buildings are either really close to each other or partly attached. Clusters represent an affordable cheap solution to the government to house the people in poor neighborhoods.

Figure 4.146: Floor Plan of the Studied Cluster House



Source: The author.

Building Components

a. Openings

The external and the internal facades are quite simple made of concrete block masonry, which is in a lot of cases not even plastered or painted. The facades have windows similar to the ones in the modern city, which are mainly large fixed frame windows made of aluminum mostly.

b. Security Features

They usually lack security features and have only high periphery walls in case of the courtyard houses and villa houses to prevent robbery.

Lifestyle

Privacy

Privacy, like in the modern blocks, is an important feature but varies from type to type. It can be noticed, for example, in:

a. Installing window shutters in all windows.
b. In the courtyard, there is usually 2m-high parapet wall in the roof.
c. High periphery walls around the land of courtyard and villa houses.
d. There is no clear separation between bedrooms and guestrooms except in the courtyard.

We can say that the older the informal housing type is the more privacy is witnessed in the design.

Socializing

In the informal courtyard and the villa houses types, the family ties are stronger than in other informal types and in the modern blocks. They are similar to what it used to be in the past within the traditional houses, but with more privacy to the small branches of the family in case of the villa type where each branch has its own apartment but meet and socialize with other family members in the yard of the house and in common meeting rooms. The social life is also essential in the informal houses in general, and in some of the outskirt neighborhoods, it is even more valued than in the modern city. It might not be reflected in the decoration or the architecture of the houses, but it is well recognized through the life style of the inhabitants.

Standardization and Diversity

Informality is the most dominant character in the housing designs and urban patterns, but there is, however, some discipline and standardization in plan typologies. The houses of the same type tend to have similar plans since they are the result of the limited experience of local construction workers and carpenters, in addition to the absence of architecture and civil

engineering studies. Therefore, what affects the type of the houses is the site location (inside the city or in the outskirts), land size, and the financial condition.

Flexibility and Continuity

Continuity in the informal settlements is logically weak because of the poor physical condition of and lack of service. Moreover, lots of inhabitants would prefer to live in decent houses with a better condition since the reason behind the existence of such settlements is an urgent need to dwell within the extreme harsh condition of living in the city. These houses' continuity is strongly connected to this need. Hence once it is gone, there is no longer reason for their continuity. However, no one can deny the flexibility of these informal settlements and their role in meeting the need of a large sector of people regardless the houses' poor condition and the lack of fundamental services. The more money the family has, the better services it can provide to a house, hence, these houses are still considered flexible, especially if we consider the ability to expand and adding more spaces informally.

4.3.2. Non-Physical Features

4.3.2.1. Government Policies

As stated by Professor Dr. S. Al-Mhanna, "these illegal settlements are Damascus' major problem. It is so widespread, over 30 percent of the city's inhabitants live there, and have been living there for nearly 40 years. The government has allowed this situation too long" (Lababidi 2008). Syrians have the choice, due to a regulatory flaw, to keep the house they live in if it is being built with a concrete roof. Hence, Syria has cultivated a speedy and practical unofficial building district, with houses constructed in 4 days.

By 2008, according to Lababidi two of the largest residential areas, Taballaa (over 25 hectares) and Nahr Al-Aishe (approximately 30 hectares) had grown into self-sustaining

districts in the city, each with their own basic shops, butchers, grocery shops, laundromats, etc. Also, these areas host a range of available services, such as surgeries, garages, hardware stores and electric repair outlets, etc., and none of these are registered in the formal economy (2008, p.49).

The standard of living in these areas for migrants is “much better than that of urban poor in other third world cities” (Naito 1989, p.445). With many long lasting electrical equipment, including audio players, satellite dishes, televisions, and fridges, these people tend to live in miniature concrete block houses. As stated by Naito (1989), “certainly they often neglect to acquire legal titles to the land and houses so that they can be classified as spontaneous or squatter settlements, but they are certainly not slums” (p.445). Residents in these areas tend to be employed in the service sector as taxi drivers, waiters, garbage collectors, and laborers for public works, or municipal offices. Unfortunately, statistics on this part of the workforce are not accessible.

The government attempt to solve the informal settlement problem were by building five industrial cities slated in Syria on the outskirts of the main cities, of which three of them are almost complete, which are near to Homs, Aleppo, and Adraa. The remaining two, near to Dier-Ez-Zor and Der’aa were still in the planning stage. Each industrial city was supposed to be self-durable, with areas already prepared to support buildings of all types including food, textiles and engineering. Economic centers that support the construction of supermarkets, cafes, hotels, banks, and hospitals have been drafted, and the residential areas have been planned with parks, landscapes, and sports areas. With tax incentives and viable free-trade zones, the government wanted these industrial cities to attract the high population areas in Damascus and other densely populated areas and produce employment opportunities across the economic environment. Dr. Habash stated about De Soto’s “simple advice” to the Syrian regime focusing on the rapidly expanding settlements: “by recognizing these illegal areas, and providing them with land titles, owners of illegals houses will be able to sell their titles to a company who can develop the areas. This way, the squatter population will be empowered, have a role in the market and will have money to buy legal property” (Lababidi 2008).

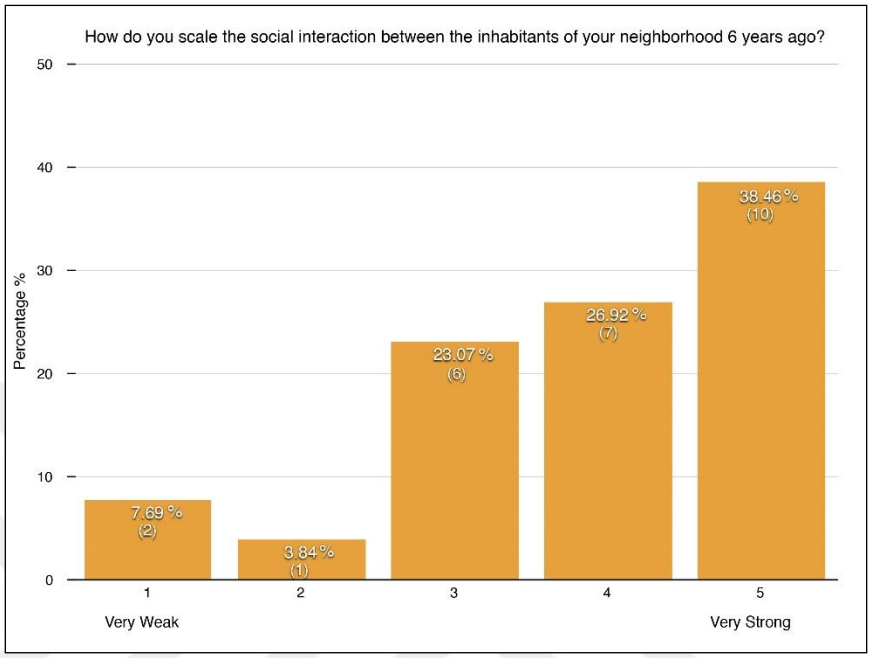
Yet, Ayoub Agha, a civil engineer in Damascus interviewed by Lababidi, argues that this idea will not be effective in Syria. “A similar scheme has been tried before where cheap studio flats were built for the low-income population. Once they were made available, all sorts of people were queuing up to be registered for the limited number of flats… and then trading of the titles ensued. In the end, the flats became expensive” (2008, p.54-55). Many academics critique De Soto’s theory of giving land titles including Gilbert (2003) who utilizes the city of Bogota as an example indicating that land titles do not really empower the poor to get official finance or credit, nor do they help with house trading. He posits instead that land titles only provide the government with a wider tax base. Layla Joukhadar, interviewed by Lababidi, has the same worries as Gilbert: “only the government will benefit from such housing permits as they will be able to collect tax from more people. This government will do anything to make itself richer. It is what has made this city so poor” (2008, p.55).

4.3.2.2. Social Capital

Social Interaction

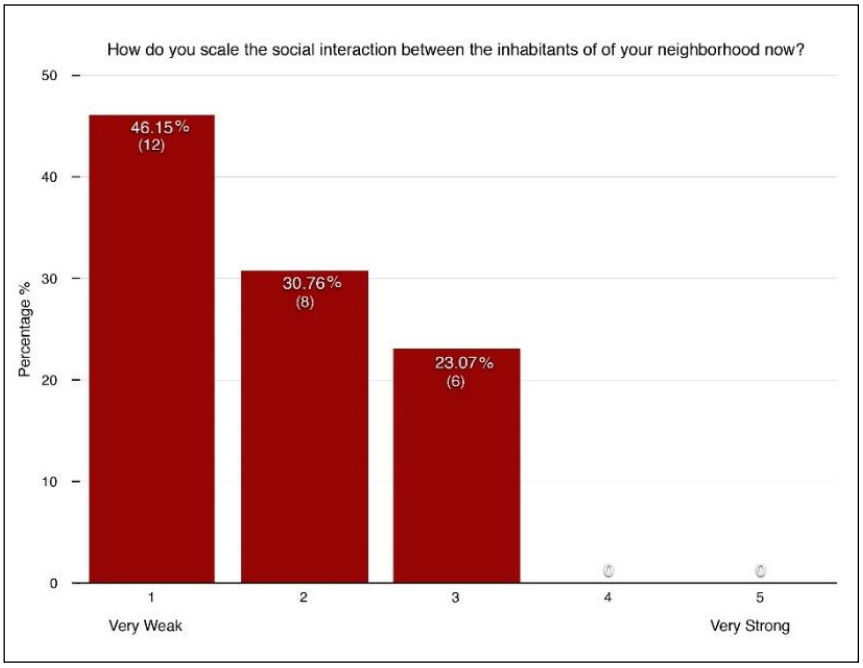
The social interaction in informal settlements at the outskirts used to be strong in general. People used to have a strong social life and a good social cohesion (see figure 4.147). However, the outskirt zones were the most affected ones among the other zones from the war in terms of social interaction (see figure 4.148). It is for sure not safe to move around because of the continues bombing and hence a lot of people have immigrated. The ones who are still living there are trapped in their neighborhoods and living a socially isolated life.

Figure 4.147: Social Interaction in the Outskirts Six Years Ago



Source: The author, April 2016.

Figure 4.148: Social Interaction in the Outskirts Now

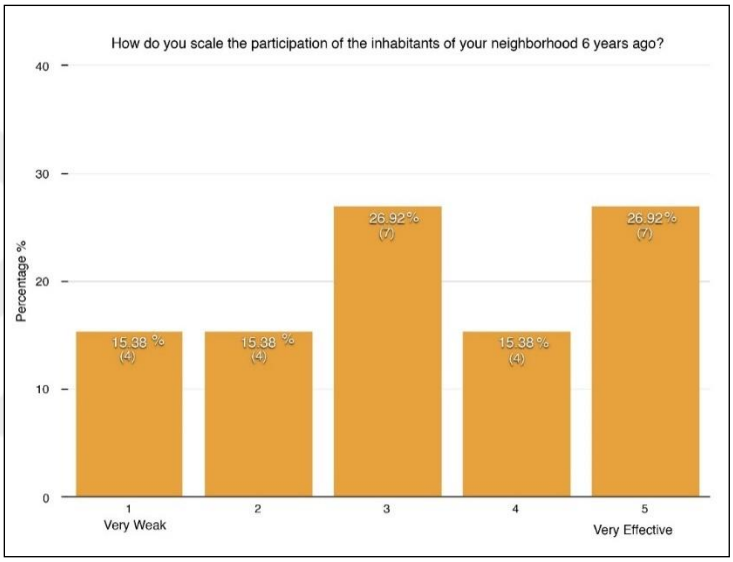


Source: The author, April 2016.

Participation and Local Democracy

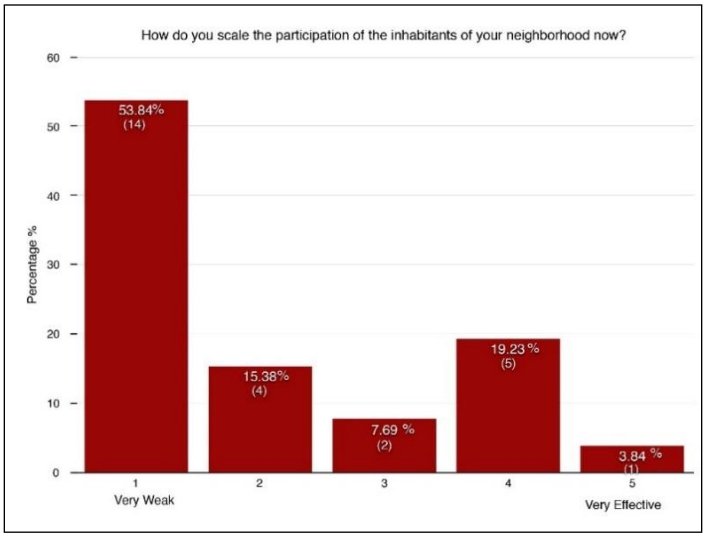
Participation and local democracy used to be normally effective and limited to charity and helping strangers (see figure 4.149). There also used to be social cohesion but it is no longer as strong as before because of the war, which made the people's participation limited to surviving together through the harsh living condition (see figure 4.150).

Figure 4.149: Participation in the Outskirts Six Years Ago



Source: The author, April 2016.

Figure 4.150: Participation in the Outskirts Now



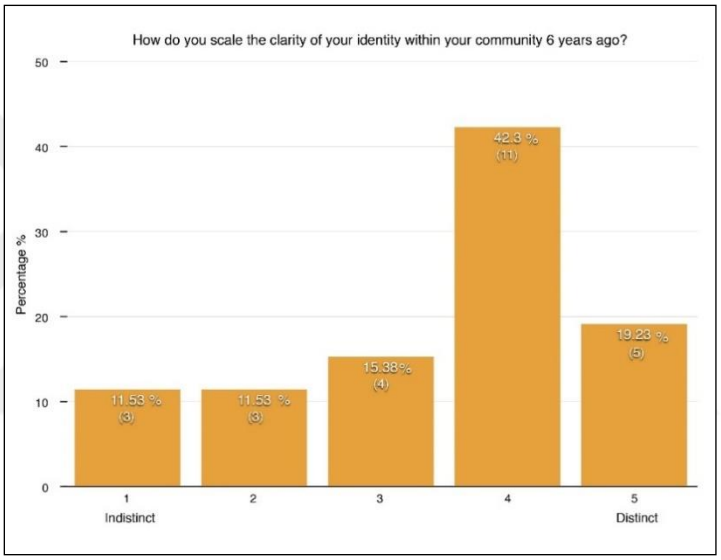
Source: The author, April 2016.

4.3.2.3. Sense of Belonging and Local Identity

Individual's Identity

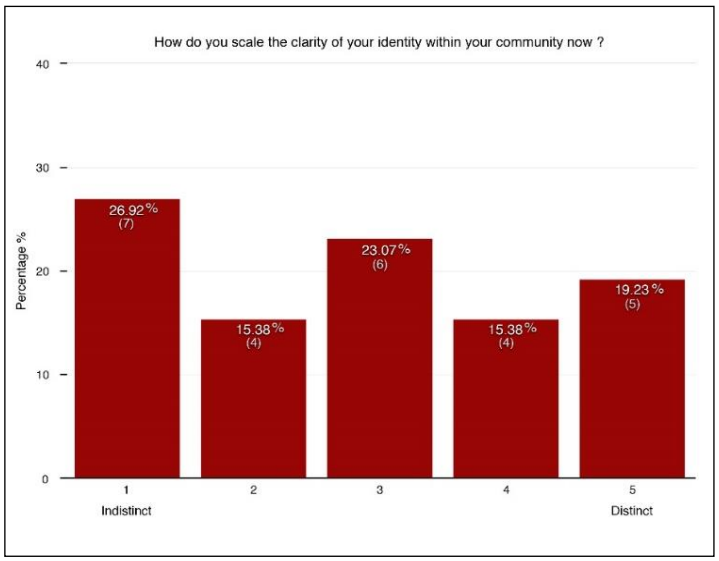
It used to be more distinct, and it was also achieved by the society's perception like in the old city and the modern city (see figure 4.151). However, now it is affected by the great frustration caused by the war as shown in figure 4.152.

Figure 4.151: Individual's Identity in the Outskirts Six Years Ago



Source: The author, April 2016.

Figure 4.152: Individual's Identity in the Outskirts Now

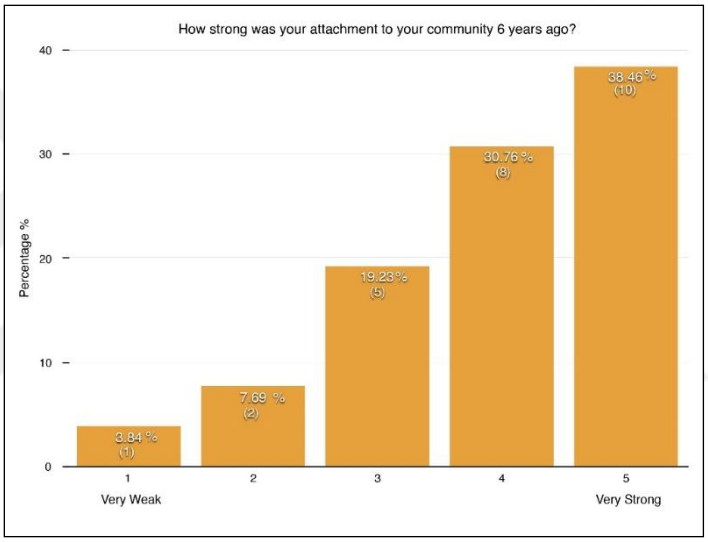


Source: The author, April 2016.

Sense of Community

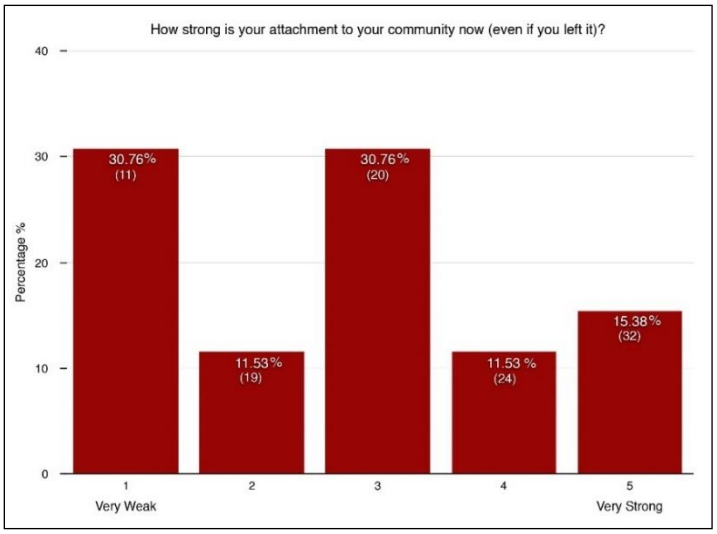
Sense of community used to be very strong in the outskirts and enriched by strong relationships, mutual respect, and cordiality (see figure 4.153). However, it is highly affected by the immigration of beloved people and the absence of safety as shown in figure 4.154. Yet, according to the answers, it has not been totally lost somehow, due to solidarity among people and their mutual reaction towards the regime and the global community.

Figure 4.153: Sense of Community in the Outskirts Six Years Ago



Source: The author, April 2016.

Figure 4.154: Sense of Community in the Outskirts Now

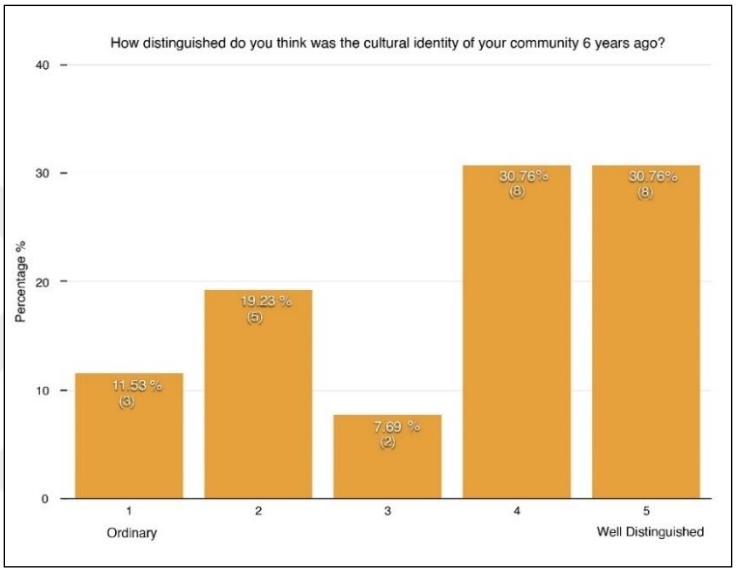


Source: The author, April 2016.

Cultural Identity

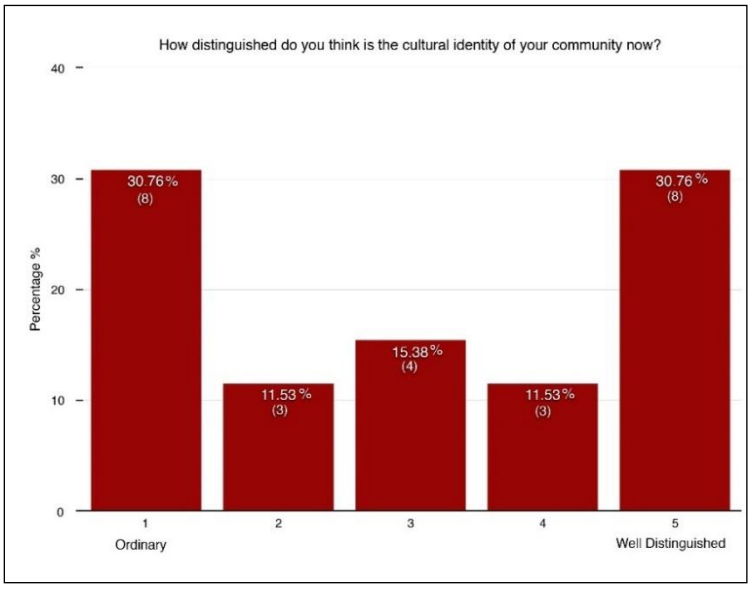
It used to be well distinguished and surprisingly is still distinguished even after the war (see figure 4.155 & 4.156). Just like in the old city and the modern city it is expressed by mainly following local traditions.

Figure 4.155: Cultural Identity in the Outskirts Six Years Ago



Source: The author, April 2016.

Figure 4.156: Cultural Identity in the Outskirts Now



Source: The author, April 2016.

4.3.3. Post-War Condition

The life condition in the outskirts is quite devastating and dangerous. Since the beginning of the Syrian revolution at least 40,000 people died and around 2 million people, including children, are still trapped in their neighborhoods, which are getting bombed every day leaving behind a large amount of destruction and death (see figure 4.157). According to the Al-Mostaqbal newspaper, more than 90 percent of its Infrastructure and 60 percent Superstructure have been bombed and destroyed in 2013 (Anon 2013). In addition, the war has caused the reduction of green cultivated areas because of the lack of water sources, the high price of agriculture products and fuels, and most importantly the immigration of a lot of youth and families. Also, continues bombing has caused the destruction of the agricultural soil and the burned off a lot of crops. Most of the cultivated lands are also full of mines and are under crossfire.

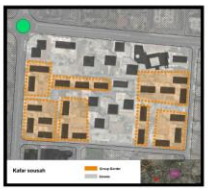
Figure 4.157: The Destruction of Duma in the Eastern Outskirts of Damascus

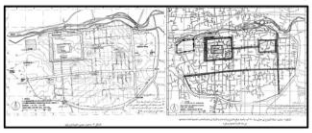
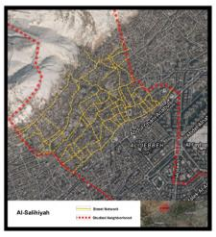
Source: http://www.deccanchronicle.com/150816/world-middle-east/article/least-58-dead-syria-regime-raids-near-damascus-monitor (accessed 23 March 2016).

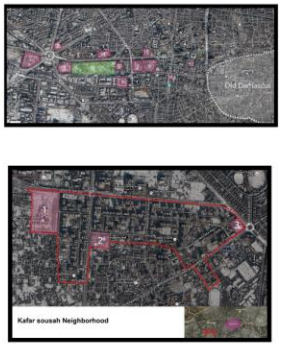
4.4. COMPARING THE RESULTS

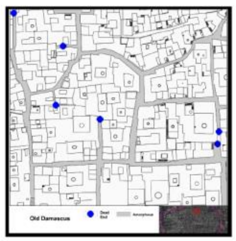
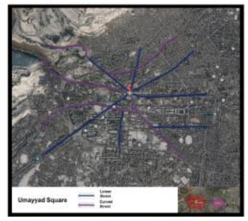
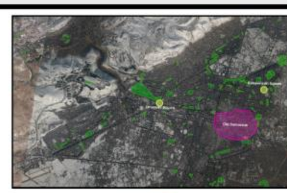
Table 4.1: Comparison between the Three Zones of Damascus

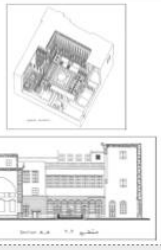
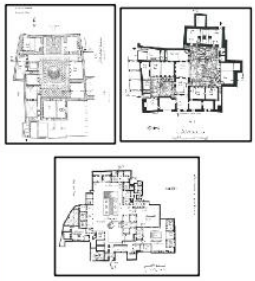
Urban Features			Old Damascus	Modern Damascus	Informal Settlements
Urban Design Schemes	Visual Principles	The Principle of Figure and Ground			
			- Balance between figure and ground - High urban density	- Figure is overwhelmed by ground in high-rise buildings - Ground is overwhelmed or balanced by figure in clusters and points - Sometime there are available large public spaces	- Extremely high urban density - Overstocked buildings in the city - Less stacked buildings in the outskirts
		The Law of Closure			
			- Open spaces are clear and specific - Private interior spaces represented by courtyards	- Large open spaces - Visually defined spaces - Either public or semi-public	- Mostly no open public spaces in the city - There are some open spaces in the outskirt, but mostly unused
		The Law of Good Continuation			
			- Road's intersection are either smooth and continuous or sudden and unnoticeable - Renewable walking experience	- Roads are harmonized with buildings - Clear paths mostly	- Mostly narrow with a lot of visual intersections

Urban Features			Old Damascus	Modern Damascus	Informal Settlements
Urban Design Schemes	Visual Principles	The Law of Proximity		 	
			- Buildings are attached - Distributed by groups which are defined by roads	- Some buildings do not form clear patterned groups and some do	- Similar to old Damascus - Attached buildings - Random groups defined by roads
		The Law of Similarity and Symmetry		 	
			- Streets are similar in appearance in general - Clear symmetry in linear street shops	- Buildings' shape are similar - In some areas there is symmetry and in some there is not	- Similar forms
		The Principle of Contrast (Uniqueness)		 	
			- Special architectural elements - Decoration - Doors… etc.	- Expressed only by buildings' finishing or height	- Lack of identity

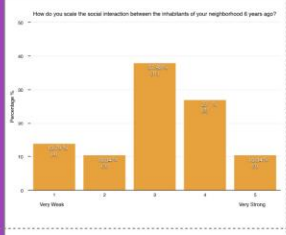
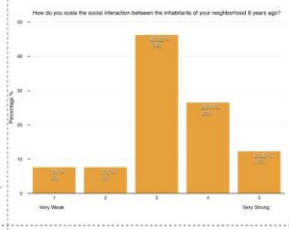
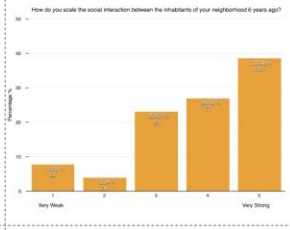
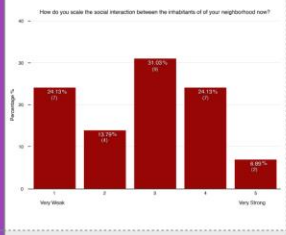
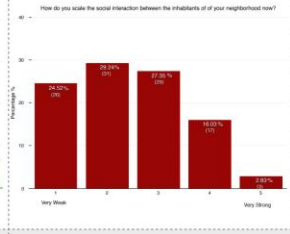
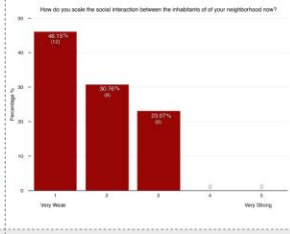
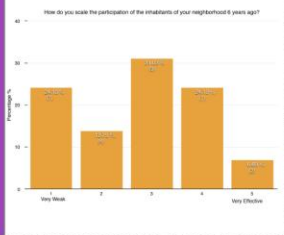
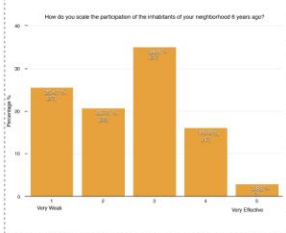
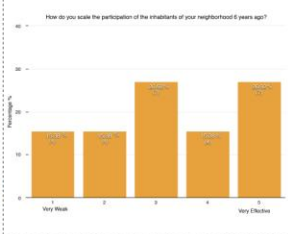
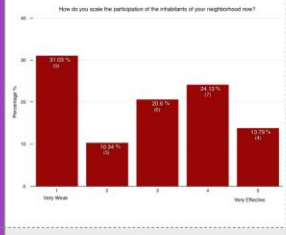
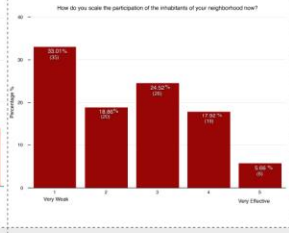
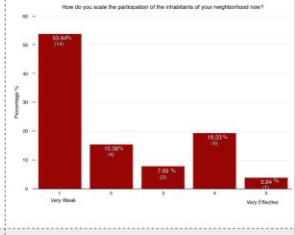
Urban Features		Old Damascus	Modern Damascus	Informal Settlements
Urban Design Schemes	Analysis of Geometric Principles	 	 	
		- Organic grid - Used to be regular in the Romanian/ Byzantine era - Some parts are regular like in Al-Hariqah neighborhood	- Mostly orthogonal grid - Also circular shapes	
				
		- Deformed grid in the slopes of Mount Qasioun	- Deformed grid in the slopes of Mount Qasioun	- Irregular grid

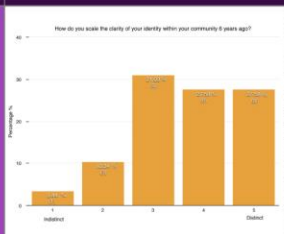
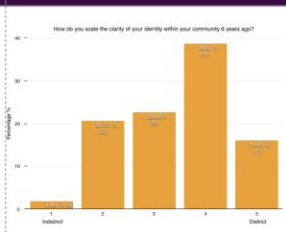
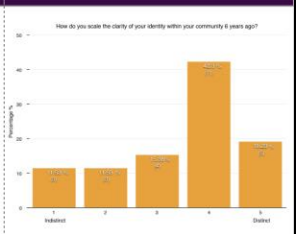
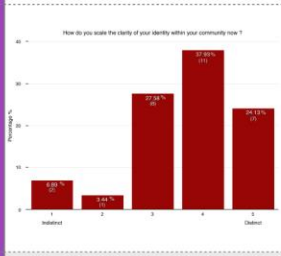
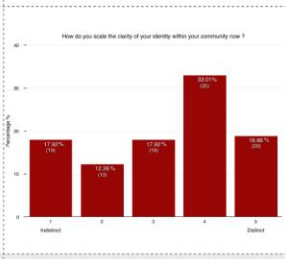
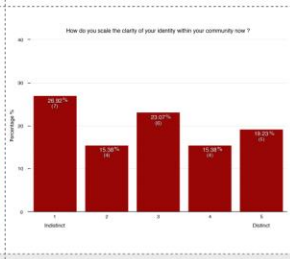
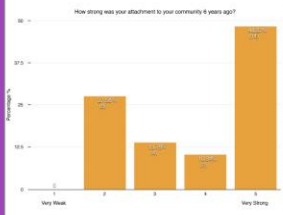
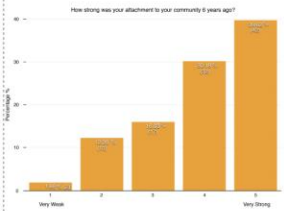
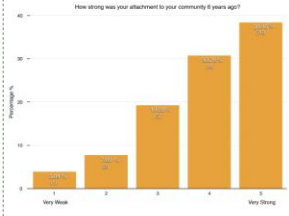
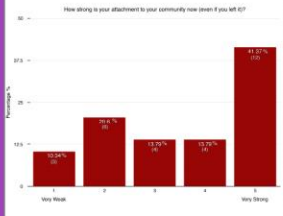
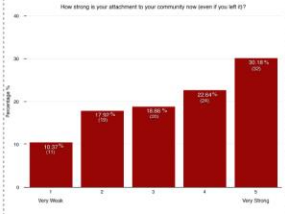
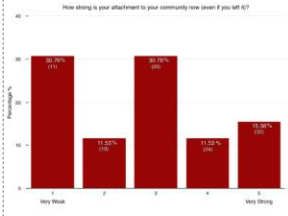
Urban Features			Old Damascus	Modern Damascus	Informal Settlements
Urban Design Schemes	Urban Building Blocks	Standard Building Blocks			
			- Carpet development blocks - Inner-city urban blocks	- Inner-city urban blocks - Opened-up city blocks - Rows - High-rise buildings - Points - Clusters	- Carpet development blocks - Clusters
		Large Building Blocks			
			- A lot of landmarks - Mosques, churches, khans, hammams… etc. - Umayyad Mosque is the most dominant large building	- Mosques mostly - Governmental buildings - Malls, Hotels, stadiums… etc.	- Mostly mosques and governmental buildings

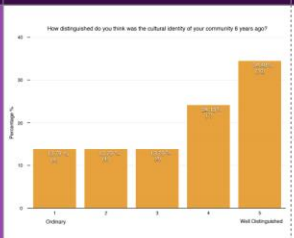
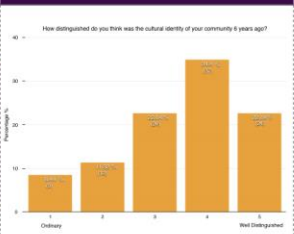
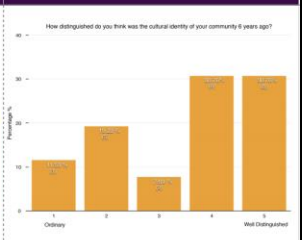
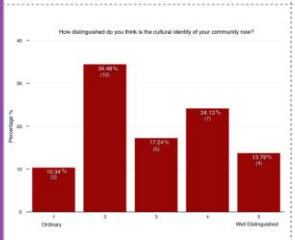
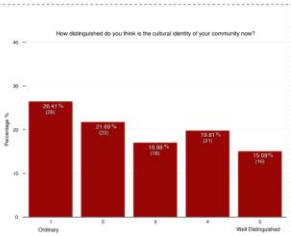
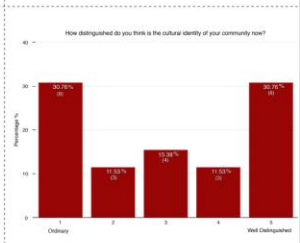
Urban Features		Old Damascus	Modern Damascus	Informal Settlements
Urban Design Schemes	Road Systems and Street Spaces	 	  	
		- Mostly amorphous streets with a lot of dead ends - Complete road networks - Linear and curved streets - Circulation loops	- Complete road networks - Linear and curved streets - Circulation loops	- Mostly amorphous streets with a lot of dead ends
	Place Capital		 	
		- Private open spaces (courtyards) - Public open spaces (large courtyards) - No public large parks	- One city-wide park (Teshreen) - District parks - Community parks - Shopping areas - Few public squares	- District parks - Community parks

Urban Features			Old Damascus	Modern Damascus	Informal Settlements
Housing	Accessibility				
			- Houses are accessed directly from streets - Courtyards are reached by long narrow passageway mostly	- Buildings are connected directly to the street (clusters) - Hallway between the building and the street (points) - Buildings are surrounded by closed garden (high-rise)	- Houses are accessed directly from streets - Rooms are reached from courtyard or hallway
	Morphology	Geometry			
			- No standard common form - No standard proportion - Maximum height 10m	- 4-6 stories boxes - 7-14 stories boxes	- No particular form
		Plan Typology			
			- One entrance or more - One Courtyard or more - One Iwan or more in every courtyard - Qaas along side the Iwan - Kitchen mostly in corners - Standard toilet design in every house - Bedrooms in the upper floor mostly	- Day part: Living room, guest room, kitchen - Night part: bedrooms, bathroom - Guest room close to the entrance	- Informal courtyard houses - Informal villa houses - Speculative houses - Clusters

Urban Features		Old Damascus	Modern Damascus	Informal Settlements
Housing	*Building Components*	   		
		- Small exterior covered openings/ Mashrabiyat - Large interior openings - Iron blusters on the interior lower windows	- Large fixed frame windows	- Large fixed frame windows
	Lifestyle			
		- Privacy is very important - Courtyard as a space for socializing - The high importance of having guests reflected on Qaas and Liwans' decoration - Standardization in plan typology - Diversity in houses' scale and interior decoration - Used to be flexible - Facing a lot of neglecting	- Privacy is still important - Social life is still essential - Guest rooms are the most decorated rooms in the house - Standardization in design - Lack of diversity - inflexible	- Privacy is still important - Socializing is also essential - Informality is the most dominant character - There is some kind of standardization in plan typologies - Continuity is weak - Flexible

Non-Physical Features			Old Damascus	Modern Damascus	Informal Settlements
Social Capital	Social Interaction	6 Years Ago			
		Now			
			- The most stable - More strong connections - Regular visits - Greeting/respect - Good relation with neighbors - Mosques as a regular meeting places	- Ordinary interaction - Visits/ Friendship - Greeting - Social media has weaken the interaction - Immigration has increased the social isolation	- Most affected by war - Used to be very strong - Not safe anymore to move freely - Immigration - Trapped and isolated
	Participation	6 Years Ago			
		Now			
			- Not very effective - Lack of organized associations - Charity - Participation in neighborhood service	- Not very effective - Lack of organized associations - Charity/ volunteering - Participation in building service	- Most affected by war - Used to be effective - Helping strangers/ charity - There used to be social cohesion - Now focusing in surviving the harsh living conditions

Non-Physical Features			Old Damascus	Modern Damascus	Informal Settlements
Sense of Belonging and Local Identity	Individual's Identity	6 Years Ago			
		Now			
			- Mostly distinct - Achieved by the society's perception - The support of friends and family	- Normal - Achieved by financial or educational achievement - Also affected by the society's perception	- Used to be more distinct - Achieved by the society's perception - Affected by the great frustration caused by war
	Sense of Community	6 Years Ago			
		Now			
			- The strongest and the most stable - Sense of respect and cordiality - Sense of belonging - Strong relationships	- Used to be very strong - Sense of belonging - good relationships	- Used to be very strong - Used to be respect and cordiality - Used to be strong relationships - Most affected by war - The immigration of beloved people

Non-Physical Features			Old Damascus	Modern Damascus	Informal Settlements
Sense of Belonging and Local Identity	Cultural Identity	6 Years Ago			
		Now			
			- Used to be well distinguished - Strong attachment to traditions - Most affected by the demographic change policies during the war	- Used to be distinguished - Affected by traditions - Minor individual efforts of cultural reading and searching	- Used to be well distinguished - It is still distinguished by a lot - Affected by wars

Source: The author.

5. LEARNING FROM SOCIALLY SUSTAINABLE URBAN INTERVENTIONS AND THEIR PLACE-MAKING FEATURES

The case studies are mainly about government policies regarding urban renovation and housing in terms of social sustainability and place-making. Since the physical and non-physical parts of social sustainability are strongly connected, the case studies will discuss both aspects.

5.1. AFFORDABLE HOUSING IN SOUTH AUSTRALIA

Australia has encountered rising housing prices that have largely influenced housing affordability for many low and moderate income classes. However, the South Australian Government has established South Australia's Strategic Plan (SASP), titled "Creating Opportunity," in March 2004 (Lawson 2012, p.3). It is a long-term (30-year) urban plan strategy to provide affordable housing for high population growth. It also aims at renovating the existing urban texture using socially sustainable methods which are well designed, well serviced, and comprehensive of diversity. The SASP have six priorities that will position South Australia as one of the most affordable and livable states in Australia: Community, Environment, Education, Prosperity, Health, and Ideas (Lawson 2012, p.3). In order to achieve this Lawson states that SASP includes (2012, p.5-6):

a. Encouraging place-making approaches to deal with urban redevelopment, and not doing typical housing projects.
b. Establishing new markets in specified developing areas and elevating creative approaches to housing, which aims for producing more than 1,000 new affordable homes per year.
c. Delivering 38,700 metropolitan and 7,000 new regional affordable housing by the support of a new Development Initiative, which will recognize and delicate key improvement opportunities in light of goals, and will empower private and non-government partnerships.

d. Setting up a new Consumer's Network to exhort the Minister for Housing on community participation strategies for housing administrations and procurement.
e. Propelling social housing renovation to enhance the physical and social framework of previous social housing domains to form a major commitment to the reshaping of the urban structure visualized in the 30 Year Plan for the South of Australia.
f. Supporting the capacity and the development of large non-profit suppliers.
g. Providing many affordable housing alternatives.
h. Improving traffic management and increasing open space and landscape.

5.2. LATINO URBANISM IN A PHOENIX MEXICAN IMMIGRANT COMMUNITY, US

Lately, a lot of assumptions have been made about Mexican immigrants' communities in US cities that are troublesome to the urban fabric, causing a cycle of poverty decay, and have less pride in making place. Moreover, a lot of planning and geographical experts have disregard the role of Latino place-making in American cities (Arreola 2012, p.157).

Yet, Daniel D. Arreola claims that a Mexican immigrant neighborhood in Phoenix, Garfield, is providing material change to the urban texture by creating socially sustainable spaces (2012, p.157). According to Arreola (2012) research has documented following features in Garfield neighborhood:

a. Different facades of buildings along shopping roads, showing how Latinos have engraved spots with their particular social identities such as color schemes and casual retail.
b. The houses are typically constructed tightly to the road with humble front yards. As an outcome, columns of fenced homes make a front property encased scene of closeness where neighbors see and associate with different neighbors, and open and private spaces consolidate effectively one into the other.

c. Pretty much as regular house styles, Mexican houses have well-kept yards and clean properties, which are very valued to the occupants of an ordinary suburb in the American city, so to the Mexican immigrants.
d. Latinos prefer compact, multigenerational, mixed-use spaces that are advanced by new urbanism activities.
e. It is clearly visually evident that when Mexicans build their houses, they apply their traditional convictions aesthetically on their dwelled space.

Therefore, we can indicate according to Arreola that Mexican housescape is "a culturally sustainability practice that improves the urban landscape in the minds of residents. Observations in Garfield also reveal that housescape differences and even acceptance can create variability in a single neighborhood" (2012, p.167). Hence, these housescapes built by Mexican immigrants in Garfield are epitomizing how to integrate socially sustainable housing in the existing urban texture that might be perceived by planning experts.

5.3. URBAN REGENERATION IN A NEIGHBORHOOD IN SAN ADRIÀ DE BESOS, SPAIN

Spain has been divided into 17 independent regions, which play an essential role in urban planning. Some of these of these regions, like Catalonia, even have given more authority regarding planning. La Mina is a neighborhood on the eastern outskirts of Barcelona, which have been regenerated in socially sustainable ways. According to Andrea Colantonio and Tim Dixon three main tools functioned as an essential part of the social renovation of La Mina (2009, p.34):

i. La Mina Masterplan for the neighborhood, which was created in 2005 with the goal of molding the urban change of La Mina and building better open spaces, roads and squares that are suitable for encouraging interaction amongst individuals and enhancing community life. For example, the construction of a wide street, Rambla, with extensive pedestrian areas which give space for inhabitants to meet and

communicate. It is also attached to a tram line that connects La Mina neighborhood with Sant Adrià and Barcelona.

ii. The Special Plan for the Redesign and Improvement of La Mina district, which was created and improved since 2000 to build up a legitimate framework for the urban development of La Mina around three fundamental guiding rules:
    a. Centrality, which visualizes the advancement of physical and social place for the area.
    b. Diversity, for housing types.
    c. Exchange, which is needed to enhance the connections between La Mina, Sant Adrià and new urban areas in East Barcelona's seaside line.

iii. The Integrated Development Plan for La Mina, which gives the most essential framework for the renovation and intervention process and flowing eight main principles:
    a. Social Development Plan as shown in Figure 5.1.
    b. Providing social, educational, and sport facilities.
    c. Housing regeneration and enhancing accessibility.
    d. Developing the public realm.
    e. Providing new affordable houses.
    f. Urban management
    g. Enhanced security
    h. Communication Plan to pitch the usage of the renovation process.

Another imperative viewpoint to cultivate the sense of belonging of inhabitants to their place was to request participation from families to enhancing access to their buildings. According to Colantonio and Dixon occupants made a commitment of € 950,000 or 20 percent of the expenses of the establishment of lifts. Therefore, 30 lifts were installed providing service to 300 families (2009, p.35).

Table 5.1: La Mina Social Development Plan

Theme	Objectives	Number of actions
Training and Employment	▪ To generate employment opportunities in an integrated fashion ▪ To improve local access to the job market	7
Professional and private life	▪ To generate equal job opportunities (e.g. gender, age) ▪ To allow teenagers to attend school by relieving them of family-imposed jobs and tasks	4
Local economic development	▪ To revitalise local economic fabric ▪ To legalise informal local economy ▪ To support new local enterprises	3
Participation and community development	▪ To facilitate local development at community, technical and institutional levels ▪ To strengthen local community and civic society	12
Improved co-existence and civic engagement	▪ To reduce antisocial behaviour ▪ To strengthen local social fabric ▪ To facilitate insertion of newcomers (e.g. with higher income) into the area	6
Social and educational support	▪ To foster education and training ▪ To reward local bottom up community projects	14
Public realm	▪ To improve urban milieu ▪ To encourage local residents to use public spaces	9

Source: Translated and elaborated by Colantonio from Consorci del Barri de La Mina 2007) cited by Colantonio and Dixon 2009, p.36.

5.4. METROPOLITAN GOVERNMENT POLICIES IN TORONTO AND MONTREAL, CANADA

Because of the ascent of global competition between cities all around the world, the Ontario and Quebec governments rearranged the regional boundaries of their major cities, which are under big economic challenges. In the case of Toronto and Montreal, the balance between people's requirements and the economically directed policies is unstable and need to be improved. Yet, both cities differ in spirit and the outcome of their regional governance management.

As for Toronto, according to Savitch and Kantor the dynamic quality of Toronto is linked with its transportation arrangement, precise managed planning, social housing, and rent monitoring (2002, cited by Le Blanc 2006). In the 1970s and 1980s, the city council proposed reliable yet controlled economic development by:

a. Empowering new office improvement around fast transit stations in the outskirts.
b. Setting up building heights and strong density controls.
c. Arranging the procurement of affordable housing units.

However, the development and the social sustainability of Toronto seemed, by all accounts, to be endangered. Yet, Le Blanc (2006, p.574) states that Metro Toronto (the metropolitan government policies of Toronto) turned out to be very effective in:

a. Supplying and funding the required infrastructures.
b. Sorting out a metropolitan police department.
c. Expecting planning capacities.
d. Providing efficient public transportation system by well planning the residential, commercial and industrial sectors.

Unluckily, according to Le Blanc, the success of Metro Toronto did not translate into satisfactory administration on a more extensive, provincial scale. In the early 1970s, the government of Ontario meddled in the metropolitan policies of Toronto and stopped Toronto Centered Region Plan (2006, p. 575). In addition, the formation of different authorities to oversee administrations at the regional level like the Toronto Area Transit Operating

Authority, the Metropolitan Toronto Housing Authority, the Metropolitan Toronto Planning Board, or the Metropolitan Toronto and Region Conservation Authority, participated in the malfunction Metro Toronto. In other words, the effectiveness of Metro Toronto turned out to be inadequate to reduce the lopsidedness that stayed between the taxation level of the metropolitan range and that of whatever is left of the region (Le Blanc 2006, p. 575).

In the case of Montreal, unlike Toronto, its metropolitan policies have barely got any praise. Some experts even claimed that they are fragile planning tools which cannot run urban development, and excessively restricted in scope to permit provincial organization (Le Blanc 2006, p. 575). However, according to Le Blanc (2006) the Montreal Urban Community (MUC) created in 1970, which was made of two-tier government, was responsible for:

a. Providing a metropolitan public services which permit a better sharing of metropolitan consumptions.
b. Providing a better coordinating of the local police departments into a metropolitan police administration.
c. Playing a key part in air quality control, food control and water cleaning.
d. Providing a valuation part in evaluating more evenhanded taxation shares.
e. Reducing disparities in local services to even out financial consumptions.
f. Contributing to lessening the financial weight of the city of Montreal.

Yet, the MUC failed to produce a pledge to the metropolitan level that could surpass the local partitions. However, it was considered a proficient supplier of services and participated to the quality of the urban arranging. Moreover, Montreal now has to incorporate local establishments and better social and political capacities at the local level to accomplish socially sustainable improvement (Le Blanc 2006, p. 582).

5.5. URBAN REGENERATION IN A NEIGHBORHOOD IN TURIN, ITALY

Turin is one of Italy's industrial large cities known as the "Italian Detroit" (Salone, 2006 cited by Colantonio & Dixon 2009), located in the North West of Italy. FIAT (car manufacturing company) have had a noteworthy effect on urban development, economic advancement, and social changes of Turin. Since the mid-1970s, because of "increasing raw material prices, national financial incentives to invest in southern Italian regions and a growing unionized workforce, FIAT began to shift production out of Turin, prompting a period of economic and social decline for the city" (Colantonio & Dixon 2009, p.46).

According to Colantonio and Dixon, the municipality of Turin in 1997 built up a creative program called the Special Plan for Marginal Neighborhoods in order to address the social issues debased neighborhoods over the city as a major aspect of the general recuperation attempt (2009, p.46). The first prerequisite of the Plan was to distinguish the city's zones with determined social qualities. These

Minor Neighborhoods were recognized by calculating the percentage of (Colantonio & Dixon 2009):

a. Residents aged between 0-14.
b. Residents aged over 70.
c. Residents with a low educational level.
d. Unemployed.
e. Workers with low qualification skills.

Porta Palazzo district, which is located near to Turin's center, was identified with debasing social conditions and was classified as a marginal neighborhood. The fundamental social issues of the district are mainly caused by being historically the main stop for immigrants to Turin. Therefore, a lack of external and internal investments has emerged in terms of social and landscape infrastructure. Hence, crime, poverty, and unemployment have increased, and housing stocks have become in a bad shape (Colantonio & Dixon 2009, p.46).

However, a new plan has been developed to regenerate Porta Palazzo focusing in three socially sustainable objectives (Colantonio & Dixon 2009, p.51-52):

i. Cultivating interest and strengthening of Porta Palazzo occupants through the development of neighborhood gathering spaces and developing the education level and skills of the locals.
ii. The improvement of community identity and sense of belonging by empowering social connections between neighbors and improving trust towards public authorities. Also, establishing a program for homeowners to improve their own houses and to take care of the stairways, roofs, courtyards, gas and water pipes.
iii. Reducing crime and improving legibility, particularly inside open air markets which pull in around 300 illegal dealers.

5.6. URBAN REGENERATION IN SOUTH ROTTERDAM, NETHERLANDS

Rotterdam, which is the second largest city in the Netherlands, is naturally and socio-economically divided by Maas River into North and South Rotterdam. North Rotterdam have older and more prosperous neighborhoods while South Rotterdam is mainly identified by less wealthy neighborhoods with high unemployment, low education, and high crime rates. As a result, it was difficult to bring private investment or attract the middle class to South Rotterdam neighborhoods. However, according to Colantonio and Dixon (2009) a few local and national projects were planned in the 1990s to improve South Rotterdam including:

a. The redevelopment of the waterfront at Kop van Zuid.
b. The Expansion of the metro and tram lines.
c. Building of notable Erasmus Bridge which connects between the South and the North.

In addition, the city is producing a creative renovation program of the southern neighborhoods in terms of social sustainability in three main objectives (Colantonio & Dixon 2009, p.63):

i. Building flourishing neighborhoods by drawing the high and the middle-class attention, providing job opportunities, improving the education, and limiting school drop outs.

ii. Enhancing the attractiveness of neighborhoods by enhancing the quality of life.
iii. Improving the competitiveness of South Rotterdam by encouraging local business enterprise and providing feeling of safety to bring private investments.

Moreover, Rotterdam city has come out with several creative experiments to improve the southern part. For example, "169 klushuizen" experiment which plans to sell low quality houses to private purchasers for low price on condition that the purchaser do the renovation and the redesign of the house, and then to allow potential buyers to live in the house for 2 weeks in order to increase make them experience the house and the surrounding.

5.7. SOCIAL SUSTAINABILITY INVESTIGATION IN DELHI, INDIA

The differing qualities of neighborhoods in Delhi is endless since these areas have for the most part been created in various periods, including diverse social values and plan contemplations. Similar to Damascus, according to Karuppannan and Sivam (2011, p.855) Delhi is sorted into three distinct parts:

i. The old city of Delhi, dated to the 17th century.
ii. New Delhi, located south of the old city and built by the British mandate.
iii. Contemporary Delhi built after independence in 1947 by public and private sectors.

Karuppannan and Sivam studied these parts and deducted the following (2011):

a. There is a solid connection between urban form and social sustainability. The Urban form can urge or debilitate individuals to take an interest in social activities and permits communication with their neighbors.
b. Interaction and social democracy enhance the quality of life. Producing mixed housing and blended area use upgrade the interaction among different socio-economic and age groups.
c. Open space, shared or semi-public, at the district level, is an essential component in the neighborhood to encourage a sense of community, reduce violence, and increase individuals' satisfaction.

d. District level open spaces which are well designed and well accessible, are favored by a lot of mixed age groups than neighborhood-level public spaces.

e. Occupants favor some outdoor spaces as imperative areas for social interaction due to their physical design and location. Also, the feeling of safety in these spaces enrich the trust and relationship amongst the inhabitants and participate to the sense of place and community.

f. Clusters are among best choices for social interaction since the housing units are close enough for residents to communicate, and windows are confronting the road. On the other hand, people in row housing units probably only know the next-door neighbors and the social interaction is low.

6. DISCUSSION AND CONCLUSION

The government did not establish a well-planned urban and housing strategy for the past 50 years, causing high immigration to Syrian cities including the capital, Damascus. Furthermore, the recent Syrian war caused a major destruction in the outskirts of Damascus especially in the war zones and stripping off people their homes, rights, and dreams. Damascus's outskirts after all the disregard and destruction they faced, starting from the years of failure of urban planning policies and ending up with the great devastation of the recent Syrian war, desperately need to be reconstructed. The Syrian people will sure need a safe harbor or a "home" to dwell after the war ends, a home which is socially sustainable to heal, live, and prosper.

There is a strong connection between social sustainability and the urban plan. Also, when it comes to social sustainability and urban growth strategies politics matters. Hence, depending on the analysis of Damascus's zones and the studied case studies, I came out with this general guideline for the future regeneration of Damascus, especially the outskirts. The guideline is organized into policy oriented guideline and design oriented guideline, as follows:

i. Putting Damascus city and its outskirts under one metropolitan municipality.

Metropolitan municipality has proven globally to be more useful and practical than local metropolitan in large cities in terms of social housing, public security, and public transport. It is also more effective when it comes to providing services and funding infrastructure in areas separated into municipalities of different wealth (Le Blanc 2006). For decades, Damascus city and its outskirts have been administratively separated and have been governed by different local municipalities. Now, both Damascus city and the outskirts have various problems, which will not be solved with the current administrative system. The outskirts of Damascus are mostly destroyed and in desperate need of funding its reconstruction and supplying socially sustainable services. On the other hand, Damascus city is having a lot of problems regarding high population density, high prices, high pollution rates, and lack of land. By putting Damascus city and its outskirts under one metropolitan municipality, new

construction projects will shift to the outskirts to release the stress out of Damascus city, and more funding will be provided to the outskirts to rebuild it.

ii. Enhancing the connections between Damascus city and its outskirts.

The connection should be approached by redeveloping the existing roads and providing the required metro or tram lines in order to improve the metropolitan public policies.

iii. Balancing social centered and market centered public policies.

Generally, local governments have to apply urban and housing development policies that are either social centered or market centered. Policies which are more oriented to public service or community advantages, and tend to move development expenses to the private sector are social centered policies. On the other hand, market-centered policies consider the economic growth as a priority in order to provide more jobs and rise income taxes (Le Blanc 2006). In the outskirts of Damascus, mostly will need socially centered policies in order to enrich public services and to provide socially sustainable housing projects. Yet, market-centered policies are also required to provide job opportunities and the public sector income. Therefore, it might be more beneficial if two or more regions were arranged to have market centered policies at the center of Eastern Ghouta and Western Ghouta. In other words, there should be some kind of coordination between social centered and public centered policies to provide the best solutions for building the outskirts and improving the modern city.

iv. Having multiple authorities that share the same task might result negative outcomes.

Multiply administrations might jeopardize the effectiveness of well-planned urban and housing strategies, hence it is important to have one authority with multiple sub-administrations in charge of policy development and application.

v. Creating long-term urban plan strategy to provide affordable housing.

The improvement of a place in terms of social qualities can take generations to achieve. Therefore, the urban social policies should be ranged in the medium and long term. In addition, public policies should have the management flexibility to take into consideration that change is unavoidable, but it is what create great cities. These policies should aim for regenerating the exiting urban pattern in socially sustainable ways that are well designed and respect the social diversity. It also should encourage place-making approaches and not just making prototype housing projects that lack diversity and identity. Hence, many affordable housing alternatives should be provided.

vi. Empowering the partnership between the private sector and the public sector.

In order to overcome financial problems and make the rebuilding process as quick as possible, the public sector should have a well-established partnership with private developers. The partnership should not jeopardize the general urban plan strategies and should be oriented by them. This means corruption must be fought, and reliable administrations should manage municipalities and oversee projects' progress process. Hence, the development of large non-profit suppliers should be largely supported. Moreover, the competitiveness of the outskirts of Damascus can be improved by encouraging local business enterprise and providing feeling of safety to bring private investments.

It might also be useful to form a partnership with local universities to improve the urban texture and empower the financial condition of a neighborhood. This partnership might be with urban specialists who can "provide the best data, understand the true causes of the problems with cities, learn how to stop urban abandonment, and replace it with sustainable revitalization." (Gilderbloom 2016, p.657).

vii. Historical places should be preserved, and new socially sustainable development projects should be introduced.

Urban strategy plans should preserve and develop the old city of Damascus and the traditional neighborhoods in order to enrich the cultural identity and the sense of belonging in Damascus as a whole. It has proven that preserving historic sites and buildings has "increased neighborhood property values, reduced Local Environment foreclosure rates, increased affordable housing stock, and increased neighborhood pride." (Gilderbloom 2016). Moreover, new urban projects that integrate with the existing urban fabric and form new symbols or landmarks should be produced. Hence, in order to achieve that aim, government should attract creative people to empower creativity and social sustainability in the regeneration process (Lily Kong 2009). Also, new residential projects should not be buildings that share the same repetitive design, but buildings with different identities in order to enrich the sense of belonging amongst people. Yet, these new buildings should also be compatible with existing urban fabric and derived from the traditional houses in order to improve the cultural identity.

viii. Engaging residents in the design process to create strong attachment to the social texture of the built environment.

In the non-physical analysis of the historical core, we notice that it is the most stable and coherent zone amongst Damascus's zones. It did not get much affected by war due to many reasons such as: Strong social structure, socially and environmentally sustainable urban and housing design, and powerful cultural identity and sense of community. A lot can be learned from the non-physical features of the place-making of the old city. In the informal settlements, unlike the modern city, houses were built informally depending on the financial status of residents and on their social life requirements. The building units might not be ideally designed, but are flexible enough to meet the minimum inhabitants' desires. Hence, we notice in the non-physical analysis, the questionnaire's results in the historical core and in the informal settlements are much alike before the war due to sharing similar social texture

and urban pattern. Therefore, we can conclude from the non-physical analysis that the participation and the engagement of the residents in the design process is highly recommended.

ix. Providing the best educational opportunities for the youth.

Preparing youths with knowledge and skills for the purpose of enhancing development opportunities for the future by developing a strategic plan which includes building schools, educational centers, and universities as a top priority.

x. Promoting public participation in decision making.

Local democracy and participation can be achieved by encouraging the religious communities and the civil associations to promote them. Participation in decision making provides a healthy socially sustainable environment where they can express and defend their rights and feel safe. People should also be encouraged to participate in enhancing their buildings and neighborhoods. Hence, constraints should be removed from volunteer work and social organizations.

xi. Providing improvement grants to homeowners.

In the Turin case study, according to Colantonio and Dixon (2009) provision of improvement grants to homeowners have improved the trust ties amongst neighbors, and between people and the local authorities. The same might be applied to Damascus and its outskirts.

xii. Reducing the traffic in residential neighborhoods.

Roads should be prepared for cars, public transit, walkers, and bikes. Promoting and encouraging riding bikes provide people with “a cost-saving transportation alternative that pollutes less per capita, increases the health of users, and creates more spending in the

community" (Gilderbloom 2016, p.655). In addition, Damascus does not have any metro or tram lines, which have caused a traffic jam in the streets and have increased the air pollution dramatically.

xiii. Clean up neighborhoods.

Toxic waste sites near to residential neighborhoods should be disposed of. Trees are also essential components in the regeneration of cities in terms of environmental and social sustainability. In addition to the many healthy environment advantages that trees provide, they also provide a suitable environment to improve interaction between people and empower the sense of belonging to a place.

xiv. Taking advantage of high urban density texture.

High urban density has many disadvantages, and strong measures have to be done in order to control and reduce it. However, the questionnaire results have indicated that high urban density in old city and outskirts enhance social relations and sense of belonging, and it might be good in terms of social sustainability if it was well-planned. For example, in Delhi case study, research has found that clusters are among best choices for social interaction since the housing units are close enough for residents to communicate, and windows are confronting the road. On the other hand, people in row housing units probably only know the next-door neighbors and the social interaction is low. Yet, this might not necessarily apply to Damascus since Damascene people cherish privacy in their homes. Hence, innovative approaches should be studied to provide new housing projects that are socially sustainable, compatible with the local social lifestyle, and take into consideration the high urban density. Contemporary interpretations of traditional courtyard housing typology of the old city might be useful to enrich the social sustainability in the new developments.

xv. Open spaces should be utilized and reused well.

In the physical analysis of the urban design schemes of the three zones of Damascus, we can notice that:

a. Open spaces in the old city are clear, specific, and represented by mostly courtyards. It used to be used well in terms of social sustainability, but now a lot of spaces public open spaces are deserted or unutilized efficiently. Even private courtyards in residential houses are misused and discarded out of their great potential.
b. In the modern city, even though it has high urban density, a lot of unused open spaces are spread through it. The same applies to the outskirts, which used to be large green groves in Al-Ghouta. It might be reasonable and beneficial to utilize these spaces to be replanted again and employ them as a place capital.
c. New urban projects should include buildings which are arranged in groups and form visually defined open spaces in order to improve the sense of safety and the interaction amongst residents.

xvi. Producing well-designed approaches for new urban projects which are compatible with social texture of Damascus city

In the Old City and the outskirts, the street pattern in the residential areas has mostly amorphous shapes with some dead ends. Such pattern has some advantages regarding social sustainability such as: encouraging interaction and communication amongst residents, empowering relation ties between neighbors, and provide feeling of safety and trust. In case of Old Damascus, houses' facades present a better example in dealing with privacy issues, which are highly valued by the Damascene people. Although the buildings and the architectural elements surrounding pathways in the old city are much alike, the pathways are diverse and create a renewable experience since there is no routine. Every pathway has its own identity and every part of old Damascus has its own point mark to guide people (solitary buildings). In addition, in a dry climate, like in Damascus, these amorphous streets have proven to be environmentally sustainable, providing shade and better air ventilation for

passing people. Therefore, it is important to come up with new approaches that understands the social texture and the environment of Damascus city, meet the requirements of modern life demands, and empower the place identity.

xvii. Producing climate oriented design would create more humane living environment.

In the old city, main rooms like living rooms, guest rooms, and bedrooms are mostly located in the northern and southern sides of the courtyard. The southern side's rooms are mostly used in summer because they are under shade most of the day while the northern side's rooms are used in winter because the sun rays always reach them through the courtyard. This arrangement proved to be durable and sustainably successful in terms of residential place-making. Since it is not practical to reproduce typical traditional courtyard houses in new residential projects due to the lack of land and the change of social structure, it is essential to produce new design approaches that are climate-oriented and practical.

xviii. Place capital is an important factor to enrich sense of place.

Place capital whether it is open public space, or semi-public space, or street… etc. is essential to encourage a sense of community, reduce violence, and increase individuals' satisfaction. Hence, the following points should be considered:

a. Damascene people mostly like socializing and their sense of belonging and their individuals' identity comes from society. Therefore, it might be effective to heal the society of the damaged areas through the improvement of the place capital.
b. The feeling of safety in place capital enrich the trust and relationship amongst the inhabitants and participate to the sense of place and community.
c. In the Delhi case study, district level open spaces which are well designed and well accessible have proven to be favored by a lot of mixed age groups than neighborhood-level public spaces.

d. Good parks should be a safe harbor for the people to breath and relax, especially the ones who are living in dense urban areas like Damascus.
e. Good squares should be a place of sense of pride, where people feel better attached to their urban cultural fabric and communicate.
f. Good public spaces are easily accessed and visible. In these spaces, people should be able to walk easily to them, and they should be well-prepared for people with special needs.
g. Good public spaces should be safe, clean, and comfortable by providing available places to sit. They should also present themselves well with various landscape features and innovative children playgrounds.
h. All people should have access to basic infrastructures like sanitation, clean water, sewage system, and healthy food. Hence, public health agenda should be linked to urban planning agenda.
i. Mosques, or churches for Christians, represent a great part of Damascene people life. Hence, they should be well-serviced by surrounding them with public spaces or parks, and providing them with different social facilities that serve all people.
j. Streets, as a place capital, should be planned and designed to meet the social needs of people and not only for traffic demands. This can be achieved by finding innovative traffic management and increasing open space and landscape in socially sustainable ways.
k. In the physical analysis of the urban design schemes of old Damascus, roads generate a renewable walking experience by their polymorphous intersections. These roads pattern should be studied to produce new urban approaches which could improve the urban texture and enhance the sense of belonging of the residents toward their places.

In conclusion, these guidelines might contribute to the reconstruction of residential districts in the outskirts of Damascus and other damaged Syrian cities. It also might help other studies related to urban and housing regeneration, and social sustainability or place-making fields. Given the limited time and length available for this thesis, many issues of urban development

are not covered. And the non-physical part of the socially sustainable place-making framework is discussed briefly because of the difficulty of having site visits and making interviews with locals considering the war condition. In the future, more analysis regarding the urban pattern and housing might be done. Also, further more case studies should be analyzed in order to come up with the more detailed guideline, and more specific proposals might be provided.

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APPENDICES

Appendix-1: Participant Questionnaire Questions

PARTICIPANT

Questionnaire Questions

First Section: Intro

How old are you?

Male or Female?

Place of Birth?

Education Level?

Do you live in Damascus?

In which part of the city do you live or you used to live?

Which Neighborhood?

Second Section: Social Interaction

How do you scale the social interaction between the inhabitants of your neighborhood 6 years ago?

What kind of interaction there used to be?

How do you scale the social interaction between the inhabitants of your neighborhood now?

What kind of interaction there is now?

Third Section: Participation in Society

How do you scale the participation of the inhabitants of your neighborhood 6 years ago?

What kind of participation there used to be?

How do you scale the participation of the inhabitants of your neighborhood now?

What kind of participation there is now?

PARTICIPANT

Questionnaire Questions

Fourth Section: Individual's Identity

How do you scale the clarity of your identity within your community 6 years ago?

Why did you feel this way?

How do you scale the clarity of your identity within your community now (if you still live in Damascus)?

Why do you feel this way?

Fifth Section: Sense of Community

How strong was your attachment to your community 6 years ago?

Why did you feel this way?

How strong is your attachment to your community now (even if you left it)?

Why did you feel this way?

Sixth Section: Cultural Identity

How distinguished do you think was the cultural identity of your community 6 years ago?

Why do you think so?

How distinguished do you think is the cultural identity of your community now?

Why do you think so?