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DECODING THE BUILDING CODE IN DAMASCUS

A SEARCH FOR CULTURALLY REFLECTED BUILT ENVIRONMENT

A Thesis submitted to
The Faculty of Graduate Studies and Research
in Partial Fulfillment of the Requirements for the
Degree of Master of Architecture

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ABSTRACT

Common urban development patterns have given Middle Eastern cities their distinctive character. This identity is partly due to the climatic and regional similarity. The remarkable degree of unity and homogeneity amongst Islamic cities is also attributed to the common religious backgrounds and the behavioural expectation of Islamic society in its urban context.

In the past, when religion and politics acted as one body, the Islamic building principles played a major role in shaping the traditional settlement of Damascus. Political, economic, social and cultural changes introduced a new system of government. The reform movements changed the structure of the administration and established a new judicial system. The authorities implemented the Building Code and other pieces of legislation, with the object of organizing the growth of the urban form of Damascus.

This paper analyzes a cluster of traditional houses in a residential quarter of Damascus, with the objective of exploring the reciprocal effect between the physical form of the cluster and the social life that existed within it. Thereafter, in the same manner, the new settlement currently replacing the old one will be analyzed. These two settlements will be compared, with regard to the traditional building principles in the old quarters, and the new building code and regulations in the new settlements. Building guidelines that make the built environment and the social life of its inhabitants complementary will be the ultimate goal of this thesis.

RÉSUMÉ

Une trame commune de développement urbain, ainsi que des conditions climatiques et régionales similaires, ont conféré aux villes du Moyen-Orient une identité et un caractère particuliers. De même, le niveau remarquable d'homogénéité et de cohésion que l'on trouve dans leur contexte urbain provient du patrimoine religieux des sociétés islamiques et de leurs normes sociales communes.

Par le passé, lorsque religion et politique représentaient une seule entité, les principes de construction jouaient un rôle primordial dans la formation des quartiers traditionnels de Damas. A la suite de changements politiques, économiques, sociaux et culturels, un nouveau système de gouvernement fut établi, jumelé à une réforme de la structure administrative et du système judiciaire. Le nouveau code du bâtiment ainsi que le d'autres aspects législatifs furent introduits dans le but de contrôler la croissance de la forme urbaine de Damas.

Cette étude vise à analyser le remplacement actuel d'un groupement résidentiel traditionnel de Damas par un nouveau quartier , en vue d'explorer l'influence réciproque entre sa forme physique et la vie sociale qui y existait. Cette étude comparera les principes traditionnels de construction dans les anciens quartiers au nouveau code du bâtiment. L'objectif ultime de cette étude est d'identifier les normes de construction qui font de l'environnement bâti et de la vie sociale un ensemble complémentaire.

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Many scholars, kindly, have contributed to this work in one way or the other, my enthusiasm alone was not enough to complete this paper. I am deeply indebted to Prof. Raphaël Fischler, my thesis advisor, whose constructive criticism and encouragement brought this work to life. I would like also to thank Prof. Jamil Akbar whose course at MIT, sowed the seeds of this research. My particular appreciation is to Prof. Norbert Schoenauer for his invaluable advices during the research period as well as during the course of my studies at McGill.

I have a great gratitude to Andres Mosta for editing and guiding this work. Like many students in the School of Architecture, I would like to thank Marcia King for her sincere concern and relentless effort to help everyone of us. To my classmates and friends, whom I learned from, thank you for your cooperation and contribution, working hard and having fun simultaneously was possible with all of you.

Finally, I would like to dedicate this work to my source of inspiration--my family.

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LITERATURE REVIEW

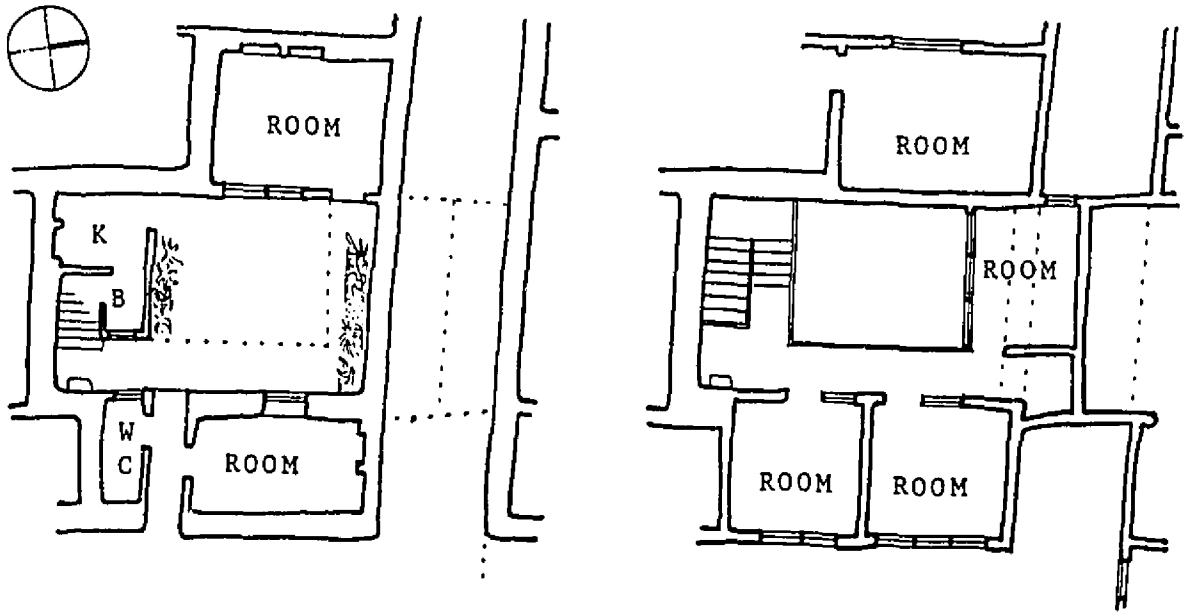
1.0- INTRODUCTION

Regardless of their backgrounds, many people have admired traditional houses in Damascus, where a distinctive arrangement between the lots and streets, or between two lots was created as a response to users' needs. Almost every house has a unique correlation with, at least, one of the surrounding houses. An example to illustrate one of the arrangements is a two-storey house in the *al-Qaimariea* quarter consisting of two rooms on the ground floor and three rooms on the first floor (Fig. 1-1). The room on the northern side of the first floor is supported by the exterior, load-bearing wall. This room projects half way onto the street and half way into the courtyard. The room on the western side of the first floor belongs to the neighbouring house. The family needed an extra room for their newly wed son. It negotiated and bought this room from the neighbour, sealed the old opening and carved new windows and a door from their own house. Through these acts the family fulfilled its housing requirements. The physical form of the settlement and the social life that existed within it helped the family to respond effectively to its new needs. Today, this close arrangement is particularly unique, because local planners, designers and builders no longer consider these spatial flexibilities in their designs and/or works. Users, as well, are deprived from using this kind of adjustable configuration in their houses.

Architectural schools in Syria, established in the 1950s, have adopted a western style curriculum.[1] They have dedicated neither enough time nor sufficient teaching material to explore the principles that produced the traditional built environment in Syria. In addition, the Damascus Municipality and other Syrian city and town

[1] *The curriculum was modelled on modern western schools of thought such as: the Organic and Functional Schools of Architecture, the Bauhaus in Germany, the Cubist and the Impressionist art movements. Meanwhile, in the traditional Islamic architecture curriculum, the focus was on monumental public buildings such as Maddrasas, baths, Khans, Caravansaries etc.. (This information was translated from the transcript of a student who had started her architectural study in Damascus University and then transfered to the University of Montreal). See Edwar W. Said, Orientalism (N.Y.: Vintage Books, a division of Random House, 1978), pp. 322-323.*

municipalities inherited the French Building code after independence from the French in 1946. The first post-French colonial building code for Damascus city was established in 1948 and used till 1978 when it was altered. It retained, however, its European spirit.



Ground floor first floor

Figure 1-1

Today, despite the willingness to imitate the West in most aspects of life, my contacts in Damascus are dissatisfied with the built environment resulting from the current Western paradigm,[2] because it did not emerge from their own culture, religion, and convention. These changes in the built environment occurred abruptly, without a sufficient transition period.

This thesis research is primarily an exposition of current housing conditions in Damascus and an illustration of the reciprocal effect between the built environment and the social life of both the traditional house and the contemporary one. A theoretical base for a new building code involving a comprehensive study of housing in Damascus with emphasis on social and cultural factors is a secondary aim.

2———————————

[2] *From the moment people move into their new apartment, they do any action possible to adapt their unit to their needs. For example: for the sake of privacy, people adopt any solution which keeps them from being overlooked. Chapters 3 & 4 discuss many similar cases.*

This thesis analyzes a traditional and a contemporary housing settlement in Damascus. The research aims to study the reciprocal effect between the built environment and the social life in these settlements. The intent is to put forward culturally oriented suggestions that not only improve the existing building code but also provide flexibility and keep pace with current trends in housing.

1.1- HISTORICAL BACKGROUND

Damascus is believed to be the longest continuously inhabited city in the world. Recent archaeological excavations have indicated that human beings lived in the Damascus area, particularly near the *Barada* and *Awaj* rivers, in the Middle/ Late Acheulean era of the Lower Paleolithic.[3] The materials discovered from these excavations provided evidences of long lasting occupation in this region. A sequence of artifacts were found dating from the eighth Millennium through to the first half of the sixth;[4] a polished axe of clear Neolithic style, and some pottery which can be dated to the late fifth or early fourth Millennium.[5] In addition, some details of the techniques used to build huts were found. Huts were made of reeds, from the nearby *el-Hayjaneh* and *el-Uteibeh* lakes, on top of platforms constructed from hand-made mud-bricks.[6] G. Pettinato has stated that:*"The city of Damascus is mentioned in the third Millennium tablets from Tell Mardih/Ebla."*[7] Babylonian Civilization followed by the Hurrian Civilization dominated the southern region of Syria during the Middle Bronze Age, around the first half of the second Millennium B.C.,[8] while the Egyptian Civilization replaced the Hittite's in controlling this region during the Late Bronze Age, around the second half of the second Millennium B.C.[9] The first clear appearance of Damascus in history came when the Egyptian pharaoh Tuthmosis III conducted several expeditions against Syria and Palestine. In an inscription of Tuthmosis found in Nubia, Timasku or Damasku was listed among the

3———————————

[3] *Wayne, T. Pitard, Ancient Damascus (Winona Lake, Indiana: Eisenbrauns, 1986), pp. 17. For a chronological sequence of civilizations in Damascus refer to Appendix -A-.*

[4] *Pitard, p. 18.*

[5] *Pitard, p. 24.*

[6] *Pitard, p. 25.*

[7] *Pitard, p. 25.*

[8] *Pitard, pp. 37-47.*

[9] *Pitard, pp. 49-51.*

conquered towns.[10] This justifies its claim as the oldest continuously inhabited city in the world.

In the late second millennium, Damascus became the capital of an Aramaean kingdom that at its height extended from the Euphrates in the east to the Dead Sea in the southwest. Later, Damascus fell to the Assyrian empire, which intended to control the trade routes. The Fertile Crescent, including Damascus, was conquered in 333 BC by Alexander the Great.[11] During this time, a Hellenistic urban planning system was introduced. The characteristic elements of this plan included the temple of Jupiter on the western side of the city center, the *acropolis*, a fortified last refuge for the citizenry under siege at the north-western corner of the city, the *agora*, which included market-place and a theater located at the southern side of the temple, and large area of residential quarters. The streets which ran the length and breadth of the city divided it into a series of rectangular blocks. Every residential block was occupied by courtyard houses with a maze-like streets run in-between them.[12]

Damascus came under Roman control during the first century BC. The Romans imposed a new urban plan on the city that integrated the original Hellenistic town and the older Aramaic part into a single entity. Like other Roman towns, the plan of Damascus was dominated by two great colonnaded streets, the *Decumanus* and *Cardo.*[13] The former street crossed the town from east to west, while the latter, running from north to south, was the ancient road adjoining the temples and the *agora*, which was then transformed into a *forum*. A *castrum* was also built in the northeast corner of the city. The rectangular shape of the city measured 500 x 750 meters and was surrounded in 395 AD by a high defensive wall broken only by seven gates.[14]

After the Eastern Roman or Byzantine Empire achieved its final separation from the west in 395 AD, Damascus became part of this Byzantine Empire and was made

4———————————

[10] *Pitard, p. 54 and P. Hitti Koury, Capital Cities of Arab Islam (Minneapolis: University of Minnesota Press, 1973), pp. 61-84.*

[11] *Koury, pp. 61-84.*

[12] *Norbert Schoenauer, History of Housing (Montreal: McGill University, 1992), p. 104.*

[13] *Schoenauer, pp. 83-85.*

[14] *Nezar Alsayyad, Cities And Caliphs (NY.: Greenwood Press 1991), pp.* 82-85.

capital of the region.[15] Several buildings were erected or rebuilt as churches during this era, among them the obsolete temple of Jupiter which was rebuilt and transformed into the church of St. John the Baptist. Later, the western hills of the city were included within the Roman wall as well as a Byzantine palace.[16] By the time Damascus fell to the hands of Ghassanid Arabs and Sassanid Persians, the physical order of the city had started to disintegrate, and many encroachments on city streets took place. Nevertheless, the urban grid was still both functional and visible.[17]

For the sake of spreading the Islamic message, the second caliph Omar dispatched Muslim troops towards the north, where they conquered Damascus in 634 AD (A.H. 13)[18] .[19] The conquerors took over vacant properties which had been left behind by the fleeing Greek-speaking population. Initially, the Arabs did not live in any special quarters. Instead, they occupied a number of vacated houses in a variety of locations.[20] Transforming the church of St. John into a mosque is considered the most significant event in the Arab transformation. Damascus became the capital of the Islamic state during the Umayyad Dynasty in the year 661 AD (A.H. 40) when it reached the height of its prosperity.

In the beginning of the Abbasid Dynasty 750 AD (A.H. 129), the capital of the Islamic state moved to Al-Kufah in Iraq and the former capital received less political and economic attention.[21] By the twelfth century AD, new settlements started to appear outside the city's wall, such as the *Al-Salihiya* quarter. The residents of this settlement came from Palestine. The migrated families settled first at the *Abu Salih* mosque outside the eastern gate of Damascus. In 1158 AD they migrated again to a monastery at the foot of Qasiyun Mountain (Fig. 1-2).[22]

5

[15] *Hitti koury, pp. 64-65*

[16] *Alsayyad, pp. 82-85.*

[17] *Alsayyad, pp. 82-84.*

[18] *The Islamic Calendar starts in the year 621 AD, when the Prophet migrated from Mecca to al-Madina.*

[19] *D. S. Margoliouth, Cairo Jerusalem Damascus (Toronto: The Musson Book Co. Limited, 1907), pp. 407-417.*

[20] *Alsayyad, p. 88.*

[21] *Hitti Koury, pp. 86-89.*

[22] *Tour Miura, The structure of the quarter and the role of the outlaw The proceeding of the international conference on Urbanism in Islam (Tokyo: Research Project, c/o Institute of Oriental Culture, University of Tokyo, 1989), pp. 407-412.*

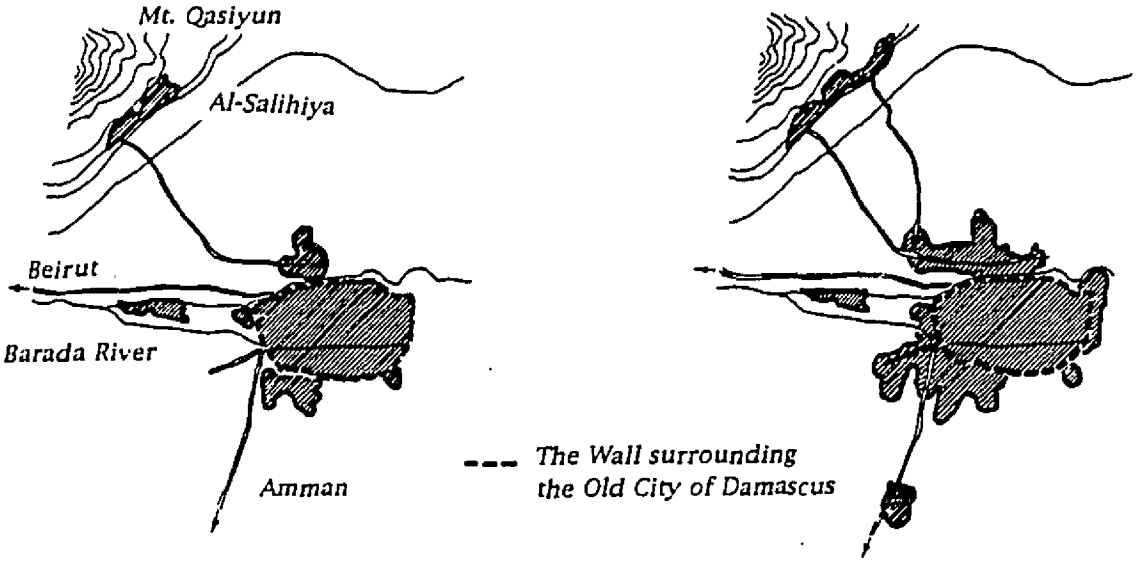


Figure 1-2

The Ottoman Turks conquered Damascus in 1517, replacing the exhausted state of the Mamluks, and established an immense Mediterranean empire. This empire created an enormous market-place where both individuals and products could circulate freely from Morocco to Iran. This facilitated the travel of caravans of pilgrims and increased commercial activities in the towns located along the main routes. It was estimated that 20,000 to 30,000 *hagg* (pilgrims) assembled annually in Damascus on their way to Mecca.[23] By the seventeenth century, trade routes were established from Europe to South and East Asia through the Middle East. The French, the British and the Dutch, realizing the potential of this region as a strategic trade link, established trade outlets under the auspices of the Ottoman Empire.[24] This economic prosperity was accompanied by an urban expansion, explained by Andre Raymond in the following saying:

> *This urban progress is apparent in the extension of built-up areas that, in many cities, took the form of vast suburbs developing along the main commercial routes, outside the town ... Damascus, grew from 212 hectares at the beginning of the sixteenth century to 313 hectares around the middle of the nineteenth century ... in Damascus the population increased from 52,000 at the end of the sixteenth century to 90,000 at the end of the eighteenth century.* (Fig. 1-3).[25]

The urban form was divided into two different urban zones:

[23] *Andre Raymond, The Great Arab Cities In The 16ht-18th Centuries (New York: New York University Press, 1984), pp. 12-22.*

[24] *Hitti Koury, pp. 61-84.*

[25] *Raymond, pp. 5-7.*

A- The public areas for economic activities, in the central zone of the town which had relatively wide and regular streets.

B- Private or residential districts, which surrounded the commercial zone and had an irregular street network. Within a quarter, the street network generally comprised of one thoroughfare street and several dead-end streets.

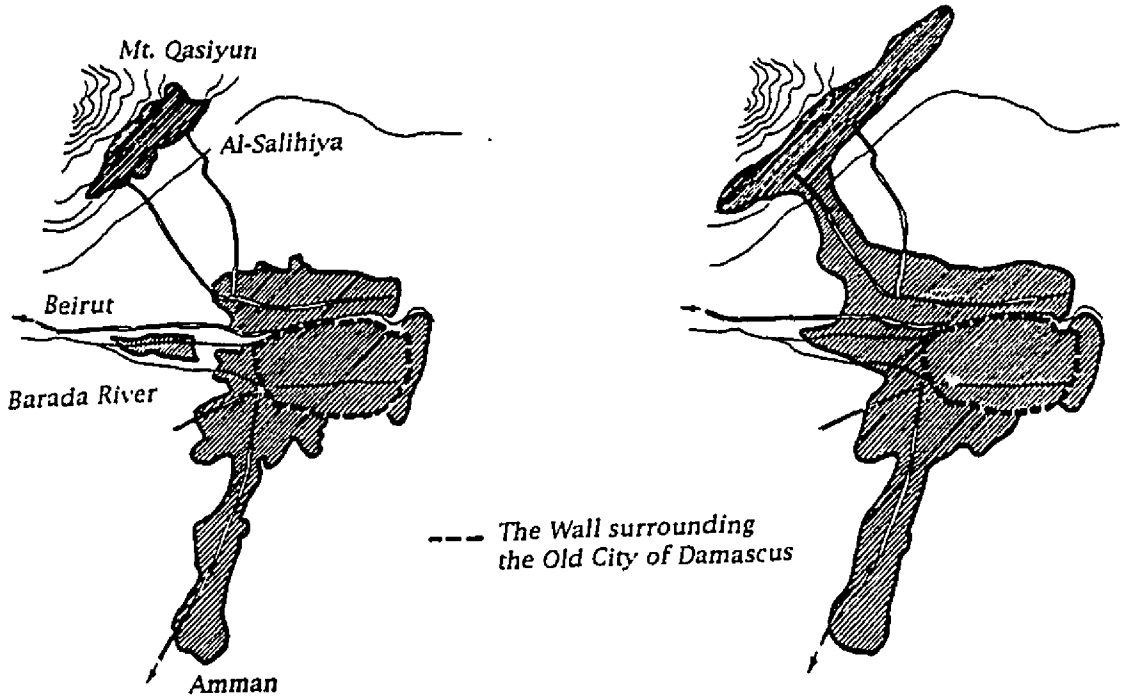


Figure 1-3

The inhabitants of the quarters used the street networks to travel to and from their work places, as well as to specialized marketplaces located in the center of town. These quarters made up pockets that opened up only towards the roadways linking the interior of the town. The dead-end streets were quite remarkable, as they formed nearly 50% of the total length of street networks in Damascus. A similar proportion was observed in other Islamic towns such as Algiers, Cairo, and Aleppo.[26] The system of closed quarters and dead-end streets formed an ingenious solution to the problems of security, fully realizing the ideals of a society dominated by Islam and ensuring nearly total isolation of family life. An extensive analysis of the street network in the traditional settlement will be conducted in the second chapter.

7

[26] *Raymond, p. 15.*

After their victory in World War I the French and British divided the Middle East, marking the end of four centuries of Ottoman rule in the region. Under French rule Damascus reclaimed its status as the capital of the Syrian region. In 1946 Syria was the first Arab country to celebrate its independence.[27] By this time, European-style buildings and new housing types appeared in the urban fabric of the city.

In the early 1930s, Damascus was comprised mostly of introverted, mud-brick houses, except for a few public buildings such as the Palace of Justice and the National Museum. These building were served by wide, straight streets. After a few decades of adopting European architecture and city design, introducing motorized vehicles and attempting to establish basic industries, a significant number of traditional houses were replaced by low-rise extroverted apartment buildings served by wide straight streets. The remaining traditional houses were located either in the central, mostly the old city of Damascus, or along the outer perimeter of the city.

In the last two decades, several symposia and workshops were held in Damascus and around the world with the objective of preserving or reviving the old city of Damascus and other similar cities in the Islamic World. The publications of the latest symposium held in Damascus in 1982 reveal the main concerns to be of an archaeological and touristic nature and not of an architectural and urban settlement nature. In other words, the participants regarded the city as a dead, rather than a living, organism. Most of the suggestions made regarding traditional houses in the old city advocated the preservation of houses, the reuse of the same indigenous building materials, and the conversion of houses into shops where people could produce and sell traditional wares such as inlaid wood, colored glass, fabric (Damasco), and terra-cotta, among others.

Traditional houses which are located at the outer edge of the city have being treated differently from those in the center. In 1978, the authorities issued the current Law of Planning. This was intended to replace traditional houses with four-storey residential buildings. The main objectives of the law were:

1- Provision of wide and straight streets to ease vehicular movement in these areas.

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[27] *Hitti Koury, pp. 61-84.*

2- Increase the investment value of land by increasing the FAR factor.[28]

Almost all the remaining traditional houses were in poor structural condition. These houses have been neglected for two reasons: First, in the case of tenant housing, the Rental Law and its ramifications discouraged the owner from investing in his property. Second, the market forces and the implicit assumption that sooner or later these houses would be replaced caused people to halt maintenance of their houses.

In the late 1970's, some attempts were made to construct houses with traditional building materials like wood and mud. Since the cost of building with these materials far exceeded the cost of constructing with cement bricks and concrete slabs, people were discouraged from re-adopting the old tech-nology. Lack of skilled traditional construction labor added to the high cost of constructing and maintaining structures built in wood and mud. One case from personal experience illustrates this.

There was a collapsed wall in a house in the old part of Damascus city. The owner asked for a permit to rebuild the wall. The necessary permit was obtained and bore the usual strict requirements. One had to use the same building materials as in the previous construction. Rebuilding had to duplicate the dimensions of the collapsed wall, including the size and location of openings as had existed before the damage occurred. After the base of the wall had been laid, building had to stop, since the client refused to use the same materials (wood and mud). The cost involved would have been more than twice the cost of building the wall with contemporary materials. Later, the owner had this wall rebuilt illegally with cement blocks.

1.2- THE THESIS QUESTIONS

This thesis argues that the traditional house enjoyed high spatial flexibility and a creative configuration that responded to changing needs of the users. The new house does not embody this level of flexibility, in spite of the availability of high technology and a variety of durable building materials. It is the product of a rigid standard and the intervention of an arbitrary authority that has broken cohesion among the users, neighbours and the built environment. This problem defines the thesis questions as:

What made the traditional house in Damascus more flexible than the new house, whether publicly or privately built?

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[28] *FAR stands for Floor Area Ratio. calculated as the total built area divided by the site area.*

How can the Building Code of Damascus grow to reflect more accurately these traditional and social requirements of the local population while maintaining the safety standards and technological innovations introduced in the past 50 years?

Many studies have been conducted on the traditional and modern settlements of the Middle Eastern region. Some of these studies focused on the technical, economic, climatic and social aspects of the house. Others have discussed urban settlements in terms of public space, traditional building guidelines and legal tenure. This thesis investigates traditional and modern settlement types from the legal and social perspectives. In other words, it demonstrates how legislation has affected the physical form of the built environment as well as the social life of its inhabitants.

Damascus has many new types of housing, such as high-rise, mid-rise, villa, detached house, row house, etc. The focus of this study will be a com-parison of the traditional house and the mid-rise (4-storey) housing type, the latter being the prevalent housing type in Damascus today. The physical boundaries within a cluster, the function of architectural and urban components, and tenure of property are the elements compared in these two types of housing. Since analysis of the traditional house and the newly built house with their respective conventions and building codes are the crucial objects of this research, a cluster of houses from *al-Mazeh* Quarter will be analyzed in two historically distinct periods, that is, the late 19th and late 20th centuries.

The study is based on a literature review and building plan analysis. First, it examines the relationship between **mass and void** or built and open spaces, in order to illustrate the building density, public and private domains, and the response of the physical form to its inhabitants climatic and environmental needs. Second, it explores pedestrian and vehicular **movement and communication** (for residents and non residents) both within and outside a cluster. Third, it determines the extent of the **users' control** over the access and use of space in a cluster. Fourth, it studies to what degree the settlement supports **social interaction** among its residents.

Bearing the above issues in mind, the next chapter presents how the traditional house, a product of cultural conventions and Islamic Divine Law, has responded to the changing needs and priorities of its inhabitants. It looks at how conventions and building

guidelines emerging from people's belief and culture have directed building processes simultaneously dictating the social relationships among neighbours.

THE TRADITICNAL SETTLEMENT

2.0- INTRODUCTION

The traditional sectors in most cities of the Middle-East have a common urban development pattern and show similariiy in urban character.[29] This can be attributed to Islamic principles and building guidelines which affected both the shape of the built environment and the social life that existed within it. This chapter provides an overview of a residential quarter or (*mahalla* or *hayy*) established on the outer circle of Damascus. It then discusses one particular cluster in the *al-Mazeh* quarter as it was in the first half of this century when it functioned on traditional principles.

The time of the establishment of these residential quarters on the periphery of the city varies and the precise dates are unknown, except in a few cases such as *Al-Salihiya* quarter which was established in 1158 AD.[30] There is no doubt that all quarters outside the wall were created after Damascus became an Islamic city in 661 AD (Fig. 2-1).

2.1- TRADITIONAL BUILDING GUIDELINES

It is important to understand the socio-cultural framework of the people who created the traditional built environment in Damascus. The basic principles of the building process, both at the individual dwelling and at the neighbourhood (*mahalla*) levels were derived from the spirit of the Islamic religion. In Islam, there are four major *Sunni* schools of law--*madahub* plural of *madhab*--(*Hanafi, Maliki, Shafi'i, and Hanbali*), and one *Shi'i* school of law (*Jaffari*). The schools are named respectively after the scholars who

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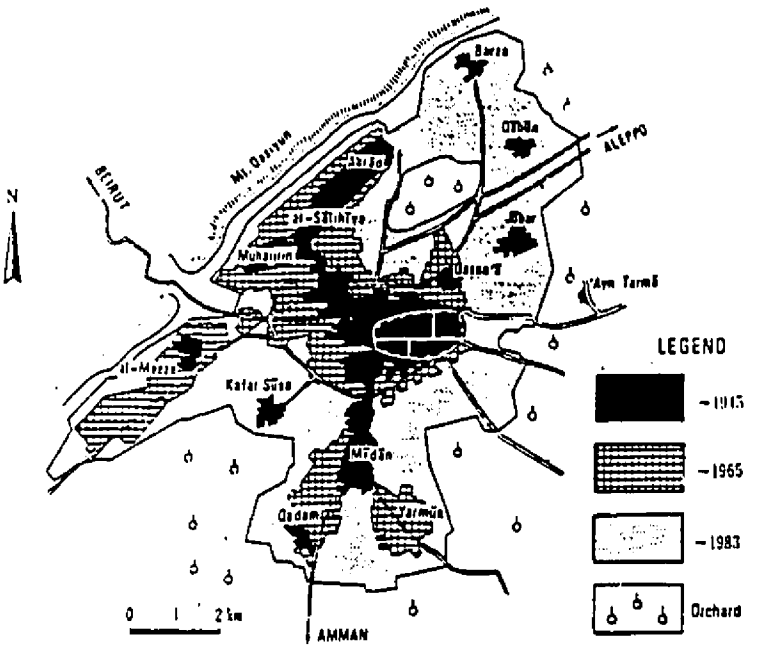
[29] *Ropert Hugh, An Urban Profile of The Middle East (London: Croom Helm Ltd. 1979), p. 96.*

[30] *Miura Tour, Urbanizm in Islam, The Structure of the Quarter and The Role oq The Outlaws, V. 3, (Tokyo: Hongo, Bunkyo-Ku, 1989), p. 403.*

developed teachings and writings on Islamic law during the first two centuries of Islam.[31] *Hanafi* and *Shafi'i* are the most influential Islamic schools of law in Damascus.



Urban development of Damascus

Figure 2-1

According to *Safi'i* there are four major sources or roots of Islamic law:[32]

1- The *Qur'an* as the main substantive source.

2- The *Sunna* --the sayings and acts of the Prophet Mohamad, peace be upon him (pbuh)-- as a complementary source to the *Qur'an.*

3- *Ijma'*, or the consensus of the entire Muslim community.

4- The *Qiyas* or *Ijtihad,* or the use of human reason in the elaboration of law.

Since the physical development of communities is a dynamic and continuous process, rules and building principles or guidelines were con-stantly in demand to resolve the conflicts among neighbours. The settlement of early cases of conflict, which were settled by the Prophet (pbuh), the caliphs and other religious leaders, attracted the attention of interested judges and others, and were soon used as precedents. There were some differences among the different schools in the interpretation of the sources

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[31] *Besim Hakim, Arabic Islamic Cities (London: KPI Limited, 1986), p. 12.*

[32] *Hakim, p. 11.*

and/or in the implementation of the principles. However, these differences had little effect on the overall framework of the building process and on the development of an urban form.[33] This framework is illustrated in the following brief description of the most relevant Islamic principles affecting the physical environment and social life: land ownership, access, harm and other related issues.

2.1.1- Land Ownership

According to Akbar, the main principle of land ownership in the Islamic legal system is:

> *everything which is necessary and useful for survival is subject to ownership, and conversely, what is unnecessary or useless cannot be owned.* [34]

The general mechanisms that governed land ownership in Islam are:[35]

1- Appropriation of a property from vacant land.

2- Transfer of a property by sale or gift.

3- Continuity through inheritance.

While the last two mechanisms were and are still commonly practiced in many societies including the Islamic, the first principle was common during the early Islamic period. It was based on the Prophet's (pbuh) saying: "*Al-naso naso Allah, wa al-ardo ardo Allah, mann ahyaa ardan mayta fa-hya lah wa-layssa li-arak ul-zalemi hak,*" which translates to: "The people are God's people, the land is God's land, he who revives a piece of dead land will own it, and the unjust root has no right."[36]

Muslim jurists recognized that unowned and unused land (without trace of building, or cultivation, or communal use as cemetery, etc.) as *mawat* or dead land. Hence, it could be appropriated. According to custom, dead lands may be revived and owned by the reviver. Since properties were appropriated on a first come first serve basis, disputes were common between the parties who shared, controlled, and used adjacent properties, and the parties had to communicate to reach agreements. Some disputes had to be resolved by judges or religious leaders.[37] Currently, this principle

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[33] *Hakim, p. 12*

[34] *Akbar, Crisis in The Built Environment (Singapore: Concept Media, 1988), p. 26.*

[35] *Akbar, p. 27.*

[36] *Akbar, p. 23.*

[37] *Akbar, Chapter 1.*

is obsolete, while in the past it was applicable on all levels, whether individual, community or state.[38]

In terms of appropriation, three mechanisms were practiced by Muslims for establishing land ownership. These mechanisms were demar-cation, allotment and revival.

2.1.1.1- *Demarcation*

Objects such as stones, sticks, or walls defined the piece of land. Demarcation was the first step towards reviving a piece of land. It gave the reviver some security and freedom from harassment for a short period of time. Although this principle gave the demarcater precedence over others, it did not give him the ownership of the demarcated land. Hence, demarcated land was not owned and could not be sold unless it was revived. Demarcation had to be followed by an effort to revive the land either through building on it or through cul-tivation (Fig. 2-2).[39]

A site demarcated by the owner with sticks

Figure 2-2

[38] *Akbar, p. 27-29.*
[39] *Akbar, Chapter 1.*

2.1.1.2- *Allotment*

The act of allotment was the act of bestowing or allotting a piece of dead land, or land owned by the state, to individuals or a group as a gift or compensation. Allotment was of two types.[40] The first type was allotting to fiefs through revival. The second was that of allotting land with the right of utilization but not ownership. Allotment was practiced mainly in the development of new towns.

> *Al-Baladhuri, in his documentary, futuh al-buldan, reports that when the caliph Ja'far resided (232/847) in Haruni he built many buildings and made allotments to the people in the back of (the town of) Surrah-man-ra'a... Then he established the town that he called al-Mutwakkiliyyah.*[41]

2.1.1.3- *Revival*

This act used to be taken by the reviver, with no need for a permit from the authorities. No constraints were applied regarding the size of the revived property or the activities which could take place on it. The reviver could invest in this land freely as long as the act did not harm the neighbours and their properties. Aside from some jurists of the *Hanafi* school of law, jurists from all other schools of law asserted the possibility of reviving dead land abutting urbanized areas.[42] There is sufficient data to conclude that revival of land was a well-known and actively practiced mechanism leading to land ownership until the late period of the Ottoman empire.[43] The mechanism of reviving dead land was recognized during the Ottoman Empire and rules were developed for controlling it.

Some schools of law considered revived land that had been neglected for a "long time" to be converted back to dead land again, and thus it could be re-revived. This "long time" varied in duration from 30-60 years depending on the school of law. In allotted and demarcated land, all schools of law agreed that the time limit for having an allotment without utilizing it is three years, after which the right of establishing ownership to the land expires. Hence, demarcation, allotment, revival and time limitation were all basic mechanisms of establishing land ownership in the traditional Islamic built environment. As will be illustrated later, the above mechanisms affected the ratio of mass and void as well as the private and public domains in the traditional settlement.

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[40] *Akbar, pp. 28-31.*
[41] *Akbar, p. 29.*
[42] *Akbar, p. 28.*
[43] *Akbar, pp. 31-32.*

2.1.2- Access

Streets and means of access in the traditional urban fabric were classified into two types, depending on their physical and functional aspects: open con-tinuous streets and dead-end streets.

2.1.2.1- *Open Continuous Street*

This type of street was the public right-of-way and was accessible to all. The width of this type of street was established by the Prophet (pbuh): "*Etha iktalaftoum fi altarik joueila ar-dohou sab-ata ath-roo*", which translates as: "If you disagree about the width of a street, make it seven cubits."[44] Hakim states that this dimension is wide enough for two fully loaded mature Arabian camels to pass through this kind of access (Fig. 2-3). Since the continuous street was open to everyone, passers-by had the right to object to encroachments upon the street. As long as there were no objections for a long period of time, the street could vary in width according to the decisions made by the adjacent residents. *Sahnoun*, a Maliki jurist, accepted this type of encroachment as legal when it was older than 60 years. Thus, encroachment on the street could follow three scenarios:
1) Demolition might be required if the street's width became less than seven cubits. *Malik* narrated a case involving Caliph *Omar*:

> *Omar passed by Abu Sufian while he was building his house in Madina, and he noticed that the foundation of the exterior wall protruded into the street. Omar said, "Abu Sufian, you have exceeded your rights and protruded into the right of others, so remove your wall"; Abu Sufian obeyed Omar and began to remove the foundation stones until completed, then asked Caliph Omar where he wanted him to place the wall. Omar replied, I want what is right.*[45]

2) If a street wider than 7 cubits was encroached upon and the encroachment did not reduce it width to less than 7 cubits this encroachment was allowed to stay.
3) If the encroachment existed for a long time without objection, even if the street's width was less than seven cubits, the encroachment was left undis-turbed. An exception which allowed one to build upon the street's encroach-ment was upper floor cantilevers or overpasses, which were high enough so as not to cause any harm to the public (Fig. 2-3).[46]

> *Sahnoun was asked about a man who owns two houses opposite each other across a street who wanted to join them with a room. He said that if he created no harm*

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[44] *Hakim, p. 146. A cubit is from 46 to 50 cm.*
[45] *Hakim, p. 25.*
[46] *Hakim, p. 26.*

then he should be allowed, but if he created harm to the street, such as by narrowing it, then he should be prevented.[47]

A few other things were not allowed in the continuous street, such as building columns, storing goods (unless for temporary loading and unloading and service to houses when no harm is done). The tying or slaying of animals, and creating a public nuisance to passers-by and neighbours were not permitted regardless of the width of the street. Down spouts were not allowed to discharge their water in streets with widths less than seven cubits in order to avoid harm through splashing the passers-by.[48]

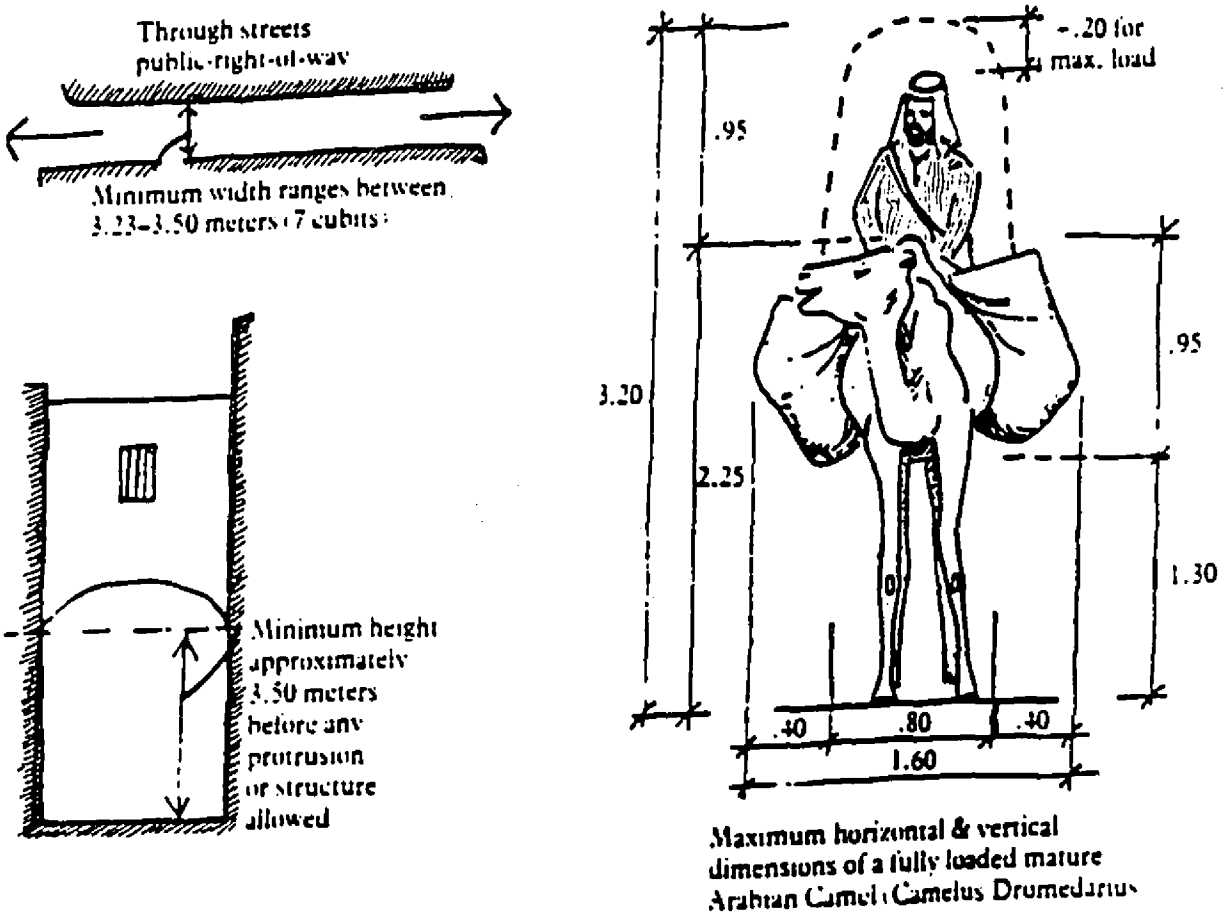

Figure 2-3

[47] *Hakim, p. 29.*
[48] *Hakim, p. 29.*

2.1.2.2- *Dead-end Street*

It was mentioned in the first chapter that dead-end streets formed nearly 50% of the total length of the street network in old Damascus. Hence, this type of access had a crucial effect on residential urban form and the social life of the inhabitants of these settlements. The dead-end street emerged over time through the incremental growth of abutting properties with a space necessary for circulation (organic urban growth). It was, and still is, considered to be privately owned by the abutting resident(s) who had access to it. *Ibn Abdin* says that:

> *the situation of usage of a dead-end street is just like that of the partners of a house who reside in it; they use it, but no one is allowed to build in it without the consent of the others.*[49]

This type of access was not public and belonged in co-ownership to the residing parties who had access to their properties through it. The dead end street was treated in a similar way to a private courtyard owned by all residents abutting it. Thus, no individual was allowed to make any change in a dead-end street, such as opening a shop or projecting a cantilever or overpass, without the consent of all the partners.[50] The width of this kind of access varied depending on the residents' needs. Typically the width of dead-end streets varied from three to over seven cubits (1 to more than 3m).[51]

Every resident was entitled to use the dead-end street from its beginning to the doorway of the resident's house. Thus, a person whose door-way was at the end could use the full length of the dead-end street for access. In some cases, the person who lived at the end was allowed to move the door forward if it did not obstruct other doors or invade the neighbours' privacy (Fig. 2-4).

The person whose house was at the entrance of the dead-end street, but had access from the public continuous street, was not allowed to use the dead-end street or to have an entrance to his house from it unless he had the agreement of all the occupants, or if he had the agreement of the occupants who always pass by the proposed door. The proposed door could not be located directly opposite or next to the neighbour's door, or the proposed door would have to be used for an occasional emergency only. In some cases,

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[49] *Akbar, p. 125.*

[50] *For more details refer to Akbar, chapter 6. and Hakim, chapter 1.*

[51] *Hakim, p. 27.*

residents used to have gates at the entrances of their dead-end streets and used to shut them down at night, to exercise control over the access to their neighbour-hood and to have special social activities in this enclosed space.[52]

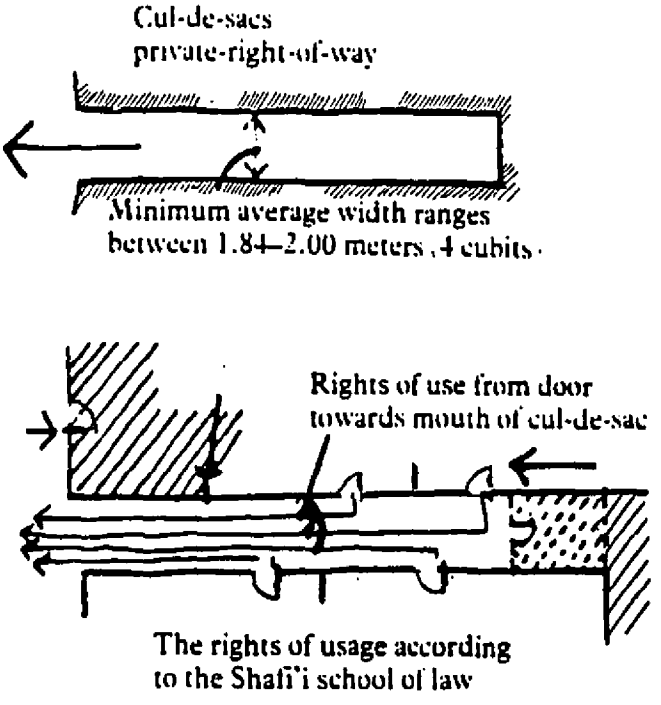

Figure 2-4

2.1.2.3- *Fina*

Fina has two meanings: one, the private open space within a property, the courtyard. Two, the space between a private and a public space. Under the second meaning, *Fina* was a crucial street-related element which extended the right of the property owner or user beyond his building's physical boundaries. It was associated with openings, mainly entrance doors. This right empowered the owner or user of a house to use the exterior space immediately adjacent to the exterior walls of the house, and forbade others from using it except for passing by (Fig. 2-5).

Fina was a permanent right without which the property and the entire traditional urban fabric could not function properly. Traditional towns were compact and

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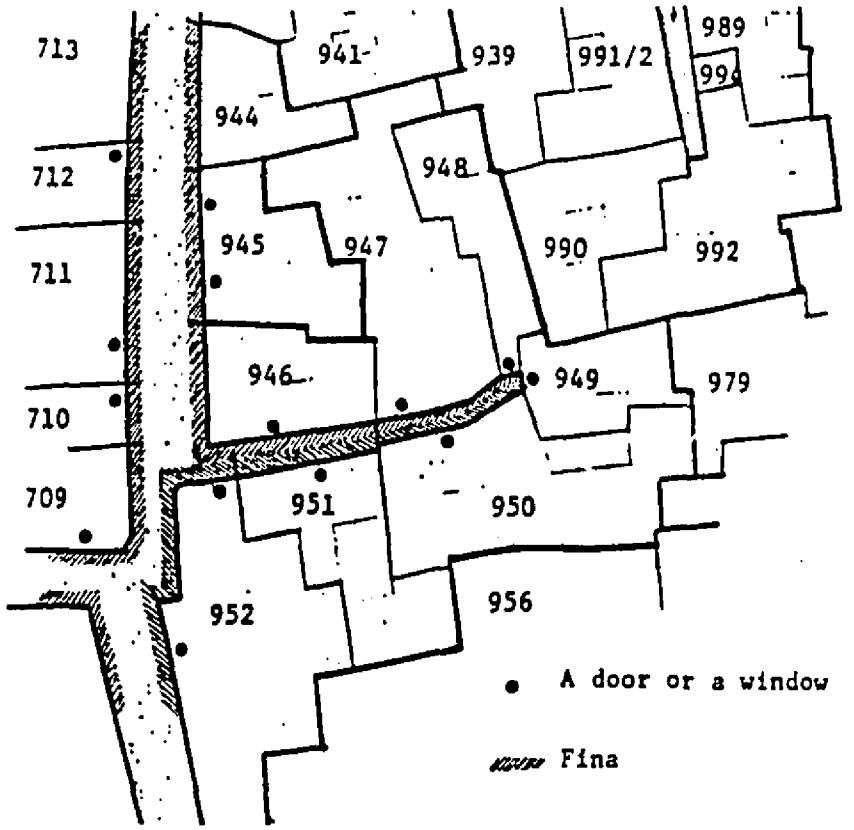
[52] *Akbar, p. 97.*

dominated by private property, with little public space. *Fina* was the instrument that gave direct access from the public domain to the private and vice versa, and it prohibited people from blocking each other's pathways. People used their *Fina* for sitting and for temporary storage. Street vendors as well could use *Fina* to sell their products if the owner did not object.

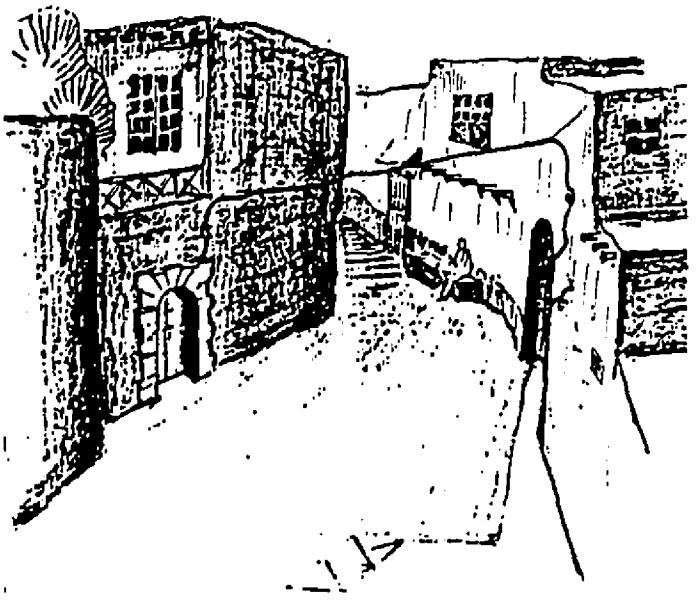


Fina was associated with opening, mainly exterior walls with entrance doors

Figure 2-5

Fina varied in width depending on the type of street and the activities taking place in it. In general, it was between 4 and 6 *shipers* (finger spans) or about 1 to 1.5 meters.[53] When private properties were close to each other, as in a dead-end street, *Finas* were shared by respecting the principle that one man's usage should not cause harm to his neighbours (Fig. 2-6).

[53] *Hakim, p. 29.*



People built benches in their *Fina*

Figure 2-6

2.1.3- Liability or Harm

The main objective of establishing building principles was to settle disputes, to avoid conflicts, and to prevent disruption of the lives of people and their environments. Acceptance or rejection of any building activity or alteration in the function of space depended upon the effect caused by any action on the well-being of the neighbours. The most frequently used principle in building matters was the Prophet's (pbuh) saying:"*La darar wa la dirar*". There are many interpretations to this saying:

> "*There should be neither harming nor reciprocating harm*"[54] ;
>
> "*Do not harm others or yourself, and others should not harm you or themselves*".[55]

This saying was used constantly by Muslim authorities (judges, jurists, prayer-leaders, and scholars) to evaluate the legality of such actions (new building or opening, changing function, etc.) in the physical environment.

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[54] *Akbar, p. 93.*
[55] *Hakim, p. 152.*

In order to illustrate how the nature and sources of harm were classified and judged, it is important to know first that the age and duration of harm played a major role in judgments. It was ruled that an old action which later caused harm to another had the right to exist (this right was called the right of precedence) and the parties who acted later had to accept the previous damaging acts as constraints. For example, a person built his house and opened a window such that it did not overlook other houses. Later the neighbour built a house that was overlooked by that window and wanted the first person's window sealed. The window was allowed to remain because the first window preceded the second and therefore the latter had to adjust. Some judges referred to the prophet (pbuh) saying that:

> *"He who possessed a thing over his opponent for ten years is more rightful (if the opponent does not protest).*"[56]

According to this saying, a period of ten years was considered a sufficient length of time for a harmful action to gain the right of precedence. However, if a person saw his neighbour initiating an action that would damage him or his property and did not protest in time, his reticence was considered consent. Sources of harm between two properties were classified as either those affecting people or those affecting property.

Harm and Disturbance Affecting People.

2.1.3.1- *Noise Disturbance*

The activities that were frequently mentioned as being aurally offensive were maintaining stables for livestock, garment beating and wheat grinding. The harm caused by wheat grinding was in fact due to the vibrations transmitted to the neighbours' wall rather than the actual noise generated by the mill. The principle of eliminating disturbances was achieved through different solutions. Sometimes, the acting party was asked to displace the millstone to a central room in the house, thus creating a buffer zone between the source of disturbance and the neighbor's wall.[57] Other times another wall was built, with deep foundations, in front of the neighbour's wall, to absorb and eliminate the transmitted vibrations.

2.1.3.2- *Olfactory Disturbance*

The sources of this type of disturbance were those functions which created either smoke or offensive odors. The attitudes taken towards smoke varied. For example, the smoke of

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[56] *Akbar, p. 100.*
[57] *Akbar, p. 97.*

a kitchen or a baking pit, which was necessary for living, was permitted. On the other hand the transformation of a space from residential to industrial or an increase in the size of a business, such as a public bath or a bakery, which would increase the amount of smoke, was considered harmful and hence was prohibited. The following examples will illustrate this aspect:

> *A man had an oven with one source of fire and constructed another source of fire to increase the heating capacity of his oven and used the existing chimney to evacuate the smoke from both fires. The neighbors protested on the ground that more smoke was being generated and therefore causing more harm. They complained to the Judge (Kadi) who agreed with their complaint, and he ordered the man to remove his recently constructed additional source of fire.*[58]

> *Ibn ar-Rami related that no one could establish bath-fires without the consent of the damaged neighbours.*[59]

Offensive odor was also considered severe harm among jurists. There were some cases preventing the location of latrines or uncovered canals near the neighbour's home or the mosque. Hence, auditory and olfactory disturbances were among the most common reasons for the location of particular commercial institutions and activities in specific neighbourhoods or markets of the Islamic city. Industries such as tanneries located always on the peripheral edge of the city.

2.1.3.3- *Visual Intrusion*

The segregation of men and women in Islam will help us comprehend the Muslims' perception of the hierarchy of space, its shape and the level of privacy and activity anticipated in each space. In early Islam, women had the right to be educated, to inherit, to divorce, to vote, and to involve themselves in public political affairs.[60] At the same time, Islam applied certain restrictions on the behaviour of both men and women which led to the segregation of women and male members of society. One of many verses in the *Qur'an* concerning the seclusion of women is advised as follows:

> *"Stay quietly in your houses, and make not a dazzling display, like that of the former times of ignorance." (surah al-Ahzaab, Verse 33).*[61]

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[58] *Hakim, p. 31.*

[59] *Akbar, p. 97.*

[60] *Tasneem Chowdhury, "Women's Domain in Rural Housing in South Asia" (Thesis Diss. McGill University, Montreal, 1992), p. 12.*

[61] *Translated by A.Y. Ali (1983), as quoted in Rghei, 1987. pp. 50.*

The house and neighbourhood are very visible products of Islamic thought and custom. Seclusion is an important factor in the use of household space and the orientation of dwellings. The women's activity center is based on the private life of the family and is hidden from the public eye. The women's domain is the most private, and the street the most male-oriented. However, human beings seek privacy regardless of religion, belief, or social back-ground. Muslims consider privacy as a right and a duty. There are many verses from the *Qur'an* and sayings from the Prophet (pbuh) which teach the virtues and the importance of privacy, the right to it, and respect for it. One of the *Qur'an* verses says:

> *"Say to the believers that they should lower their gaze and guard their modesty, that will make for greater purity for them, and God is well acquainted with all that they do."*[62] (24:30, Ali)

And one of the prophet's (pbuh) sayings regarding privacy says:

> *"He who looks into a house without the occupants' permission, and they puncture his eye, will have no right to demand a fine or ask for punishment."*[63]

All these verses and sayings were the basis of protecting privacy and avoiding intrusion. Opening a window that facilitated visual overlooking was considered harmful and an offense. Thus, jurists have ruled that this must be amended by correction or removal of the source of offense. There have been some differences among the schools of law in the interpretation and prevention of visual intrusion. In comparing doors and windows on upper floors, one jurist explained that doors are made for movement in and out, and do not invade privacy as much as windows. Windows are more harmful for they might overlook a neighbour. In the case of disputes he allowed doors, but not windows.[64] A new window facing the neighbour had to be high enough so as not to look into the neighbour's home. The acceptable height for a window sill was determined from the interior space by Caliph Omar:

> *A bed is to be placed underneath the window, and if a man standing on it does not see through it, then the window is allowed to remain, otherwise it should be shut.*[65]

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[62] *Hakim, p. 145.*
[63] *Hakim, p. 151.*
[64] *Akbar, p. 96.*
[65] *Hakim, p. 36.*

According to Hakim, a bed height was given as 4 to 5 *shibers* –finger spans (from 0.80 to 1.25 m). The bed was also interpreted later as any object in a room which could be used to stand on. Adding 1.6 m to that dimension as an average eye-level height of a man, would make an acceptable height for a window sill approximately 2.50 m (Fig. 2-7).[66]

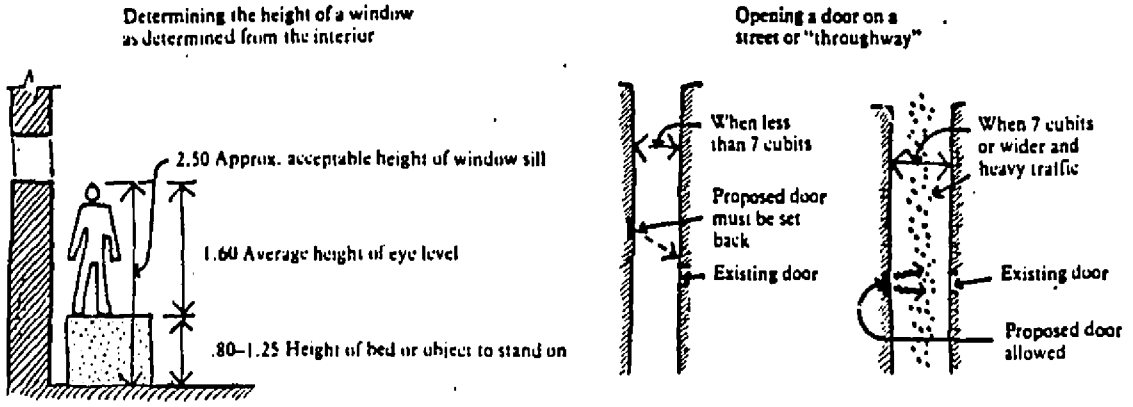

Figure 2-7

Liability Affecting Property

The ownership and integrity of a property was respected and no action was allowed which would decrease its value or usefulness or create a nuisance to its owner. This principle was supported by many verses and sayings. Verse 26:183 (*Arberry*) in the *Qur'an* says:

> *"And diminish not the goods of the people, and do not (make) mischief in the earth working corruption"* [67]

The Prophet's (pbuh) sayings clarify that: *"He who takes from the land without rights will, on the Day of resurrection, be submerged to the seventh layer of the earth."*[68] Through the sayings property was protected from both direct and indirect sources of damages as explained below.

2.1.3.4- *Direct (physical) Damage*

The most common structural element that raised dispute was the common wall, since every house shared at least one wall with the surrounding houses. Damaging the

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[66] *For more details regarding different cases of opening and location refer to Hakim, Chapters 1&4.*

[67] *Hakim, p. 144.*

[68] *Hakim, p. 148.*

neighbour's wall, burning things near it, or using the neigh-bour's wall without permission to support new construction was considered harmful. The Prophet (pbuh) encourages using the neighbour's wall only after obtaining permission from the neighbour:*"A neighbour should not forbid his neighbour to insert wooden beams in his wall."*[69] Any damage to the neighbour's wall in this case, would have to be repaired by the new user.[70]

2.1.3.5- *Indirect Liability*

This type of harm has to do with the speculative value and depreciation of property. For example, opening a new public bath or bakery would depreciate the value of the houses surrounding it, for it would increase the risk of fire and disturb the privacy of the residents. Both sources of property damages, direct and indirect, were considered severe and removal of the action that caused the damage was required.[71]

2.1.4- Related Building Guidelines

In addition to the above principles, there are additional guidelines that should be understood in order to comprehend fully the mechanism that shaped the traditional urban fabric in Damascus, as well as in other Middle Eastern and North African Islamic cities. Each principle is supported with at least one saying of the Prophet (pbuh). These principles are:

Keep things clean, including the interior and exterior *Fina:*

> *"God be praised is good and He loves goodness, clean and He loves cleanness, generous and He loves generosity, perfect and He loves perfection, so clean your fina..."*

Keep appearances humble, without displays of arrogance, as it reflects not only on the house but also on the entire settlement:

> *"God did not order us to cover stone or clay."*
>
> *"God does not look at your appearances or wealth but looks at your hearts and deeds."*

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[69] *Hakim, p. 154.*

[70] *For more details regarding different cases of opening and location refer to Hakim, Chapters 1.*

[71] *Hakim, Chapter 1.*

Defects must be announced and not hidden by the owner when selling a property, for example clarifying any easement rights existing upon the property from abutting properties.

> *"The Muslim is the brother of the Muslim, and a Muslim is not allowed to sell his brother something that has a defect without disclosing it first."*

The right of pre-emption is the right of priority. For example, if someone wanted to sell his house, and two people offered to buy it for the same price where one of bidders was a neighbour of the owner, then the neighbour had priority to purchase. This principle kept the neighbourhood homogeneous: *"The neighbour has the rights of priority"*. Trust, respect and peace should prevail among neighbours.

> *"He whose neighbour is not safe from his harm and dishonesty, will not enter Paradise".*[72]

From the above we can see that each party knew its limits but retained flexibility in their actions. If both parties agreed on some action, the sensitive relationship between two neighbours was regulated and ordered with no external intervention. This fostered active community dialogue and discussion. Thus, the Islamic principles governed the morphology of the city as well as the social life of its inhabitants. They guided the appropriation, use and tenure of land, oversaw the access, controlled the fenestrations and ensured that differences in class distinctions of the inhabitants did not overtly dictate the external appearance of the dwellings. A close observation of one sector of the traditional settlement provides a better understanding of the reciprocal relations among these principles, the built environment and the social life within it.

2.2- THE MORPHOLOGY OF THE SELECTED SUB-QUARTER.

The division of the Islamic city was established on the principle of separate residential quarters. The creation of quarters resulted from the organization of society itself, which was comprised of many tribes. The tribe was the major recognized institutional unit. Each tribe was assigned a quarter by establishing the boundary of the territory through the ruler's permission on a designated site. This quarter was a recognized property that was not to be violated by others. The size of the quarter depended on the size of the tribe or its clans.

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[72] *Hakim, all the above quotations are from chapter 4.*

A quarter might be subdivided into many sub-quarters, which was most often the case, such as in the *al-Salihiya* quarter which comprised of approximately thirty to forty sub-quarters.[73] Families that resided in the sub-quarter intermarried and these marriages formed the basis for economic and political ties. The extended families were large, with a clear hierarchy governing them which made each home a strong, economic unit. The extended family was a part of the larger clan which gave it social and economic security. The clan was in turn strengthened by being part of a tribe.[74] A city quarter was both a physical and a social entity. Each quarter housed a single ethnic or social group, and was named accordingly. Some sub-quarters were named after a market or craft, like *harat al-Kayatin* (the tailors' alley). Residents regarded their quarter as their own semi-private domain.

By the 13th century, Damascus was surrounded by residential quarters such as *al-Qubaybat, Maydan al-Hasa* and *al-Shaghur* in the south, and *al-Qabun, al-Akrad, al-Salihiyya, al-Mazeh* and *Darayya* at a short distance from the city toward the north and the west.[75] A cluster from the *al-Mazeh* quarter (Fig. 2-8) will be used as a case study because of the author's personal familiarity with it and because of the availability of materials on the suggested new layout of this site. Property deeds of some sites in this cluster show that this settlement dates back at least to the late 19th century.

Mass and void

The relation of building mass and open space in this residential cluster is similar to any traditional residential settlement in other Middle Eastern cities. Kevin Lynch in his description of the Islamic city states:

> *The city is a solid built volume, in which hollows and lanes have been excavated, in contrast to our picture of a city as a collection of volumes set on open ground.*[76]

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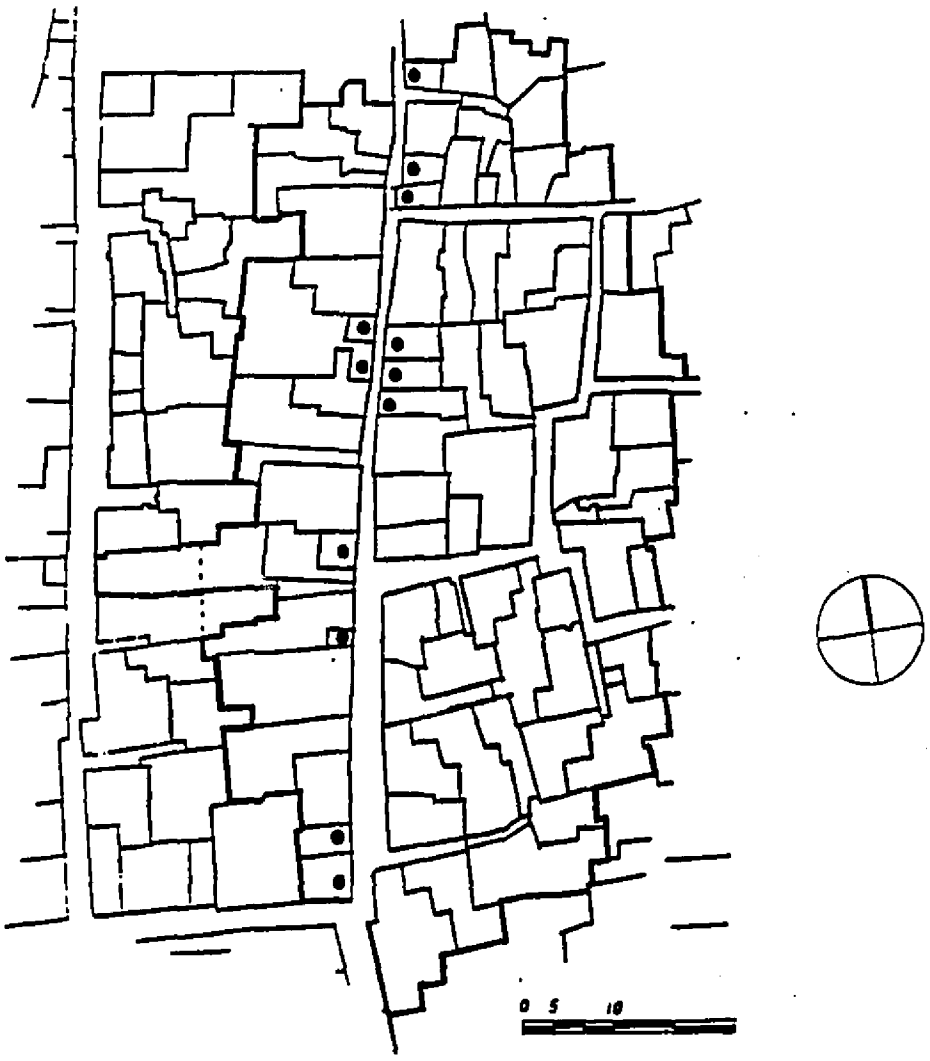
[73] *Tour, p. 403.*

[74] *Roland Lewcock, "Working With The Past," Theories and Principles of Design in the Architecture of Islamic Societies, ed. by Margaret Bentley Sevcenko (Cambridge, Mass.: The Aga Khan Publication, 1988), pp. 87-89.*

[75] *Ira M. Lapidus, Muslim Cities in the Later Middle Ages (Cambridge: Cambridge University Press, 1984), pp. 78-95.*

[76] *Kevin Lynch, Good City Form (Cambridge, Mass: MIT Press, 1984), pp. 187-204.*



● Shop
Layout of a traditional sub-quarter from *Hayy al-Mazeh*

Figure 2-8

Private open spaces were restricted mainly to courtyards within the houses. In large houses, the courtyard itself would not necessarily be large, because the value of the shade provided by surrounding buildings would otherwise be lost. In a large house where more open space was required, two or more courtyards could be used with rooms clustered around each (Fig. 2-9).

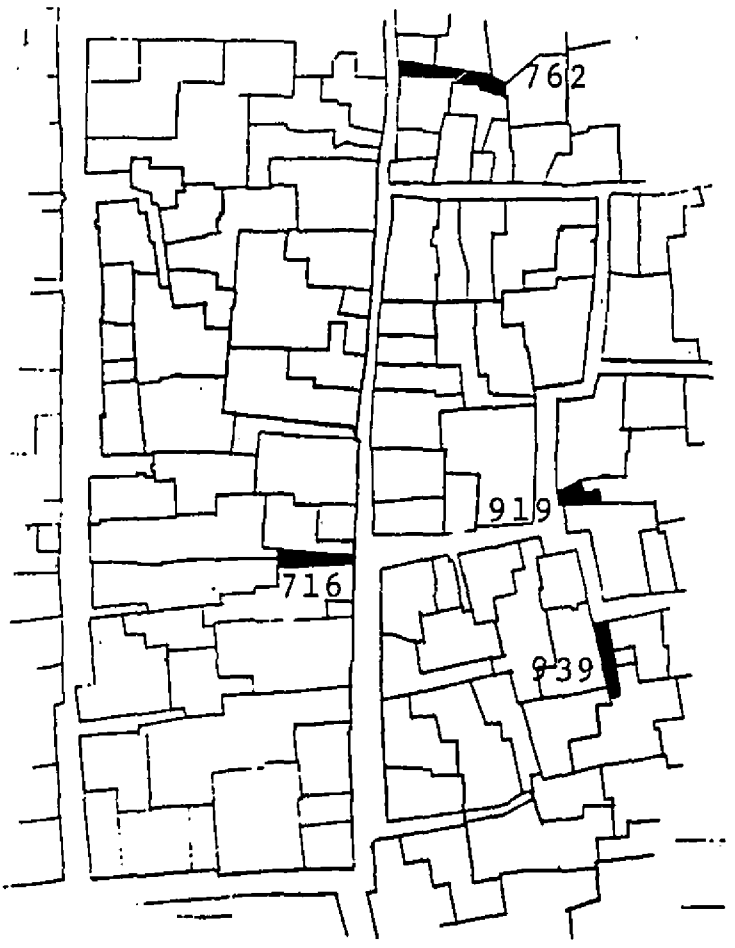
The cluster chosen for analysis is quite small. It comprises mostly houses and a few shops. Large central courtyards, such as those found in mosques and other public

buildings like the (*Maddrasa*) school and (*Khan*) caravansary, are not found here. The private open spaces were either purpose-built courtyards or modifications of dead-end

Mass and void relationship in the selected sub-quarter

Figure 2-9

streets. The private claim to ownership of a dead-end street was sustained not only by practicing control over it-- deciding on its dimensions, determining the users--but also by a property deed. Sites 762, 716, 919 and 993 in this case study were private dead-end streets owned by individuals or collectively by the surrounding property owners. This claim was proven by property deeds (Fig. 2-10).



The private claim to ownership of a dead-end street was sustained by a property deed

Figure 2-10

Public open spaces were streets and the slight enlargements at their intersections. Relative scarcity of public open space was quite natural as the traditional land ownership mechanisms encouraged reviving urban land by building on it. Open spaces in the quarters were created and developed naturally, by accretion. Irregular street patterns formed in the high-density residential cluster, as nothing was pre-planned on a large scale. The width of the streets was based upon the Islamic principles and the mutual consensus of the residents. The width was reduced to the minimum dimension acceptable to the users, and the street could be narrow to the extent that walls on the ground floor were within touching distance on either side, while on the first floor walls often touched each other (Fig. 2-11).

The shading effect of encroachments on the street

Figure 2-11

This did not affect the air circulation or amount of daylight required for the comfortable and pleasant use of the street as all the buildings shaping the street were one or two storeys high. At the same time this height was enough to shade the open spaces from the sun and to reduce the heat of long summer days. The street as a major element of public open space accounted for 12% of the area of this sub-quarter, while the courtyards and the dead end streets as private open space accounted for 10%.

Access

Close contact between members of each social group is fundamental to the well-being of the residents. Access to the key spaces of the city, such as residence, workplace, school, shrine, market and other amenities is very important to any settlement. The physical proximity and visual link between these spaces are substantial ontological components of urban life.[77] Dwellings in this settlements were grouped by the following rule. The north-south alley was the main access for physical activities. It carried traffic through the sub-quarter but tended not to be integrated into it since houses located along this axis had no direct entrances from it. The commercial activities located along this alley formed a local market or *suq* which led to the mosque and the public bath at the northern end of the cluster. Traffic through this access included pedestrians, horse or donkey riders, carts pulled by animals, wheeled vendors' carts, and more recently, small cars (Fig. 2-8).

Many dead-end streets lead out from this main alley. Each one of these dead-end streets served as the entrance for a handful of houses and as an extension of the private spaces of these houses. The shape, the width, and sometimes the gate at the entrance, all limited the access to pedestrians and their livestock. The alley was in the center of the sub-quarter and connected the residential zones, rather than forming the boundaries of the sub-quarter.

Both types of neighbourhood access mentioned above were on the ground level and open to the sky, which made them clearly evident, even to an outsider. However, there was another type of access located on the first floor, connecting two or more houses together. This type of access was used primarily by women of different households to visit each other. This afforded flexibility for the women because they would not have to dress elaborately, which would have been the case if they used the street access. Islam prohibits women from wearing clothes which fail to cover their bodies. It is required for a Muslim woman who goes out, to dress in such a way that she is totally covered from head to foot, except for the arms and face, and does not reveal her figure. The upper level passage facilitated the women's movement while at the same time providing them protection from the hot summer sun, the rain and the winter cold. Although this kind of access was limited and private it played a major role in the social life of the women sharing this passage (Fig. 2-12).

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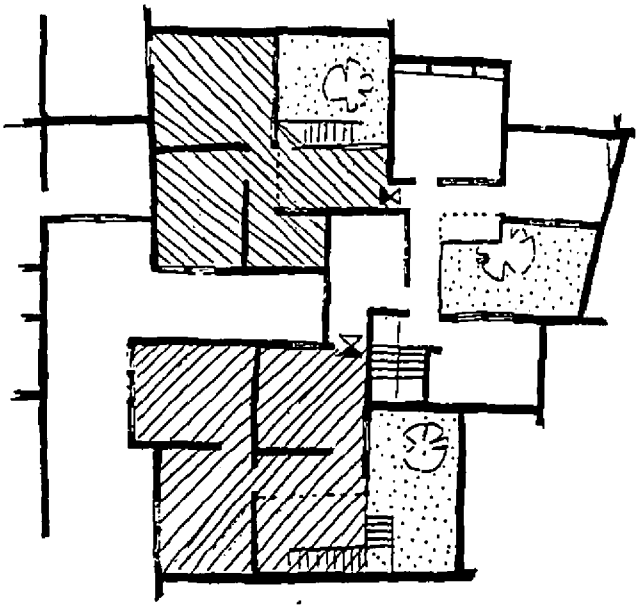
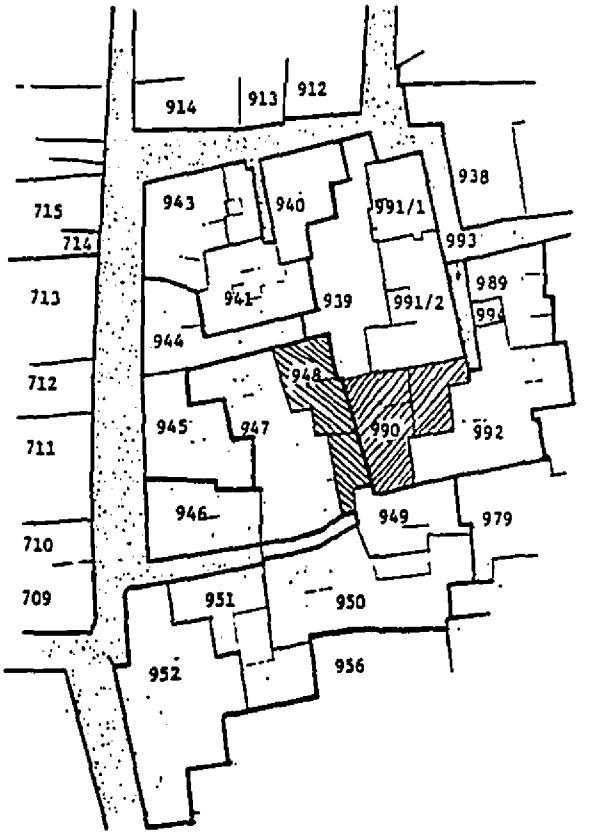
[77] *Lynch, pp. 205-220.*

Another kind of informal access also used in special cases, and again primarily by women, was the roof-top. Since sub-quarters were positioned back to back, women sometimes went from one house to another using the rooftops. This path was also advantageous to them as they did not have to use the more circuitous streets, as would be the case between site 990 and site 948 (Fig. 2-13).



⋈ An inter-connecting door between two houses providing private accesses on the first floor

Figure 2-12



Using the roof as a short-cut instead of using the circuitous street between site 990 and 948

Figure 2-13

Control

The aspect of control could be understood at two different levels. First, it was a physical defensive device against invaders which was one of the most important factors in an urban settlement. Second, control could also entail protection of one's rights of ownership, or of any type of tenure, through rules and regulations.

The defense factor was considered on two levels; the first is against invasion by military forces and the second is against intrusion by strangers. In general, the Islamic city had two slightly different strategies for defense. The difference depended on the time of the founding of the city or of
the settlement. The strategy for defense in old Damascus consisted of a wall with seven gates that surrounded the city. The gates opened onto the main streets of the city. These streets led to smaller local streets, which ran through the residential quarters and sub-quarters. Most of these streets had gates at their entrances as a second line of defense. From its entrance, the narrow and crooked street appeared to be a dead-end street and did not encourage outsider traffic. A stranger would often go past without noticing it. People who did enter it, clearly had business there. The inhabitants were well known to each other and strangers with no apparent business in the neighborhood were likely to be questioned. The same defensive form was applied, but to a lesser extent, at the entrances of the extremely narrow dead-end streets. All these defensive elements gave a sense of security and control to the inhabitants of the city.

A similar defense system was used in the settlements that evolved near the old city (Fig. 2-1). As such, there was no designated defensive wall system that surrounded the settlement. The outer walls of the houses located along the edges of the settlement became the effective defensive walls of the entire community. The residents of quarters, within their own walls, were located close together in a pattern which afforded mutual protection.[78]

Tenure is a bundle of rights over an object or place. These rights could vary from the right to be in a place, use its facilities, modify its components, draw benefits from it, sell it, and to exclude others from all these privileges.[79] It may include the right to use the facilities of a place as others do, with some limitations, such as in a specific time, or under some other condition. For example, when going to a movie theater, one has the right to enter and to use its facilities during a specific time, but cannot exclude the others from doing so. Neither can anyone smoke. Thus, tenure can take many different forms or claims, such as ownership, co-ownership, lease, easement, etc..

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[78] *Toru, pp. 405-409.*
[79] *Lynch, pp. 205-207.*

The concept of claims is based on the plurality of owning, controlling or using an object. Ownership is a well known form of claim, though it may be limited by law and/or a contract. Control is defined as the right to manipulate elements without necessarily using or owning them. Use is defined as employing or accessing an object or property without neccesarily owning or controlling it. According to Akbar, who developed a comprehensive model illustrating the relationships among these three claims (ownership, control, and use.), there are five basic forms of relationship which he calls *"form of submission of property"*. They are Unified, Dispersed, Possessive and Permissive property and Trusteeship. He regards the **Unified form** as the best form of submission with respect to the physical condition of the built environment. In this form, a property is well maintained because it is owned, controlled and used by one party .[80]

Increasing users' spatial control leads to an enhancement of the physical condition of a property and improvement of the sense of security, satisfaction, and freedom to operate. The primary method of identifying a controlling party is by detecting physical change. The party who changes or manipulates an element controls that element, and the relationship between all parties affects the conditions of their property.[81]

In the traditional Islamic settlement, space was controlled by creating boundaries, by increasing one-way visibility into the space of the controlling group to ease surveillance, or by manipulating access with the erection of gates. Therefore entry to the settlement was limited to one gate which could be supervised by the community residents. The inhabitants had the motive, commitment, and the ability to control their built environment. All these requirements were met by implementing the traditional principles in which people were encouraged to keep their semi-private spaces (*Finas*) clean and well maintained. They had the power to exclude intrusion and to object to such an act of it occurred in their private or public domains and proved to be harmful to them or their environment. People acted freely in their spaces so long as they did not cause

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[80] *In the **Dispersed** form, a property is owned by one party, controlled by another, and used by a third party. In the **Possessive** form, the user and the controller of a property are one party, and the owner is another party. In the **Permissive** form, the owner and controller are one party and the owner is another party. In the **Trusteeship** form, the owner and the user are one party and the controller is another party. The term party could be an individual, a group, a company etc. For more details refer to J. Akbar, Introduction & Chapter 1.*

[81] *Lynch, pp. 205-235.*

any harm to the other residents. The traditional principles empowered the people to act first. The intervention of other external authorities came later.

Social Interaction

The physical structure of this neighbourhood was the manifestation of a particular way of life that had been prevalent up until the early years of this century. Observation and comprehension of the socio-cultural framework adopted in this neighbourhood will clarify the special cases that occurred within its physical structure.[82] The dead-end street acted as a buffer zone to protect the private domain from public intrusion. Many household activities took place in this passage way, such as the drying of beans and vegetables, the storage of materials for short time, and occasionally, sleeping in the *Fina* (for males only).

It was not unusual to see men in their dead-end street (*harah*) wearing pyjamas and doing day to day activities. Women in the neighbourhood often ate their breakfasts or drank their late morning coffee together in one of their houses or in the dead-end street after they sent their children to school and their husbands to work. Sometimes women brought their foodstuffs with them and prepared almost all of their meals in one house while they socialized. When the physical shape of the alley was very closed and secure, doors of the dwellings were left open. In the case of a wedding or death, close neighbours offered their houses to host the visitors, and in the summer time people used the alley itself as guestrooms for male visitors.

Most families lived in one house as an extended family, and most of their relatives lived in the same neighbourhood, if not in houses accessed from the same dead-end street. The dead-end street strengthened their unity, increased the social interaction among neighbours, and encouraged a spill over of their daily activities. The type of activities varied depending on the social relationships among neighbours, the number of families sharing a dead-end street, the residents' ages, and the shape of the dead-end street. For example, two or three interrelated families, with young children, performed more combined activities in their blind dead-end street than in large dead-end streets with many unrelated families with different ages. The deeper the dead-end street was within the neighbourhood, the freer the inhabitants felt.

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[82] *Nawal al-Messiri Nadim, "Family Relationships in a 'Harah in Cairo, " in Arab Society, ed. by Nicholas, S.H. and Saad Eddin, I. (Cairo: The American University Press, 1985), pp. 212-222.*

Also, the deeper one went into the settlement, the greater the privacy and freedom. Privacy was one of the main aspects that shaped the Islamic settlement, from the form of access through to the introverted housing typology and the principles that ruled all of its opening. Privacy concerns had their effect on the house layout as well. The kitchen, as the woman's place, was located as far as possible from the entrance. The closest space to the front door was designated as a guest room. As long as there was no guest, this room was used for a variety of activities, like all other rooms of the house, and it was accessible by both genders. Segregation of this room took place when there was a guest, and depended on how close he or she was to the family. The gender of the guest also determined who would have the priority to use this room. If the guests were both male and female, males would occupy this room and females would go deeper into the house or to a room on the upper floor.

The very private passages that existed in the traditional settlements, the movement from one house to another on the first-floor level or on the roof of the houses made neighbours, and especially women, maintain good relations. This ensured that they did not lose their privileges of using accesses going through other people's property. This kind of access, especially on the roof, made the people aware of security. If a family had to spend a long time away from home, it would inform the neighbours and ask them to watch over their house, since it was easier for a thief to break in from the roof, than from the front door.

In conclusion, unity among Muslims is a religious imperative. The traditional urban form and social life supported this requirement at every level. The quarter was a tribal settlement and acted as an administrative and a political unit. The sub-quarter was inhabited by one group and was served by one alley. One family in one house was the basic unit of the social structure. No individual lived in a separate house, not even a divorcee, a widow, an orphan or a grandparent. In rare cases, if an older member of the family wanted and could afford to live alone, their house would have to be very close to the family's house to maintain daily contact, and one grandchild could help by sharing that house.

THE MODERN SETTLEMENT

3.0- INTRODUCTION

In the early 19th century, the Ottoman monarchy underwent a lack of control over some of the remote parts of its empire. At the same time, it also experienced financial difficulties. Certain reform movements were introduced in 1839 which fundamentally reorganised the Ottoman society. Known as *Tanzimat*, the reforms changed the structure of administration and established a new judicial process. The intellectuals of the *Tanzimat* period searched for a synthesis of their political ideas and a new system of government. They utilized, for example, the precepts of Islam to legitimize constitutional monarchy.[83]

The Ottoman Empire regulations were codified and were no longer based on local agreements. The Government established the committees that enforced these regulations in 1856.[84] By 1868, the committees' responsibilities were mainly to maintain public spaces. In 1879 a decree established the municipalities, gave them the right to organize the Ottoman towns and to expropriate private property to help solve problems such as the creation of new streets. Gradually, municipalities became more powerful and began to intervene in the building process. In Damascus, for example, people were asked to use bricks or stones in their buildings.[85] With French and British colonization, secularization separated Divine Law from national jurisdiction in most Middle Eastern countries. Although none of the countries completely abandoned the Sharia Law, the jurisprudence of the colonizers prevailed.[86]

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[83] *Y. Yavuz, and S. Ozkan, Modern Turkish Architecture, The Final Years of The Ottoman Empire (Pennsylvania: University of Pennsylvania Press, 1984), p. 34.*

[84] *Jamil Akbar, Crisis in The Built Environment (Singapore: Concept Media, 1988), p. 139.*

[85] *Akbar, p. 141-142.*

[86] *W. P. Germeraad, "Open Space in Human Settlements, The Lesson From The Islamic Tradition" Ph.D. Diss. , Agricultural University: Wageningen, Netherlands: UMI, 1989, p. 71.*

In 1913, the Ottoman Empire issued the Defining and Emancipating Law after the work of Robert Norence (Head of the Property Deeds Department in Australia).[87] In 1925, the French delegate in Syria and Lebanon formed a committee to re-study and modify this law in accordance with the French law.[88] In March of 1926, the French passed two laws: 186 LR and 187 LR.[89] The objects of these laws were to define the boundaries and area of each site and to provide legal property deeds to the owners. These laws declared all those properties that had no recognition of private use for a long time as public.[90] The French mandate, also, established a system of taxation that provided the authorities with much revenue. Roded states:

> *The peasants believed that registration of land was a prelude to more effective taxation and conscription (and their fears were not grounless). The introduction of tax payment in cash rather than in kind increased the indebtedness of the peasants and forced them to borrow from money lenders at exorbitant rates. As a result of their burden of debts, many peasants became tenants of tax-farmers, usurers of other wealthy notables.*[91]

Syria, like many other developing countries in this century, has been undergoing a continuous transformation from a predominantly rural, village-based to a largely urban society, whose economic bases are light industry and agriculture. While only 37% of the Syrian population lived in urban settlements in 1960, by 1981 this ratio had jumped to 47%.[92] Damascus and Aleppo are the main cities that have been witnessing this rapid growth in population and territory. Indeed, Damascus' population exploded as it absorbed two successive waves of migration after the 1948 and the 1967 wars.[93] Most of the displaced population settled in the suburbs of the city.

Several western, and particularly French, researchers have studied the urban form of Islamic cities like Damascus and Aleppo. With the western urban image in their

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[87] *Holo Buzo, al-Tashreeat al-Aakaria wl-taawnia wl-Omrania fi Soria, (Damascus: Damascus University Press, 1985), chapter one.*

[88] *Holo, p. 1.*

[89] *Holo, p. 2.*

[90] *Translated by the author, there was no indication of the duration of the "long time" term.*

[91] *R. M. Roded, "Tradition and Change in Syria During the Last Decades of Ottoman Rule, The Urban Elite of Damascus, Aleppo, Homs and Hama, 1976-1918" Ph.D. Diss., University of Denver, Denver, UMI, 1984. pp. 120-121.*

[92] *al-Kitab al-Margeei fi al-Tarbieh al-Soukanieh (Damascus: the Ministry of Education in cooperation with UNESCO, 1992), p. 45.*

[93] *J. Abu-Lughoud, Recent Migrations in the Arab World, Arab Society, Social Science Perspective (Cairo: The American University Press, 1985), pp. 178-181.*

minds, these scholars could not comprehend the rules or fundamentals that led to the seemingly spontaneous form and maze-like street network of the traditional Islamic city. They attributed the crooked streets and inexplicable urban form to disorder in Islam. Alsayyed states:

> *The alleged irrationality of the streets of Damascus and its spatial organization has been subject of a great debate. The prevailing idea among researchers is that the irregularity of the streets was manifest-ation of some anarchic principles inherent in the Islamic urban system. This view has mainly been espoused by Jean Sauvaget... It was, however, De Planhol... who popularized this idea and stigmatized all Islamic cities as cities lacking any order. De Planhol confused students of urbanism by suggesting that "the religion of Islam leads to a negation of urban order." Von Grunebaum later pointed out that the decomposition of the Damascus grid had begun as early as the second century AD., and that the gradual forsaking of the geometric block structure was consummated under the Arabs. Like Sauvaget, Von Grunebaum attributes the transformation to weakness of government authority.*[94]

Criticizing the French colonizers, Gwendolyn Wright describes their impression of the cities in the colonized countries as follows:

> *These cities seemed exotic and even mysterious settings, "primitive" in comparison to Europe; simultaneously, they represented the epitome of rational Western organization.*[95]

The interests of the French colonizers extended beyond political control and exploitation of local sources. They took the liberty to experiment with their new visions of order regardless of local cultures.

> *Colonial urban designers and social scientists believed they had formulated general principles of design and social order. They chose not to recognize the particular circumstances under which they worked...They functioned like a magnifying glass, revealing with startling clarity the ambitions and fears, the techniques and policies that pertained at home, here carried out almost without restraints... Colonial architects were also entangled. Eager to assert new approaches to style, urban design, and historic preservation, they touted the benefits of granting exceptional authority to experts like themselves. One can understand how these professionals could see themselves above politics... Yet the circumstances of the colonies made the architects all too dependent on authoritarian regimes that would support their policies.*[96]

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[94] *Nezar Alsayyed, Cities and Caliphs (N. Y.: Greenwood Press, 1991), pp. 94-96.*

[95] *Gwendolyn, Wright, The Politics of Design in French Colonial Urbanism (Chicago: The University of Chicago Press, 1991), p. 303.*

[96] *Wright, pp. 306-307.*

In 1936, the French planners Robert Dangeh and Michael Ecochard designed the Master Plan for Damascus.[97] The plan was the first synthesis of the traditional urban fabric of the city and the western norms of city planning which were established after the Industrial Revolution in Europe.[98] Later, legislation and guidelines were issued in order to implement that plan. In February, 1948, the Damascus Municipality issued the first Building Code namely, Ordinance 97.[99] In this code, the Municipality assigned to itself the responsibility for planning subdivisions and issuing of building permits in accordance with the regulations prescribed by the plan. It also took over the responsibility to levy fines and demolish buildings in cases of non-compliance.[100]

The implementation process was faced with many technical and administrative hurdles such as unsettled cases of property ownership, especially trusteeship or *Waqf* property, and the professional opposition to the destruction of some historic buildings. These snags forced the Municipality to ask the Belgian expert Joseph Vitmer to re-evaluate the Plan in 1959.[101] Thereafter, the Bulgarian planner Morozov was asked to study the Plan and prepare detailed plans for some crucial civic spaces. In 1963, Ecochard was again invited to work, this time with Gaygi Banshoya, a Japanese planner, on a new Master Plan for the city. The second plan was to consider the anticipated growth

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[97] *M. A. al-Kalaa, "al-Fikr al-Omrani," Almouhandis Alarabi, The Syrian Engineers & Architects, issue No. 110, 1993), p. 8.*

[98] *According to Wright "The European city takes form on vast open space,... with broad boulevards,... squares and gardens, buses and tramways, and also foreseeing future extentions." p. 88. In addition separate housing types segregate social classes and adopt mandatory building scale, material and services. p.105.*

[99] *al-Kalaa, p. 10*

[100] *The Land Code was modified in 1949 by the Civil Law which was influenced by the Western Civil Codes. It was prepared by Dr. as-Sanhuri, assisted by the French jurist E. Lambert. Akbar, p. 50. Many decrees have been issued between 1948 and 1978. These decrees classifie the existed building violations in Damascus into two types. The first type of building violation could remain after the payment of a fine as a settlement. These fines are the main source of income for the Municipality. The other types of violations have to be demolished. --for example, there were 70,000 such cases in 1978. Philip S. Koury, Syria and the French Mandate, (N. J.: Princeton University Press, 1987), p. 597. The amount of work required to demolish these violations, the volume of waste, distraction of people and the loss of resources stopped the Municipality from demolishing the violated building parts. However, these violations are reported on the Property Deed Records, and affects the property value when the owners want to sell their properties. People believe that in the future they will be able to pay fines and settle their building violations since the Municipality always needs additional income. However, according to the new building code, all building violations are subject to demolition.*

[101] *al-Kalaa, p. 11.*

of the city up to 1984. It was completed in 1968, and the Building Code was brought into accord with the new Plan in 1978.[102]

3.1- Social Changes

The Building Code was just one of the many changes occurring in Damascus. Western influence and the general process of modern technological and social changes affected the family as well as other aspects of life. New economic reforms disrupted the foundations of old family self-sufficiency; government institutions replaced some of the functions which in the past belonged solely to the family. Family no longer constituted the basic framework within which the life of the individual organized. New industries and the expansion of trades created many new and specialized jobs, which in turn dismantled the old basic unit of work and discipline--the household. Since people preferred to settle close to their work place, some of the younger family members had to separate from their extended family.[103] Pursuing job opportunities accelerated the transformation of the family structure from extended to nuclear. To settle close to their workplaces, people moved out of their customary neighbourhoods. This relocation decreased familiarity among residents within a settlement which in turn reduced self-policing and societal pressure to maintain a congenial environment. These new as well as migrant families, boosted the demand for rental housing and increased the demand for building new houses.

Other changes in the social structure also affected living environments. Intermarriage became less favored among the extended family members.[104] A survey conducted in the early seventies indicated that 42% of Damascus families had at least one member of the family from outside Damascus.[105] People, especially women, realized that education not only opened the doors for employment, but also assumed great importance as a means of rising in the social scale. However, for several reasons, most housewives do not work in spite of their educational qualifications,[106] and houses

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[102] *al-Kalaa, p. 12.*

[103] *D. N. Wilbert, United Arab Republic (New Haven. Conn.: Harf Press, 1969), pp. 87-93.*

[104] *In the past, intermarriage was preferred in order to keep the family property intact by uniting individuals who are already bound by collateral family ties. Wilbert, p. 90.*

[105] *M. S. Al-akrass, Tarkib al-Aaila al-Arabieh wa Wazaefoha, Case of the Syrian Family (Damascus: Ministry of Culture Publication, 1976), p. 185.*

[106] *Having children to take care of accounted to 47% of the reasons that housewife do not work. Al-akrass, p. 314.*

remain the place where women spend most of their time. This interwoven nature of social life and the built environment is discussed further after the review of housing regulations.

3.2- HOUSING RELATED REGULATIONS

Damascus and other Middle Eastern town have witnessed rapid and multi-faceted changes. The effects of these changes have been profound.[107] First, economic colonialism introduced a new era of growth into the region: new suburbs were added to cities,[108] dwarfing the previous traditional Islamic quarters. Wide boulevards were introduced along with new layouts for buildings, both in terms of their size and their position.

Second, the migration of a significant portion of the labor force into large-scale urban industry placed new demands on land use, transportation and communication. The breakdown of the old road pattern in many Islamic towns was one of the most profound elements of change in the layout of urban areas.

Third, improving services such as water supply, sanitation, electricity and tele-communications, within traditional quarters created serious problems for engineers. When these problems were combined with the developing preference for European housing styles, a new pattern of residential development, such as villas and town houses where the building is surrounded by a garden and supplemented by a garage or a driveway, was introduced to the region. These new styles allowed efficiency in the laying of services but required a lot of land for wide streets and parking facilities.

The re-emergence of rapid growth in towns, the concentration of economic activity in urban communities, and the profound changes which had developed in town layouts were all factors destined to become serious political, economic, and social issues.[109] The sudden growth of Damascus led to increasing urban sprawl. With the object of maintaining some order, the Authority's interventions, which began with merely keeping public spaces clean in the late 19th century now involved the creation

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[107] *The French mandate focused on the administrative, legal and economic pillars during the time of occupation, 1918-1946. Philip S. Khoury, Syria and the French Mandate (N. J.: Princeton University Press, 1987), pp. 83-120.*

[108] *The al-Mazeh quarter was added to Damascus in 1947. Safouh Khayer, Madinat Dimashq, Damascus City (Damascus: Ministry of Culture Publications, 1982), p. 400.*

[109] *Germeraad, p. 135.*

and enforcement of detailed standards for each residential unit. Six main divisions of law have had a large effect on the housing process and the urban fabric of the city. Of these, the Rental Law, the Planning Law, the Building Code and the Civil Law are the main pieces of legislation. They are involved in the replacement of traditional housing quarters with the new residential neighbourhoods.

The Rental Law was established by Ordinance 111/1952.[110] Damascus underwent various changes in the early part of this century. As a result of these changes, rental housing, which had been rare, was popularized. To protect the poor (tenants) from the rich (owners), the authorities, through this ordinance, gave the tenant the right to rent a house or apartment at a very low rate regardless of the owner's objections and the contract between them. In addition, it empowered the tenant against eviction. The law applied to every tenant who was employed by the government; and the government is the major employer in Syria.[111] Thus, the law applied to individuals, unlike in many other countries where Rental Laws are apply to specific properties. As a result, rental property suffered and is still suffering negligence from both the owner and the tenant because of a lack of interest.[112] This law led not only to the deterioration of the physical environment but also contributed to distrust amongst people, breaking age-old social ties.

The Law of Acquisition is the expropriation legislation which the owners dread, as compensation is very low compared to market value. This law is enacted primarily for the creation of official buildings, parks and streets.

The Law of Reorganization has been in use since the late 1950s. The Municipality applies this law in important and expensive areas like the city center or near large official buildings in order to develop new housing settlements. The process of implementing this law can be summarized in a few lines: a committee from the Municipality estimates the value of everything on the land which is the subject of the

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[110] *Y. Balnco, Opening paper presented at "The International Year of the Family" Conference, Damascus: Syrian Woman General Union Press, 1993, p. 17.*

[111] *"The average landlord is no more exploitative than the average tenant is scoundrel" Alan Gilbert and Ann Varley, Landlord and Tenant-Housing the Poor in Urban Mexico (New York: Routledge, 1991), p. 178.*

[112] *Gilbert and Varley, 1991, have summarized studies done in various third world cities and concluded that, though significant, rent control measures are only one of the many reasons for the reduction and deterioration of rental housing stock.*

reorganization (buildings, trees, etc.) and exchanges that cash value for stocks. The planners of the Municipality develop a new plan with consideration for archaeological preservation and trustee-properties. Existing houses, trees and streets are ignored, however, since each new plan is supposed to have new streets, schools, public and private spaces.

Another committee estimates the value of the newly created private sites. Many factors are considered in the estimate (allowable site coverage, the distance from the site to the main road, proximity to amenities and etc.). The total value of the new private sites must be equal to the total stocks of the first committee assessment. The second committee distributes the stocks of these new private sites. Each stockholder is supposed to possess a new property equal in value to the original property. This process is called the Initial Distribution. The Municipality announces the Initial Distribution and allows 90 days for objections from the owners who may prefer their stocks to be distributed in some other way or if they believe there was a miscalculation of their property value. Finally, the Municipality announces the Final Distribution after it attempted to respond to each objection. Thereafter, every owner supposedly has a new property, a site, or a part of a site, with a value equal to his original property value.

The state, through its various bodies (The Ministry of Housing, The Municipalities, etc.) uses **The Law of Planning** in the traditionally built areas with the object of straightening and widening the streets to accommodate vehicular traffic and to facilitate the laying of new infrastructure. This law also increases the density of these sites by increasing the maximum number of floors, from the pre-1948 two-storey high to four storeys. In the rare case of a vacant lot, owners are pressured to develop their land by increasing the tax on this type of property and by making it subject to acquisition if construction has not begun after a certain period of time.

The following section will discuss a few cases under the jurisdiction of this law in some detail, with the object of illustrating different problems that arise in the built environment, and in the social life that existed within it, from the implementation of this law. Growning up in one of the sub-quarters under study, and having worked with the Damascus Municipality (Building Permits Office), interacted with various people over the issue of building permits, some of the descriptions and analysis are based on the personal experience of the author.

3.3- THE MORPHOLOGY OF THE NEW SETTLEMENT

The study will focus first on the Municipality's policy in terms of land-ownership and access, then it will consider the harmful aspects created by implementing the Planning Law and the new Building Code.[113]

The Municipality developed the general plan 54/3/A for the *al-Mazeh* quarter in May of 1986, in accord with the master plan which was developed by Ecochard and Banshoya in May of 1968 (Fig. 3-1). Shortly after, a detailed plan for every block and detailed plan for every individual site (scale 1/500) were developed. The owner of a site has to meet specific requirements prior to receiving a building permit. Some of these requirements are related to the site itself and others concern the individual site in relation to adjacent property.

According to Section 6/h of the Building Code, any old building may be demolished unless the building has been considered to have archaeological value by a committee from the General Administration of Archeology and Museums, or if the municipal committee in charge of studying the Demolition Permit found that the new building area would not be more than one and a half time as large as the old one. In other words, if the anticipated built-up area would not significantly increase the already existing built-up area, it would be a waste of building materials and labour.

It is important to mention that it is specified on the Demolition and Building Permits, and in Section 6/D of the Building Code, that both permits do not give the owner the right to evict the tenants from the old building. Thus, the owner has to convince and compensate the tenants before demolishing the old building.

In order to receive a Building Permit, the owner has to comply with the Planning Law, Building Code and Civil Law requirements. The following examples demonstrate how the Municipality tries to enlarge public property even though it lacks sufficient funds and has limited resources to take care of its newly enlarged property.

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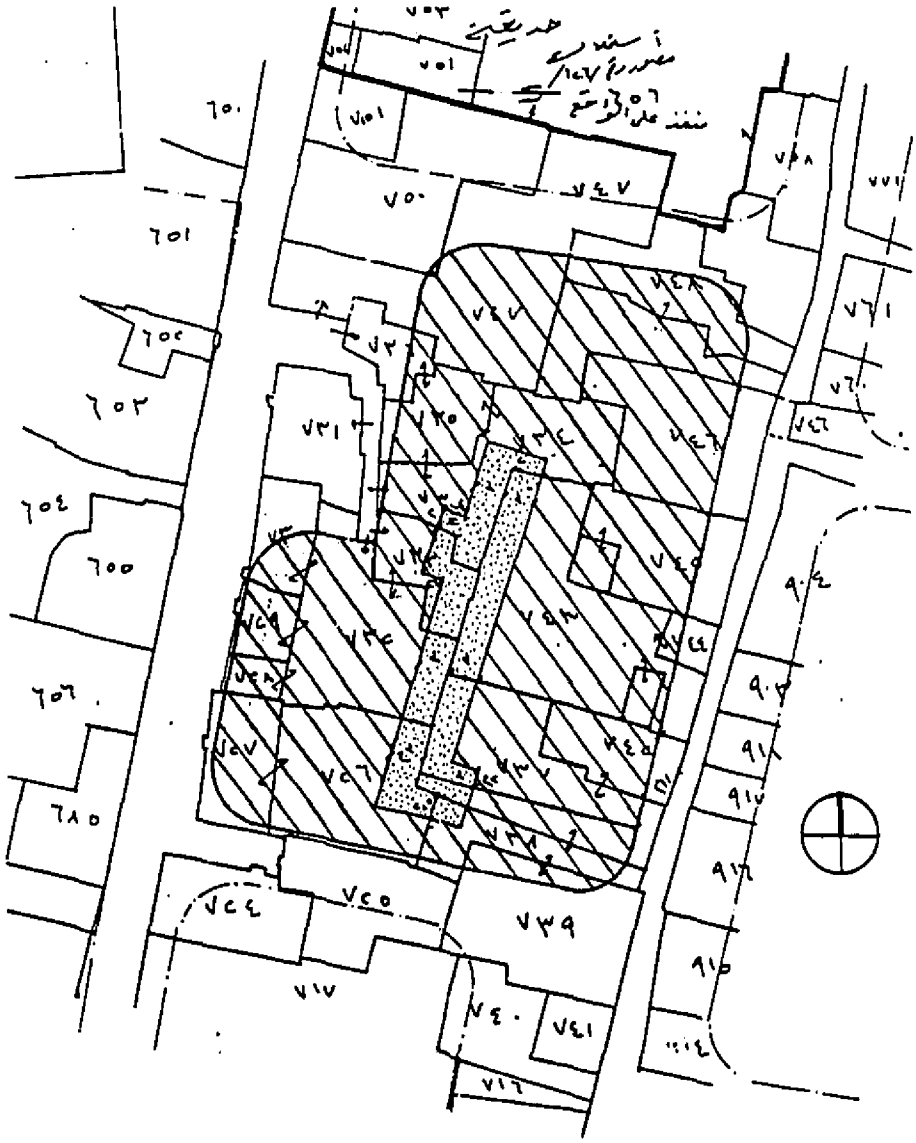
[113] *For information about the Building Code and its implementation refer to Appendix B.*

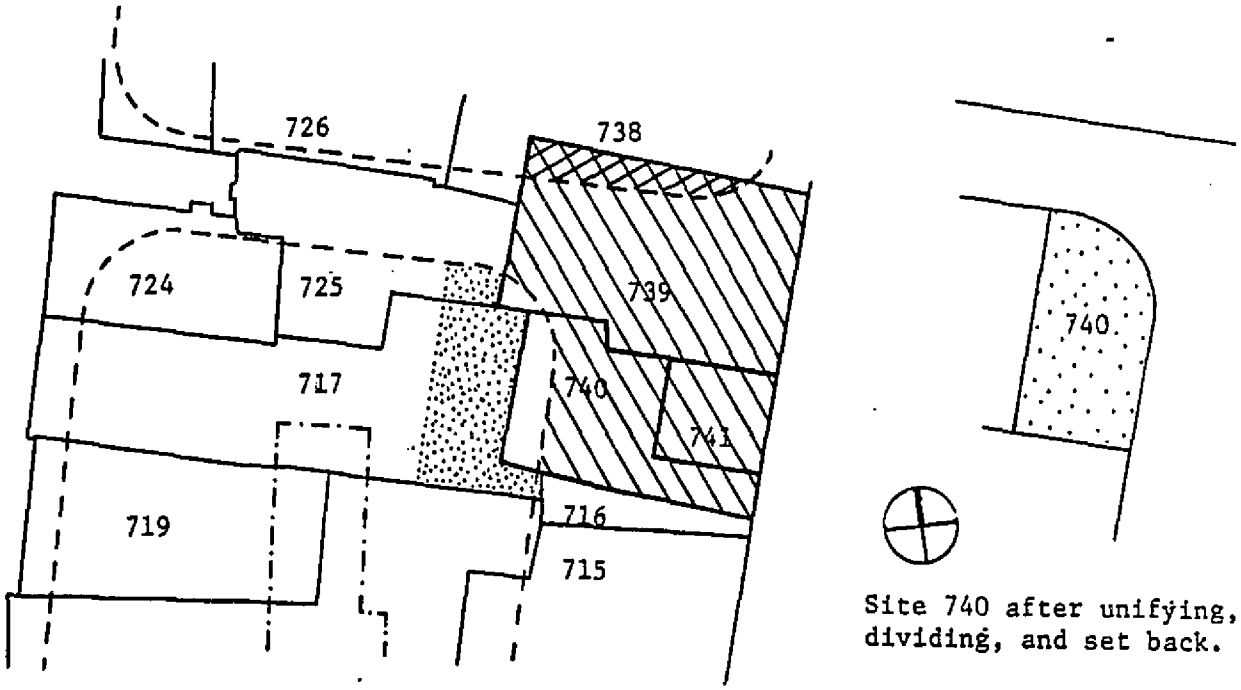


New block
Communally owned sky-well to provide light and facilitate ventilation

A detailed plan for the block (1581/3) of the new settlement under study

Figure 3-1

CASE 1: in the instance of sites 739, 740 and 741 (Fig. 3-2), the plan requires that the owner unify these sites in one site under the number 740. It also demands that he sets back, or gives up, the hatched sector of the new land for public property without any compensation (Building Code, Section 13/A). Then, they must combine the dotted parts of the adjacent sites 717 and 725 with the new site, making the site dimensions and shape acceptable to the Building Code.



Site 740 after unifying, dividing, and set back.

A sector which must be given to public property for free
A sector which must be sold and unified with site 738
A sector which must be bought from sites 717 & 725 and unified with site 740

Figure 3-2

Section 85/C of the Building Code stipulates that a square of 7 x 7 m2 or a rectangle of 6 x 8 m2, should fit in the site subject of the Building Permit, and that the area of the site must not be less than 75 m2. This requirement is supposed to make all sites receptive to livable spatial configurations. Further, the owner has to divide the double hatched part of site 739, which is supposed to be combined with site 738.

Though the objective of these requirements may seem valid, in reality the process of achieving it is unjust since the owners give up unequal parts from their sites to the public property. Secondly, the process of adding a part of an adjacent site is a long and complicated task. Quite often it involves much more time, money and work than the anticipated benefits warrant. This becomes more complicated when there is more than one owner for each site (the site which the part is taken from and the site which the part is added to), which is often the case. According to Section 12/A, the owner of a site cannot obtain a permit to build on the site without buying the shared space from his neighbours, no matter how many, how old, or where they live. There is a significant

amount of manipulation, extortion, and disagreement among multiple owners, particularly when some want to sell and other do not.

The situation is increasingly difficult if some of the owners are foreigners. Often they are Turkish. By the end of W.W.I, the French and British forced the Turks to pull out of Syria. Turkish property owners returned to Turkey and left behind property which was most often appropriated by a military order from the Turkish governor *al-hakim*. The Turkish owners did not inquire further about their property and by now they are very likely deceased. To buy a property owned by foreigners, one has to go through a maze at the Turkish embassy, and if nobody claims ownership of a certain piece of a property after a period of time, one has to have the purchase processed by the Central Bank and then approved by the court.

In the traditional settlements, public property accounted for 12%, on average, of the total area of the designated sub-quarter. This small proportion of property was maintained voluntarily by the users since they had full control over it. As explained in chapter two, residents used to maintain the access (*Fina*) in front of their houses, because it was seen as a part of their house. Residents had the right to perform several kinds of activities in their *Fina* and to exclude others from doing so In the new plan, the area of public property jumped to 35% and users lost control over it.[114] (Fig. 3-3).

The use of public space, except for pedestrian circulation, became subject to the permission of the Municipality, regardless of the opinion of the residents or other users. This resulted in a significant change in the size and the physical condition of the open areas which transformed from small and well maintained to large and neglected. The prevailing situation could be attributed to the lack of government resources for maintenance and the elimination of residents control and responsibility over open spaces.

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[114] *In addition, about 4% of the total area of the settlement was planned as communally owned' sky-wells. These were inserted within the blocks for ventilation (Fig. 3-3).*

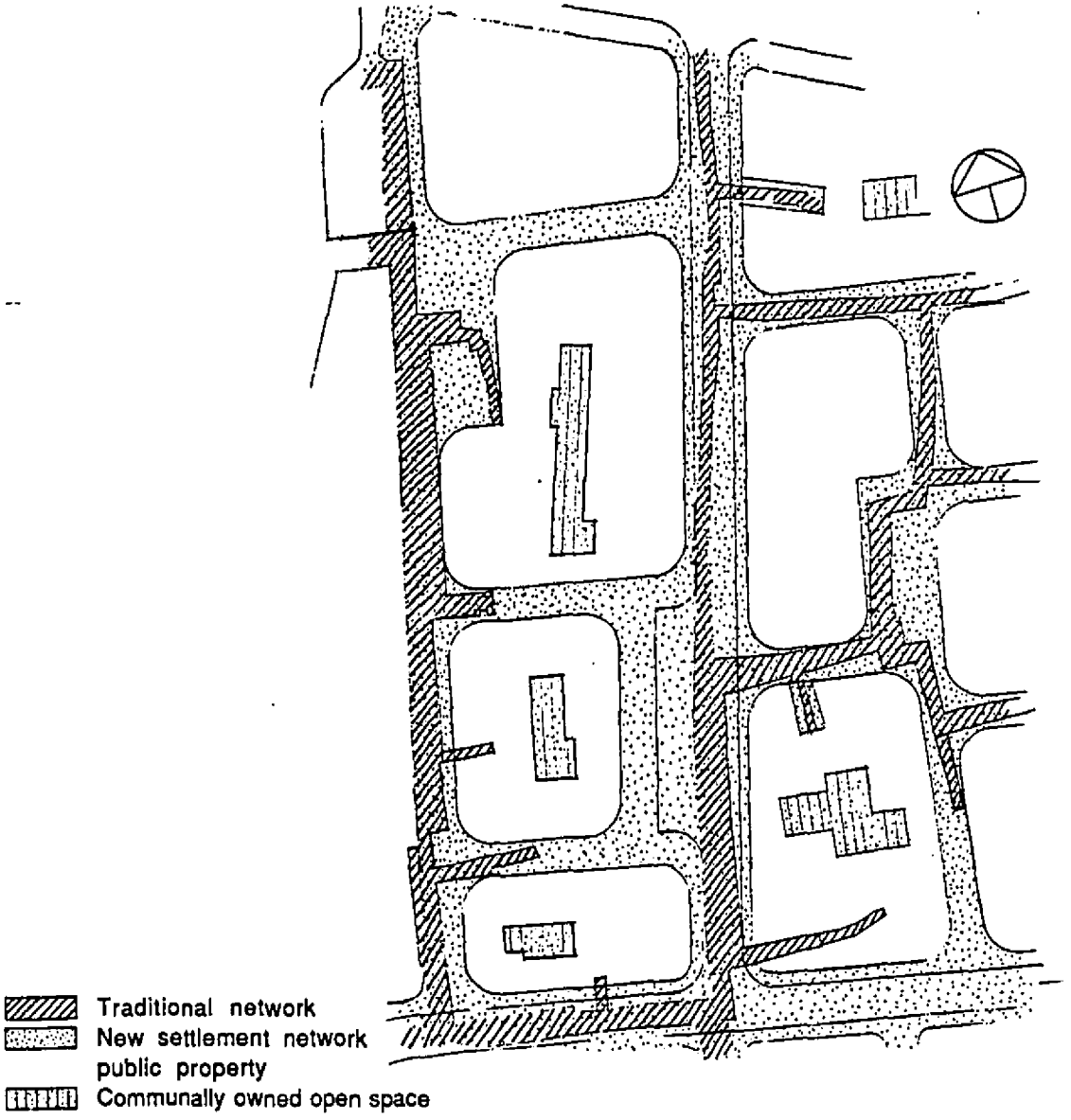
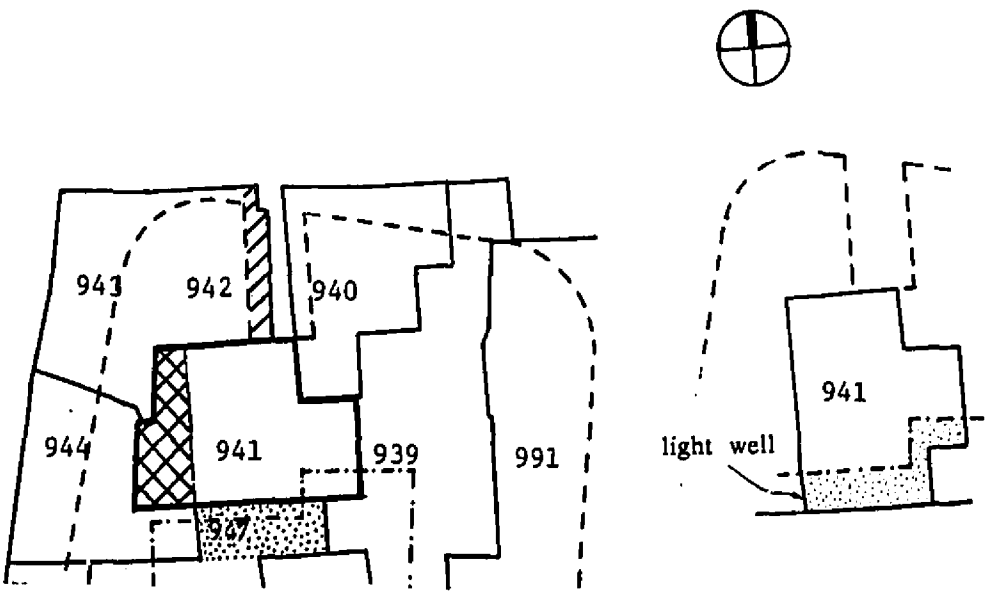


Figure 3-3

CASE 2. Site 941 was inside a cluster in the old neighbourhood, and access to it was through a dead-end street (Fig. 3-4). In the new plan, this site is within the new block such that the owner does not have to give up any part of his property to the public. But in order to provide the interior spaces with natural light (section 42 of the Building Code specifies that the area of a light-well serving rooms is supposed to be at least 18 m^2) a large light-well has to be inserted in the new design. This cannot, however, replace the courtyard, a vital element in the traditional house, because it cannot be considered livable space, since it has poor physical proportions and is overlooked by at least three neighbours.

The owner of site 941 has to meet another requirement before obtaining a building permit. Sections 13 D/1 & 2 of the Building Code require at least a two-meter wide entrance to the site from public property and require that the owners of dead-end street properties give up their right of ownership, servitude or any other type of tenure, of this property to the authorities. Site 941 has a narrow entrance and the owner has a few difficult choices to make in order to meet the building code requirement. He can buy the hatched part of site 942 and demolish the building on it in order to have a wide entrance, but this option may make him a subject of extortion from the owner(s) of site 942, like in the first case. Or the owner can wait until the building on site 942 is to be demolished for new construction, since the new building on this site has to be set back, and in this case the entrance to site 941 would be wider than two meters. In this option, the owner of site 941 may have to wait for several years.



Site 941 after unifying, dividing, and set-back

A sector which may be bought from site 942 then given to public property for free in order to make the entrance to site 941 two meters or wider

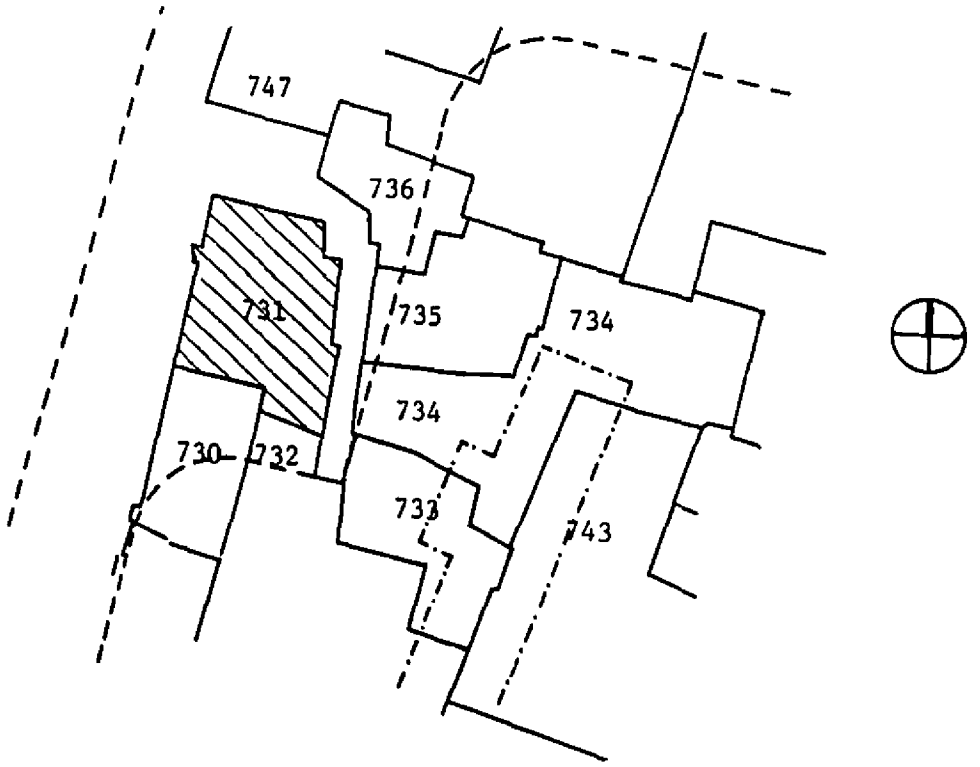
A sector which must be sold and unified with sites 943 & 944

A sector which must be bought from site 947 and unified with site 941

A light well providing the site with natural light could not be considered a courtyard

Figure 3-4

CASE 3. Considering the objective of widening streets, site 731 falls entirely in the new street area (Fig. 3-5). The Municipality implements the Acquisition Law in this case, and, as mentioned earlier, it offers the owner of the site very low compensation, compared with the market value. There is also another law which prohibits municipalities from evacuating the residents, if they are tenants, from the house before offering them alternative shelter. Thus, the Damascus Municipality has to have its own half-way houses in order to relocate people and to implement the master plan.



Site 731 is to be acquired by the Municipality since it is totally in the new street plan

Figure 3-5

The Damascus Municipality cannot afford to build enough houses for all the qualified residents under this law, especially when there is more than one nuclear family in each old house. The Municipality sells its new housing units through subsidized loans (15-year at 4% interest)[115] . Owing to a high rate of inflation, the Municipality

[115] *Relocating people into highly subsidized rented or owned accommodations, besides being expensive, also created management problems and many buildings soon turned into slums. This option was, therefore, soon abandoned. Yapkioe Sheng, Low-income Housing in Bangkok: a Review of Some Housing Sub-markets (Bangkok: Asian*

is a loses in the process; the more it builds, the more it loses. Recently, the municipal planners have begun to deliberately draw new streets through sites avoiding the inclusion of a whole site in the proposed street area. This enables them to bypass compensating owners and resettling the tenants whose properties have been acquired. Therefore, one seldom finds public facilities like parking lots, parks, police stations or post offices in new settlements like these.

Hence, the Municipality delayed the acquisition of site 731 as much as it could, which created another problem: the building on site 731 is two storeys high and the surrounding buildings are (or will be) four floors high. This creates openings that overlook site 731 from the third and fourth floors of the surrounding buildings and breach the privacy of the residents in site 731 (Fig. 3-6). Since Section 970 from Civil Law stipulates that the distance between an opening or cantilever from one building and the opposite building, at the same level, should be at least two meters,[116] the harm is reciprocal among the sites owners/users.

An old house is being overlooked by neighbours from the new building

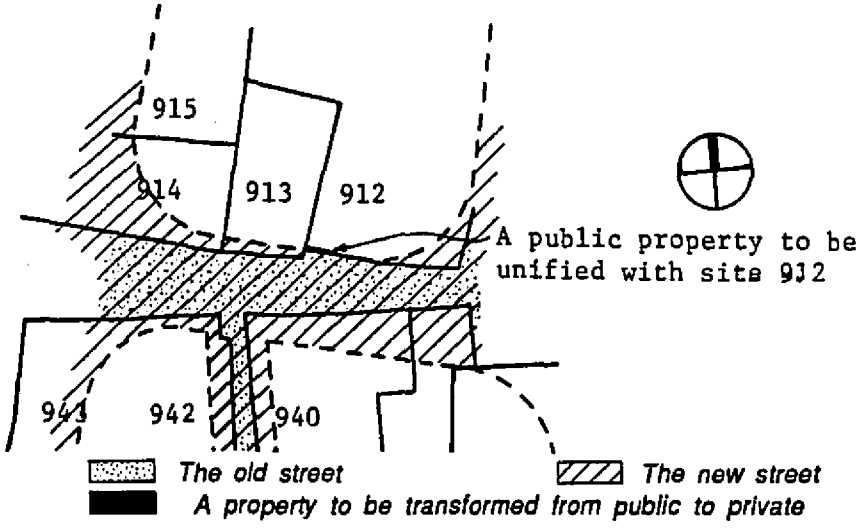
Figure 3-6

Institute of Technology, 1992), p. 94. This phenomenon has been noticed in many cities around the world

[116] *M. Outary, al-Kanoun al-Madni, the Civil Law (Damascus: Mouasaset al-Nouri, 1992), p. 172.*

The new building on site 733 cannot have any openings or cantilevers on the first two floors on the elevations facing site 731. A space without openings cannot be used for residential or commercial activities except, maybe, for storage. This situation could last for several years because the Municipality, as mentioned above, is delaying the acquisition and demolition of site 731. In addition, owners would have to postpone construction of any cantilever on the elevation of the surrounding buildings facing site 731, until the building on site 731 is demolished. Yet it would be very difficult and expensive to add a cantilever to an existing building.

Case 4. The municipal planners endeavor to contain the old street network within the new one. Sometime a part of the old network cannot be accommodated, for geometrical reasons, as is the case in site 912 (Fig. 3-7), the owner of the site is required to buy this small portion of public property and combine it with his own site, according to Section 12/A,. A committee from the Municipality estimates the market value of this section of public property and the owner of the site is required to buy the property at this price, regardless of the fact that he may have to give away a much larger portion of his site to the public for free.



A piece of public property to be bought by the owner of site 912

Figure 3-7

From these examples, one can see that the Municipality aimed to enlarge public property. In doing so, it adopted an unfair strategy. First, people were forced to transfer unequal parts of their private property to public. Second, the Municipality charged people for transferring property from public to private but not vice-versa. Third, the

estimated price for an acquired property by the Municipality was very low in comparison to market value. These compulsory requirements reflect the Authority's top-down policy. Two shareholders of two different adjacent sites, for example, have to reach an agreement when they attempt to meet the imposed plans of the Municipality. In addition, they have to convince the tenants, if there are any, to leave the sites by compensating them, either by cash or by a share in the new municipally planned building. Often, one must compulsorily procure a portion of an adjacent property to comply with the new plans, and the tenants on that property must also be compensated. When it comes to selling a designated part of a site, the owner has a monopoly by which to exploit the buyer(s).

Often a delay in the site acquisition process can lead to costly delays in occupancy or development of neighbouring sites. Hence, these constraints have provoked sour relations amongst neighbours instead of providing solutions to improve the built environment while maintaining harmonious social relations.

ACCESS AND OPEN SPACE

The authorities did not appreciate their lack of control over the access networks of residential quarters. That was one of the main factors that made the Ottoman and French authorities force people to remove the doors of their dead-end streets.[117] In the colonial French era, dead-end streets were considered contaminated social spots in the city and the only way to purify those spots was to remove the gates from the entrances and make the dead-end a through access, where any person could pass and which the authorities could easily control.

The first half of this chapter has discussed briefly the negative effects of the Rental Law on both the physical environment and relationships among people. Furthermore, this chapter has illustrated other social changes which took place in the first half of this century such as change in the family structure from extended to nuclear.

The social factors mentioned in the earlier section, together with functional and physical factors such as the introduction of vehicles and the layout of utility networks in the city, changed the perception of the dead-end street of a semi-private open space that

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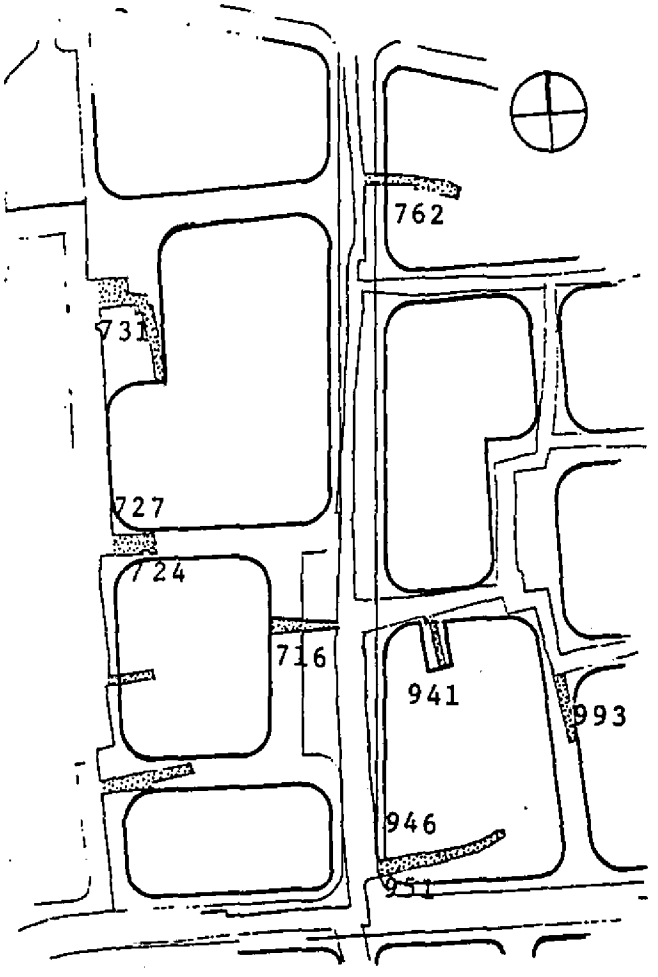
[117] *Akbar, pp. 171-172.*

was an extension of the house and generated many social activities, to an unpleasant spot that bred trouble. As the Municipality tried to eliminate all the dead-end streets in its new plans (Fig 3-8), in the new settlements, access to houses became direct, from open through-streets, as compared with the traditional condition in which 85% of the houses were accessed from dead-end streets.



Eliminating the dead-end street in the new plan

Figure 3-8

First, gates on dead-end streets and at the entrances of quarters were removed, later dead-end streets were eliminated on the grounds that there exists an authority who is in charge of defending and providing safety to its people, their properties and possessions. The transformation from private to public, as well as the increasing diversity of residents in the new settlement, gave rise to a feeling of insecurity, which in turn encouraged people to use steel doors at the main entrance of their building,

supported by the use of a buzzer system. Here children are the most affected by the lack of private or semi-private open space: their parents did not let them play in unsafe streets, and no closed public park is provided as an alternate area to play in. Further, children are most often restricted from playing in their houses, as indoor play is a source of disturbance and noise not only for the family itself, but to the neighbours as well.[118]

According to Vasiritabar, a group of sociologists indicated a relationship between street form and social atmosphere among residents:

> *Changes in the type and form of street (from cul-de-sac to open-ended, and from short and narrow to long and wide) were associated with changes in the character and significance of social relationships among residents. It was found that residents in cul-de-sacs, compared with through streets, enjoyed greater social ties, intimacy, and neighbourhood cohesion.*[119]

The planners did not stop with laying down straight wide streets, but also proceeded to curve all corners at the intersections in order to ease car movement within the new settlement. This process was implemented not only on the first floor level, but on all the four floors (Fig. 3-9). This negatively affected the spatial configuration in all of the units located on the corner of a site. Trimming the corner is an old treatment used only at the first floor level to increase vision and to reduce sudden or surprise appearances at intersections.

Other sections of the Building Code specify the uses allowed along the streets in this new settlement. The Building Code gives two options for first floor use, commercial or residential. In the case of commercial use, Section 30 of the Building Code determines the level of the floor at 25 cm above the side-walk level and in the case of residential use, Section 84/J/8th/3 sets the floor level at 125 cm above the side-walk level. Since

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[118] *70% of the families in Damascus do not have space inside the house for children to play, and 66% do not have nearby park for the children to play. Al-akrass, p. 80.*

[119] *S. Vasiritabar, "Design and Privacy in Modern and Traditional Housing in Iran" Ph.D. Diss. Oxford: School of Architecture, Oxford Polytechnic: UMI, 1990, p. 104.*

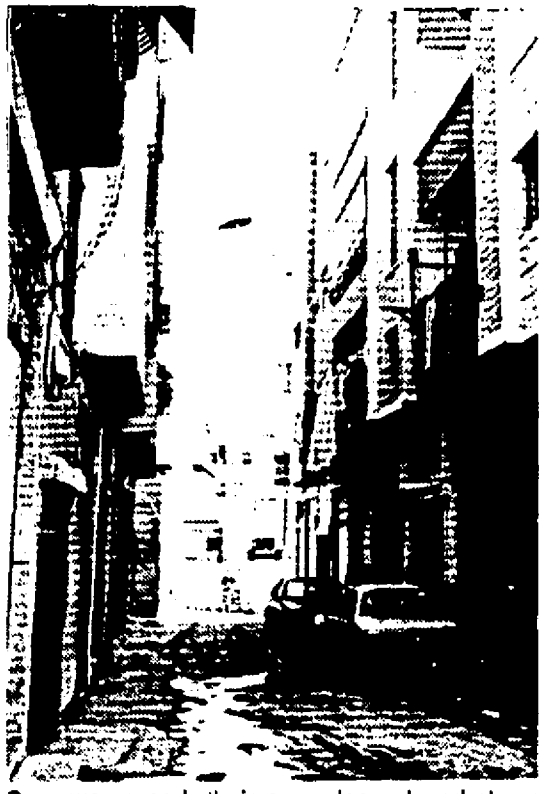
Curving the corners at the intersection was applied on all the four floors

Figure 3-9

speculation for commercial space was high in the early 1980s, all the earlier developed sites had a commercial first floor. A typical site contains four shops on the first floor, with the main entrance between two of these shops. There are two units on each of the three remaining floors of the building. For every six units there are four shops. Thus, the new settlement is overwhelmed with shops on both sides of each street.

Nowadays, one can see many closed shops and no one willing to invest in them (Fig. 3-10). Converting these shops to residential use would require demolishing the old concrete slab and building a new one at 125 cm above the side-walk level, as determined by the Building Code. This process would not only be very costly but also technically difficult. In fact, no example of a conversion from commercial to residential, or vice-versa, can be found in this or any other similar settlements.

The inconsistency in the municipal plan and policy of 1986 is illustrated by analyzing one of the streets in the new plan. Since one of the main objectives of the new plan was to facilitate car movement through the settlement, this consideration has to be understood in all its aspects--not only ease of vehicular movement, but also stopping, parking and pedestrian safety. While the first two aspects have been addressed, the parking issue remains generally unsolved and is sometimes worked out at the expense of other factors. The lack of parking lots has been explained in Case 3 as the result of the Municipal intention to avoid the ramifications of site acquisition for public use (i.e., providing half-way houses for the residents of the site(s) subject to acquisition). As a direct outcome, residents in the sub-quarter who own cars are forced to use the only other alternative: using the street itself for parking.[120] Temporarily, car owners can afford to park on the street since most of the shops are closed, but if the situation changes and business booms, this will not be possible.



Car owners park their cars along closed shops

Figure 3-10

[120] *The number of small cars, for private or commercial use, is relatively small, the average is one car for every 23 people. Khayer, pp. 412-415.*

Even though vehicular movement through the settlement has attracted more concern and thought than pedestrian circulation, the result is far from satisfying. While the plan distinguishes between street and sidewalk, in reality both are at the same level and covered by asphalt, resulting in pedestrians and cars using the same lanes and spaces. Thus, pedestrians do not have any real protection.

Since most areas did not, and still do not, have the western system of postal addressing, most of the narrow, crooked streets either had no names or were called by the local residents after families who had lived there for gene-rations. To get a letter to a resident in a sub-quarter, one would indicate the quarter, sometimes the sub-quarter, and occasionally even give a physical description of the neighbourhood. Having a significant landmark or public place such as a public bath or a grocery shop in the neighbourhood made life easier for both the letter sender and the postal workers. Then the address merely included the sub-quarter's name and the grocer's name. The latter was not only a resident of the sub-quarter but also a crucial part of the social structure in the neighbourhood. The postal worker had to deliver the letter to that shop, and during the day, the grocery would either deliver the letter himself or come across one of the addressee's family members, relatives or neighbours who would then carry the letter to its final destination.

As illustrated by the example of the postal system, in the new settlements, receiving a letter is uncertain. Streets remain unnamed and houses unnumbered even though during the past decade the Municipality has been working on naming all the streets in the city. Site numbers, as referred to on planning documents, cannot be used because they vary widely, even within a single 'block.' People from outside prefer to send mail with a local resident who knows the area well.

The dead-end street in the traditional quarter was conceived by its users as a place for open-ended activities. With only one entrance, a limited number of users and with strictly pedestrian movement and residential use, the dead-end street is completely opposite to the street type of the new settlements. The sense of penetrating deeper into the neighbourhood, which increases the feeling of freedom through familiarity, has disappeared in the new settlement.

Human behavior is greatly related to and affected by the size and dimension of not only internal but also external space. This behavior has to be understood in terms of

place, people and socio-cultural activities that link people to these spaces. In the traditional settlement, streets served as extensions of the houses without intrusion from vehicles: children played, women went about their chores, and men gathered in small sidewalk cafes, to sit on stone or wooden benches. The street was a life line. It was a place of constant activity and excitement for people--effectively a path but not a thoroughfare. The street was a place in itself. The boundaries were impossible to define because there was no strict definition between a path, a sidewalk, the inside of a shop, or a threshold (*Fina*) of a door.

Hassan Fathy conceived the plan of New Gourna in experiential terms whereby one chooses a path through an expanding scale of spaces that begin with the privacy of the small courtyard,[121] leading to the semi-public neighbourhood street, to the larger avenue, the village square and then finally to the open field of the Nile Valley. He envisaged that the population of New Gourna, drawn from the surrounding area, would feel a sense of identity and congeniality with the place. Christopher Alexander,[122] in the Mexicali Project, considered the builder's yard the essence of the cluster. Although this space was the center for production of houses, the intention was for it to evolve into the hub of the community in later years. It became a part of the community defined by the houses. He believed that in clustering houses, or buildings in general, the creation of positive public space for pedestrians should be the first priority,[123] while the layout of a road network should be the last in the hierarchy of decisions regarding urban design. Charles Correa, on the housing project in Belapur, New Bombay,[124] describes the hierarchy of urban space as the space needed by the family for exclusively private use (such as cooking, sleeping, storage, etc.), the areas of intimate contact (i.e. the front door step where children play and neighbours chat), the neighbourhood meeting place (where the individual becomes part of his or her community), and the principal urban area, such as a market place or a mosque.

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[121] *Hassan Fathy, Architecture for the Poor (Chicago: University of Chicago Press., 1973),*

[122] *Christopher Alexander, the Production of Houses (N.Y.: Oxford University Press., 1985). Capter 2.*

[123] *Christopher Alexander, A New Theory of Urban Design (N.Y.: Oxford University Press., 1987). pp. 63-74.*

[124] *Charles Correa, The New Landscape, Urbanisation in the Third World, Singapore: Concept Media, 1989), pp. 32-33. And Hasan-Uddin Khan, A Mimar Book in the series Architects in the Third World, Charles Correa (Singapore: Concept Media, 1987), pp. 70-75.*

All the streets in the new settlements of this study are public and their width is standardized based on planning regulations. They are accessible by both pedestrians and cars, commercial and residential activities are allowed along any street. Among the most significant modifications in the new planning approach is the drastic change in the formation of a cluster. In the traditional settlement, houses were clustered around a dead-end street and the boundaries of that cluster were defined by common walls shared by two or more clusters set back to back. In the planned settlement, by contrast, houses are grouped in an island surrounded by streets. This arrangement exposes houses directly to open public spaces and therefore, eliminates the traditional hierarchy of movement from private, through semi-private, to public spaces and vice-versa.

In different societies the number of spatial elements or the hierarchy of relationships between these elements varies, but humans throughout the world have some analogue of such a system, one which modulates climate, income levels, and cultural patterns of this society. As a part of social practice, concepts and definitions of privacy vary from one culture to another. There are also subcultural differences that relate to privacy. Privacy requirements may vary according to socio-economic conditions, lifestyle, family background and values. The concept of privacy can vary among the individual members of a community.

> *Westin identified four major functions or goals that privacy serves. These include protection and maintenance of personal autonomy, opportunities for release of emotions, the function of self evaluation, and limitation and protection of communication. Many psychologists support Westin's analysis and hold the same view. Moreover, it is held that privacy functions to promote self-expression, and serves to maintain and develop a sense of identity.*[125]

An analysis conducted in Melbourne, Australia, by Worsley and Finigham, identified interior, exterior, and surrounding elements of privacy in housing design.[126] Privacy within can be achieved by the individual possessing his or her own room or place and by flexible spatial arrangements that allow the users to determine which activities can be grouped together and how segregation of rooms or spaces may take place. Privacy outside the dwelling is largely determined by sight lines and noise. Outward visibility and avoidance of being overlooked have often tend to conflict. While windows mediate daylight, ventilation, views and the relationship with the outside, they may be disadvantageous in terms of privacy and heat loss. Privacy could be disturbed either by

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[125] *Vasiritabar, p. 79.*

[126] *Worsley and Finigham cited inVasiritabar, pp. 91-108.*.

exterior noise or by the fear of being heard by others. Privacy around the dwelling depends upon the social relationship with neighbours. It is influenced by the physical arrangement and by the mutual familiarity of the residents in the settlement.

Al-Mazeh quarter has been enlarged many times due to the successive waves of immigration from the surrounding suburbs, other Syrian cities and neighbouring Arabic countries. Thus, residents of this quarter are of diverse backgrounds. My family used to live in a walk-up building with fifteen other families but only our family was originally from *Al-Mazeh*. The rest came from different parts of the country, at different times.

The change of the typical family structure in the Middle East, particularly in Damascus, has had different reflections in the built environment. On the one hand, gender segregation within the house has been reduced and circulation has become simpler, since, for example, sisters and brothers do not have to restrict their movement in the house and the female members no longer have to dress as formally as they used to when they had to live together with their male cousins. Nonetheless, separate bedrooms are still required wherever possible and the gender of the guest determines the priority of the use of guest rooms. On the other hand, the elimination of the dead-end street, which acted as a buffer zone between the extremes of private and public life, has changed perceptions in the new settlement, increasing the awareness of privacy and the need to avoid outside intrusion. People use a variety of means available to reduce outside intrusion.[127]

As mentioned earlier, by-laws state that in order to open a window toward another building, the minimum acceptable distance is two meters from that building. A further requirement is that any projection onto the street should not exceed one tenth of the street width. For example, in a street with 6m width having buildings on both sides, each building can have a projection of 0.6m, from the second floor level and above. Thus, the remaining space between the two buildings, or between two windows facing each other, is 4.8 m. Similarly, the space between windows in streets having widths of 8m or

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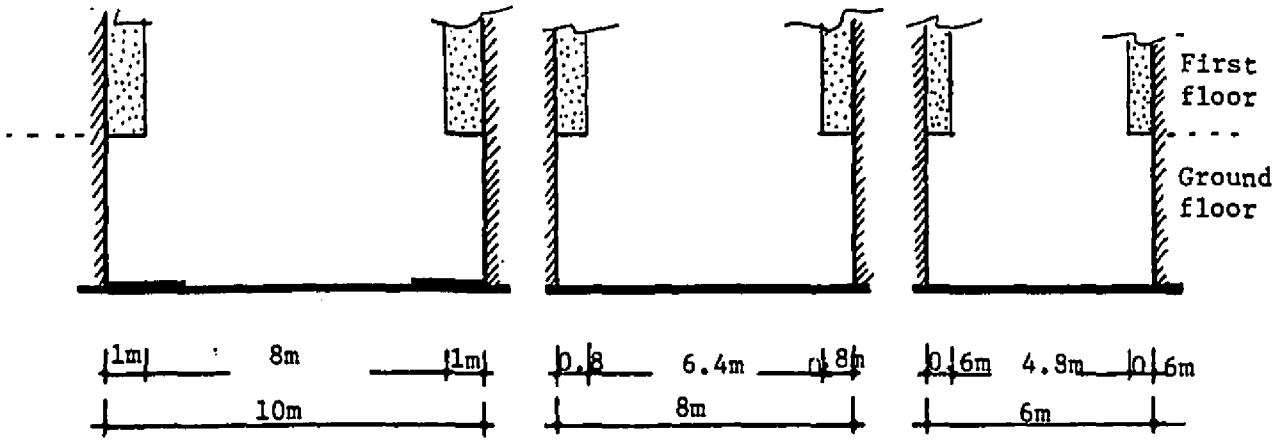
[127] *Professionals in the private housing sector come under two categories. The first are concerned about the 'aesthetic' appearence of the building with little regard for the cultural requirements and needs of the users. The other professionals, who are the majority, work as developers (they design and construct) whose main concern is to make more profits regardless of the appearance of the building and with little concern for the needs of the users. In this market, a successful professional, be an architect, a civil engineer, or a draughtsman, is one who is well versed in the machinalions of the Building Code and its interpretation.*

10m is 6.4m or 8 m respectively (Fig. 3-11). Even though these distances adequately comply with the by-law, residents in these extroverted houses consider the distance inadequate to exclude visual intrusion. This is demonstrated by observing how little of a window area is normally left open and how much is screened by curtains, shutters or both.



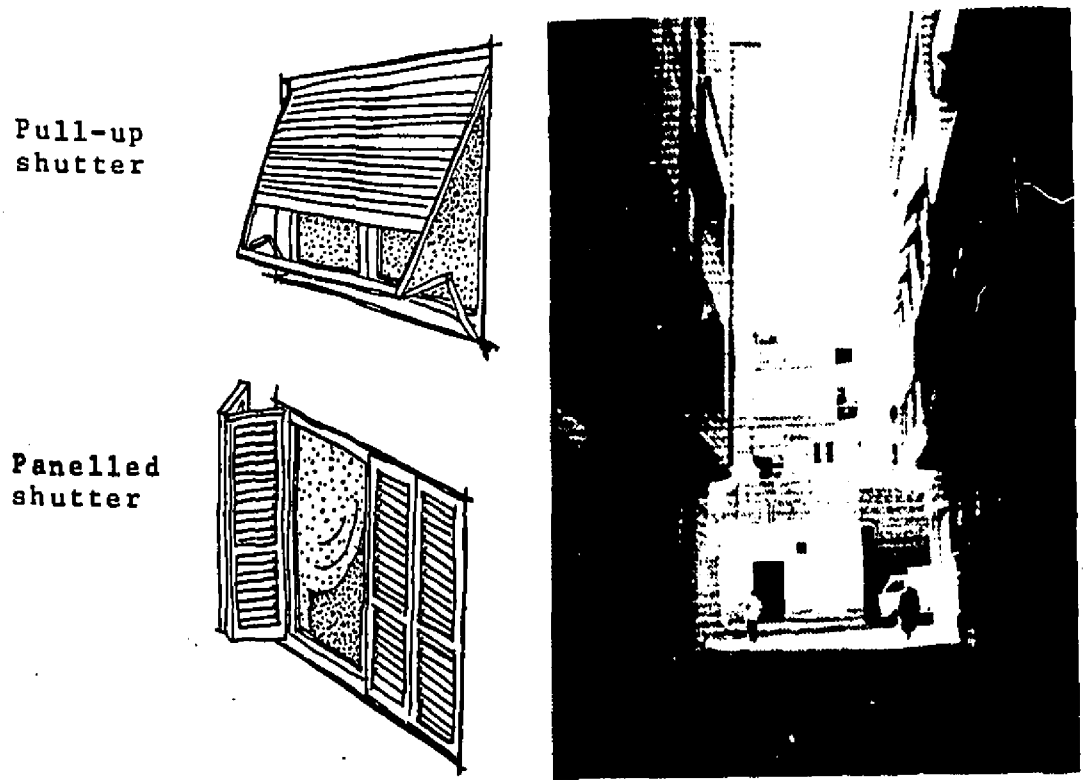
The distance between two windows according to the street width and the projection allowed by the Building Code

Figure 3-11

The traditional *Mashrabiya* is not used in the new buildings.[128] The absence could be attributed to economic reasons, lack of skilled labour, or the *Mashrabiya* being considered an outdated architectural element. It is unlikely that the disappearance of the *Mashrabiya* could be based on the desire for more openings towards the outside. Regardless of the season or time of the day, window shutters in this settlement of Damascus always cover more than a half of the available opening. In addition, an interior curtain almost always covers a large portion of the open half. The figure (Fig. 3-12) below illustrates the two forms of shutters that are popularly used to eliminate the sunshine and avoid visual intrusion.

[128] *A mashrabiya can be defined as a projected bay-window with decorative wooden screen enclosures. It was developed in response to the hot climate. The Mashrabiya performs two important functions. The transparent wooden screens allowed cross-ventilation and provide privacy for the family, which is very important in an Islamic household.*

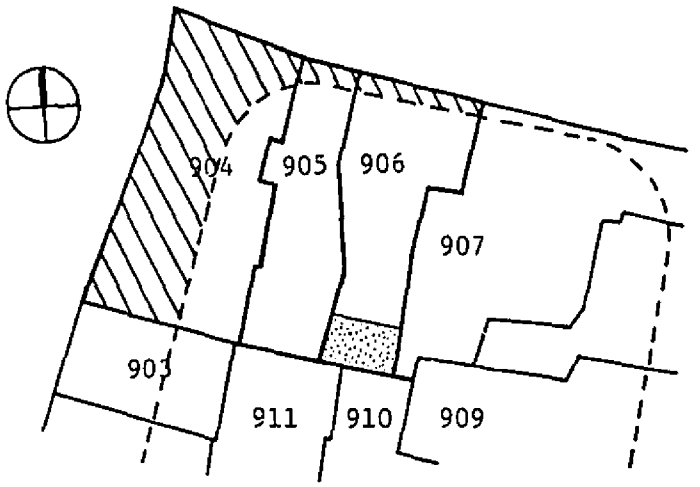
In the traditional house, few exterior openings were common and acceptable to women because the courtyard was the major source of light, fresh air, and social activities, while the outward facing window was a secondary source. But in the new apartment buildings, women have only the outward facing windows. Since these windows remain mostly covered, people have become dependent on electrical lighting as an alternate source of light. The ventilation and cooling of the air is through artificial means, with air conditioners or fans, depending on what is affordable; poor people manage their needs by sometimes opening the front door by the staircase to allow fresh air circulation.



Large portions of the windows are kept closed

Figure 3-12

In addition, orientation which was not a problem earlier in the courtyard house, became difficult in the new settlement. Site 906 has only one opening toward the North and a light well facing the south. During the winter, sunshine from the light well is hardly enough for the fourth floor of the building since the sunshine angle does not reach up to the lower floors (Fig. 3-13).



Light well
Site 906 has the North as the only orientation

Figure 3-13

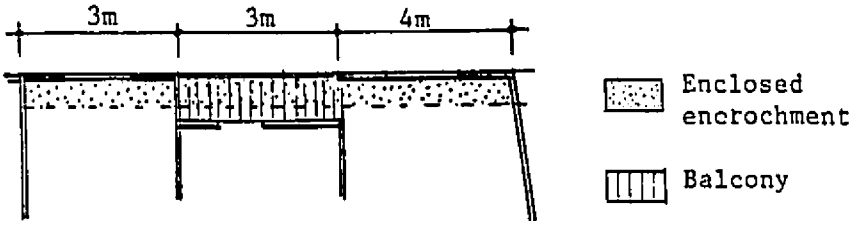
The balcony as a building element provides more exposure to view than a window. Hence, enclosing the balcony or avoiding that space are the only options if one is to maintain privacy. According to Section 33/A of the Building Code, the maximum depth of a balcony is 1/10 of the street width, that is, between 0.6 and one meter (Fig. 3-11), since the street widths in the new settlement vary from 6 to 10 meters. Since the balcony is too small for any activity, most people enclose their balcony for two reasons. One is to add this space to enlarge their already small rooms and the other is to provide for visual privacy. Section 36/B of the Building Code determines that 30% of the allowed cantilever must be left open as balcony, while the rest can be enclosed. The justification for this requirement could be to create variation in the elevation. The Municipality's intentions however, do not match the users' priorities.

Enclosing the balcony is considered a violation of the Building Code, Section 121. The Municipality has the right to demolish any structure that violates the code, as long as the officers act during the process of construction. If the violating construction is completed before the Municipality's officers discover it, the enclosure may remain.[129] Thus, people construct the enclosure as fast as possible, even if the process is more

[129] *This action is supported by a court ruling.*

expensive. The balcony is enclosed with expensive materials like aluminum and glass panels. Later, people add curtains, smoky glass or both to avoid being overlooked.

In fact, enclosing the balcony seems to be the most frequent infractions of the Building Code. Sometimes it takes place even before people move into their apartment. In case covering is not possible due to financial reasons or due to intervention from the Municipality, people leave their balcony open and use it as a storage place or enclose it with a piece of fabric, just to avoid being overlooked. Another popular use of an uncovered balcony is for drying laundry (Fig. 3-14).



the Building Code determines that 30% of the allowed cantilever must be left open as balconies

Figure 3-14

As revealed by personal observation, in some conservative quarters of Aleppo, it is a tacit convention that balconies are supposed to be used only by women, for housework or entertainment, as they do not go out as often as men. Of course, when a woman uses her open balcony she dresses almost as if she were going into a public place. If a male member of the family tries to use his own balcony he could provoke a conflict with his neighbours.

In summary, in the new pattern of development, the authorities focused on easing vehicular movement and facilitating layout of infrastructure. Social and cultural needs such as safety, privacy as well as protection from the harsh climate did not receive appropriate consideration. This made people withdraw from their traditional forms of living. They placed doors at their building entrances, closed off large portions of their windows and enclosed their balconies. These emerging patterns of development were the product of many inputs. Amongst these, new building materials and construction technologies, international urban and architectural trends (attributed to media and

colonization), a pro-western educational system, social and economic changes in the society have had significant effects. But the direct and most pronounced factor shaping these new developments can be attributed to the authorities building development regulations, prominently among them the Planning Law and the Building Code. These regulations switched priorities from social, cultural and climatic to increased mechanistic functionalism.

Though people try to barricade their home and family from the external environs, men go out and loiter, which is not possible for children and women. Children are deprived from playing outside because of the lack of safe open spaces. Meanwhile, according to cultural norms, going outside, for women, requires rationalization such as going to school, work, shop or visit friends and relatives. Besides shopping, most of these destinations are indoors. This limits the outside experience for women to the distance between two indoor places. In general, women spend most of their time in their houses. Houses therefore need to be vitalized through the use of partial openings, which respect the desire for privacy, and simultaneously improve the indoor living environment.

The new settlements initially targeted poor people, but poor families found these unacceptable. This was because the new sites made provisions for small units and had high reconstruction costs. These units (produced under the Building Code and Civil Law requirements) did not appeal to the family members, especially women, who needed more indoor space and privacy. Thus, most poor people sold their existing share of a new property and moved to the city peripheries. They bought plots in illegal settlements where no regulations were enforced and tailored their living environment based on their needs. Most of the property in the new settlements was bought out by richer families who could afford to bear not only the burden of reconstruction but could also adorn the new buildings with materials like stone or marble and supplement the internal comfort levels of the dwellings with air conditioners.

The domestic activities and socially integrated units found in the traditional quarters do not exist in the new settlement. The resulting environment has a negative effect on the social conditions; communication has been reduced since doors are always closed. There is an isolation between the dwelling units and public spaces. Bad habits generated in reaction to this environment include a lack of trust and of participation. The socio-cultural familiarity has been lost.

> *Byrom noted that there is an apparent loosening of immediate social relationships and informal social ties with neighbours, associated with an increasing desire for privacy through non-involvement and social distancing rather than through intimacy and collectivity.*[130]

Attention should be focused on the need for privacy and strong social ties among residents in order to promote a sense of community and create a harmonious living environment. The Tanzanian president, at the "Housing in the Islamic Cities" conference, summarized the importance of sustaining these ideals:

> *These timeless human needs should not be hostage to fashion and rigid standards. There is much to learn from the experience of earlier generations, gathered by centuries of trial and error, before we seek to discard this legacy for the often illusory promise of solutions imported from the western world. This is not to deny the importance of remaining open to what is best in the world around us. It is sensible to promote modernity while protecting the cultural heritage and roots of our people, to find the right balance between stability and change, between modernization and tradition, between external and internal influences.*[131]

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[130] *Vasiriiabar, p. 83.*

[131] *The Aga Khan Program for Architecture. The Architecture of Housing (Cambridge, Mass., The Aga Khan Publication, 1988), p. 12. (Proceedings of the International Seminar of Housing in the Islamic Cities, held in the United Republic of Tanzania, 12-15 October, 1988).*

CONCLUSION

The last two chapters analysed housing paradigms, both traditional and modern. In traditional settlements, the building guidelines were based on the religious principles and values, whereby people built based on mutual consensus and avoidance of harm to others. Local residents decided on the shape and size of their dead-end streets as well as their *Finas*. The width of thoroughfare streets was varied by allowing encroachments or over-passes as long as they were not objected to by the street users. The principle of avoidance of visual intrusion was evident in the treatment of openings in elevations, the size and location of which varied from one case to another. Those principles were effective, not only because they were driven by peoples' beliefs, but also because they responded appropriately to cultural and social needs.

The physical form of the settlement and the social life that existed within it supported each other. A hidden dead-end street with controlled access provided an outside private open space for women to mingle freely with their familiar neighbours. In addition, it provided a safe place for children to play and acted as an extension space of the daily activities for any house which was accessed from it. Private accesses used by women, often through other houses among other factors, laid the foundation for good relationships between one another. The need for security fostered interdependency and trust amongst neighbours of any dead-end street. The use of the introverted house type was prompted by concerns of privacy, climate and other cultural factors which also affected the location and size of openings. Dwellings were simple and homogenous in their external appearance. This reflects the principle of 'humbleness' among Muslims which grouped the wealthy and the poor together in one neighbourhood.

The rapid urbanisation of Damascus region increased the demand for residential, commercial and other land use. The shortage of urban land led the authorities to develop urban plans and regulate land use. The objective was to control built form and to regulate the direction of growth and use of urban land. This consequently led to the establishment of a building code, the contents of which were drawn extensively from the French

Building Regulations. In the modern housing paradigm, social needs such as privacy and security were no longer considered paramount. The new system of standards and measurements used were not responsive to these traditional needs and values. People, not being satisfied with the outcome, took two types of actions to fulfill their needs. The first type of action occurred at the social level with children and women limiting their outdoor activities, which resulted in people becoming socially less active. The other type of action was physical whereby people, before moving into the new building, made alterations to the physical form such as enclosing balconies. Most of these physical actions are considered 'violations' according to the Building Code and are subject to demolition. Outdoor spaces became limited and the safety of community residents was affected by increased vehicular movement and inadequate provisions for pedestrian circulation. Further, reduced interaction among neighbours led to alienation among community residents. The implementation process followed by the authorities ended up affecting people's lives and their built environment.

The authorities implemented their policies at both the macro and micro levels. They claimed ownership and control of public space--the roads. The intention was to provide easy vehicular access and essential services including water supply, power, drainage and sanitation. The authorities also took charge of the local jurisdiction for the settlement of conflicts among neighbours which were in the past amicably settled through discussions among the concerned parties or by religious judges, with immediate results. The modern concept of residential settlement replaced the Islamic socio-religious organization, with no sensitivity to the traditional hierarchy of open spaces. The new legislations disregarded the traditional building principles that had promoted good relationship among neighbours.

As a result of the new policies of the authorities, the replacement of the remaining fragments of the traditional quarters by new settlements is inevitable. The introduction of new street networks and the erection of four-storey extroverted buildings have resulted in the change or disappearance of some factors that held traditional settlements together. In fact, erecting a single new building was enough to disturb the privacy and the micro-climate of the surrounding traditional houses. This alteration adversely affected the traditional dwellings which were oriented towards favorable breezes and sunlight. The traditional building principles had been honoured by everyone through mutual agreement. With the intervention of the authorities through

the implementation of the Building Code, the Rental Law and other by-laws, these principles, which bound the community together, were ignored.

However, today people are willing to replace the remaining fragments of their traditional neighbourhood for many reasons. The growing needs of modern transportation are a major deterrent to the traditional quarters. Narrow roads and lanes in the quarters have congested vehicular movement. With the advent of new building materials which require less maintenance, the traditional wood and mud structures are becoming less popular. The lack of traditional skilled construction labour has made maintenance of traditional housing a difficult and expensive exercise. In addition, modern architecture symbolises 'status' and greater returns from increased built up area.

Both the traditional building principles and the building & planning codes play a crucial part in shaping the built environment in the traditional and the modern settlements respectively. Thus, in order to enhance the new built environment some portions of the process of replacing the traditional quarter need to be reconsidered and modified. These portions are both on a macro level (Rental and Planning Laws) and on a micro level (Building Code).[132] Each level complements the other, and working only on one level will not help achieve the anticipated improvement.

This study illustrated the negative effects of the Rental Law on both the physical conditions of the built environment and the relationships amongst people. Maintaining rents at reasonable levels and guarding the tenants against arbitrary eviction are the main objectives of this law.[133] However, this law does not provide landlords with fair rents, especially in comparison with the inflation rate. On the other hand, the Rental Law imposes a lot of restrictions on the eviction of a tenant. Though the issue of fair rent is crucial, it is not discussed here, for it is beyond the scope of this thesis.

Evicting the tenant has a major effect on housing development in general. Eviction is opposed by the Rental Law and avoided by the Building Code. Highly protected by the authorities, the tenant feels secure and empowered to the point that in the event of new development, demolishing an old house and constructing a new building, the tenant asks for a large compensation or a prime share in the new building. Most often these

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[132] *Refer to Appendix -B-*

[133] *Kiran Wadhva, Delhi Rent Control Act, HABITAT INTL. Vol. 17, No. 1,, (Great Britain: Pergamon Press Ltd., 1993), pp. 103-116*

requirements far exceed the owner's or the developer's anticipated profit. Thus, plainly empowering tenants against eviction not only deprives some landlords from turning over their houses to the rental housing market, but also postpones if not drops the idea of such development of rented properties. Abolishing the Rental Law will create social problems and disturb other investments, besides housing, in the market. Furthermore, it is out of the question politically. **The authorities will have to strike a balance between protecting the tenant from arbitrary eviction while simultaneously honoring the landlord's right to invest in his or her own property.** Three suggestions can facilitate the eviction process fairly and consequently promote housing development. First, the tenant's compensation should be measured in relation to the rental rate which was fixed by the Rental Law. Second, giving a note of eviction for a relatively long period (one to two years) is enough time for the tenant to look for another accommodation. Third, the contract between a landlord and a tenant should be honoured and enforced.

On the planning side, the disparity between demand and availability of urban land created a complicated real estate market. This market is sensitive to the point that any alteration in the urban fabric will cause a substantial change in the value and appreciation of the land. For example, the introduction of new arterial or access roads, public facilities or development proposals (especially on the periphery of the city) promote speculation and stimulate the market.

Most of the habitable sites in Damascus were privately owned. In general, all the sites in the traditional quarters were either privately owned or were held in permanent trust (*Waqf*). However, in the new settlements this is not the case. The area notified as public property in these settlements is large, accounting for 35% of the total area of the studied sub-quarter. The Municipality could not afford to pave, plant and maintain this large area on a regular basis. The enlargement of public property at the expense of private property led to the creation of small plots, which in turn increased land values. This led to the elimination of courtyard houses and the construction of unfavourable small housing units. Khayer states that the new urban settlement has transformed the traditional housing pattern from life in large houses with narrow accesses to life in small units with wide streets.[134]

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[134] *Safouh Khayer, Madinat Dimashq, ("Damascus City") (Damascus: Ministry of Culture, 1982), pp. 412-415.*

Examples from the Third Chapter illustrated the unfair treatment meted out to different property owners by the municipal authority. Some owners had to give up large portions of their property for public use without compensation, while some others had to give up only small portions, or sometimes even none. In other words, there are some externalities.[135] On the other hand, the Municipality maintains double standards while transforming land from private to public or vice versa. According to its plan, the Municipality appropriates large portions of private land for public property without compensation. When a small part of the public property is to be added to a private site, the Municipality sells this part at the market value. In addition, the Municipality stipulates that dead-end street owners relinquish all their rights of ownership and use of this access before they get a permit for a new building. Consequently, municipal planners armed with such excessive powers are careless about the principle of fairness or externality and people's right of ownership. The chances of even the most unfair plan being challenged in a court are remote since the legal processes are both costly and time consuming. Thus, **a limit for transference of private property to the public should be set, beyond which adequate compensation should be applied amongst the property owners in order to reduce the externalities involved. A comprehensive legal review should be initiated to look into the right of the Municipality to strip ownership rights without compensation as well as into the fairness of the estimation of the value of an acquired property.**

In physical terms, the authorities expanded their territory horizontally and allowed people to extend their buildings vertically. In legal terms, besides claiming the ownership and control of all non-private property, the authorities limited the owners' tenure upon some parts of their own buildings. An example of this is the Section 55/A & B, which requires all owners to declare in writing that their roofs and light-wells would be used as communaliy owned spaces. Residents have the right to use the light-well as an

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[135] *With respect to a property, 'externality' is a term given to those physical features or actions that affect it without the consent or motive of the owner. For example, when the Municipality wants to provide a public street, often it passes through privately owned properties. The site owners are forced to give up this part of their property 'for the benefit of the public' without any compensation whatsoever. If more than one private property is affected, the losses incurred are not shared in a fair manner. The negative externality for the owner who gave up a large portion of his/her property, is far greater than for the owner who lost less.*

open space, but they are not allowed to change or build anything in this space even if all the residents concur to such an action.[136]

Since all the public property in the new settlement is used as streets, a change in the ratio of public to private property could be achieved through modifying the street dimensions, character and tenure. However, these changes do not guarantee reduction in land value, since the demand for land is far greater than the availability of land. On the other hand, increasing the width of the streets would not mitigate the 'harm' caused by the visual intrusion between neighbours. An example from the author's personal experience supports this statement. In an apartment located on the fourth floor of a building at an intersection, where the closest neighbour's window is more than 15m away from the apartment, two or three of the four-panel shutters are kept permanently closed and curtains are drawn together behind the shutters. Therefore, regardless of the distance between the windows of two opposite dwelling units, the extroverted housing type is considered as exposed and the users feel that they are vulnerable to visual intrusion.

The character of an access suggests the type of activities that can take place within it. For example, an easily accessible main street indicates commercial use, vehicular and/or pedestrian movement. A hidden entrance indicates residential use, or pedestrian access that fosters social interaction among people. But there is no such distinct character to the streets in the new settlements. All public property is utilized as a thoroughfare, catering to both vehicular and pedestrian movement. There is indiscriminate commercial land-use along all the streets.

The shape of an access as well as its tenure status have a great effect on the social life of the people using it and the activities they perform within it. Many factors, such as pedestrianization, can improve the physical condition of the access and promote positive social interaction. If the traditional semi-private open spaces are to be revived, **the authorities should accept users' control, if not users' joint ownership, over the access to their units. This would allow the users to decide on the shapes, dimensions and functions of their alleys.**

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[136] *The Municipality started to implement these types of requirements after it lost a few cases in court, when some people sued the Municipality for attempting to demolish parts of their buildings which violated the Building Code. The court ruled in favour of the people on the grounds that those parts were built on private property.*

The existing administrative structure can be reformed to encourage local level participation in the planning process. Damascus is divided into fifteen sectors, with each sector being served by a Public Works Department (PWD). This department is in charge of the implementation of the Municipality's decrees and regulations, including the demolition of any construction that violates the Building Code. In addition, it is responsible for maintaining public property and the utility networks in its sector. The PWD is not authorized to make any major decision of its own, despite the fact that it has at least four architects and civil engineers, amongst its technical personnel. Their role could be certainly enhanced as follows:

The Municipal planners do not have to develop a complete detailed plan and superimpose it on the traditional urban fabric. Laying out the main axes and leaving the lesser details to a local committee would be sufficient. Nabeel Hamdi emphasizes that:

> *Community participation ensures that everyone involved has a stake in the outcome and that therefore they have some measure of control over it. The best processes of community participation ensure that all concerned will share the responsibilities, profits, and risks of what they will decide to do.*[137]

Chapter Two illustrated the community participation practiced in the traditional settlements, in deciding street widths, allowing or objecting to an overpass, etc. The new local committees should include representatives from all parties: the local Public Works Department, the tenants, the owners, and their architects or planners.

People were aware of the shape of their sites and of the straightness of their accesses. In all illegal squatter settlements around Damascus, people subdivided the land, as much as they could, into parcels with regular shapes and laid down streets, as straight as possible, with widths of no less than 4m. They inherently assumed that the regular shape of the site would improve their house design and increase land use efficiency. In addition, the straight and reasonably wide streets, it was thought, would ease layout of infrastructure and afford vehicle access.

The traditional principle of 'causing no harm' is still relevant. In fact, it is needed today more than ever. Sources of noise have become numerous: each house has several instruments and appliances, including air-conditioners and

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[137] *Nabeel Hamdi, Housing without Houses (New York: Van Nostrand Reinhold, 1991), p. 75.*

generators that compound the disturbances caused by the increased vehicular traffic. Chapter Three showed that some of the user activities, like children's play, have become a source of nuisance in the apartment buildings, violating the neighbours' privacy. Thin partitions between units raise people's fear of being overheard by neighbours. Visual intrusion has become a matter of daily concern because of the shift from houses clustered around dead-end streets to extroverted housing blocks surrounded by streets. Commercial activities face the entrances of these blocks, leaving little for residential privacy. The disagreeable urban patterns and architectural elements, together with the defensive attitude of the users, have broken the social ties among neighbours. Municipal permits have taken precedence over traditional values. No longer is a neighbour's objection considered important as long as municipal rules have been complied with.

The authorities have generalized the problems and singled out the solution. Observing the few examples given in Chapter Three, it is apparent that every site has its own unique features. Hence, a Technical Committee was formed to study the special cases that were not covered by the Building Code. For sixteen years, ever since the Municipality implemented the new Building Code, this committee has been overwhelmed with numerous cases. The decrees issued by this committee in response to the special cases outnumber the Building Code's sections several times over.

The committee comprises of the Mayor, the head of the Technical Affairs Office, a member of the Executive Council and the head of the Permits Office. Usually, there are no architects or planners on the committee. Moreover, the members are preoccupied with other duties and other committees. The committee meets once a week for a short period to discuss a few cases and pass orders on the solutions proposed by the Building Permit Office. It is important to mention that neither the owners nor the architects representing them are allowed to attend these meetings, even though it is their properties and projects that are the reason for the assembly in the first place. This process reduces familiarity with the problem and its ramifications and increases the chances of adopting inappropriate solutions.

In a bureaucratic centralized system, filing a complaint is of little avail. The Municipality and its Public Works Departments receive many complaints, including different kinds of unanticipated liabilities which are protected by Municipal permits and decrees. In several cases, the harmed party sues both the Municipality and the harming

party. This effort does not accelerate the process either, since the courts are overworked with many similar cases, which forces the litigators to wait several years.

The traditional building principles, physical form of the built environment and social life in the traditional quarters formed the vertices of an equilateral triangle. Each vertex had an equal and reciprocal effect on the other two. They supported each other and evolved a model which contributed significantly to the development of an Islamic urban form. Unlike this, in the new settlements, the relationships among these parameters became linear. The Building Code shaped the physical form of the built environment, which in turn affected the social life of the residents. This has resulted in an inflexible top-down approach with the Building Code dominating. Moreover, regardless of their social needs, the residents cannot alter their housing because such an action is considered 'unlawful' and is subject to demolition.[138]

However, dissatisfaction of the residents with the entire scenario has forced them to breach the Building Code and risk demolition. Presently, the Municipality cannot keep up with building violations either in this settlement or in any other settlements, even though it operates sixteen demolition crews. **Supporting the PWD with legal experts, placing each PWD in charge of special cases in its own sector, and discussing these cases with the owners and the affected people will increase the chance of reaching comprehensive cooperative solutions to these housing problems.**

The Building Code has to be flexible, so that it ensures safety without overly prescribing the actual forms. People need more options. Chapter Three illustrated the problem of using the lower floor as a commercial area. The owners' miscalculation of the demand for commercial space in a particular neighbourhood should not be treated as an irreversible mistake. If the Building Code does not determine the floor level, the owner, or the designer, can accommodate both possibilities, commercial and residential, in the design. In any future changes, such as new users with different requirements, or an increase in the demand for commercial space, transformation from one activity to another could be done with minimum

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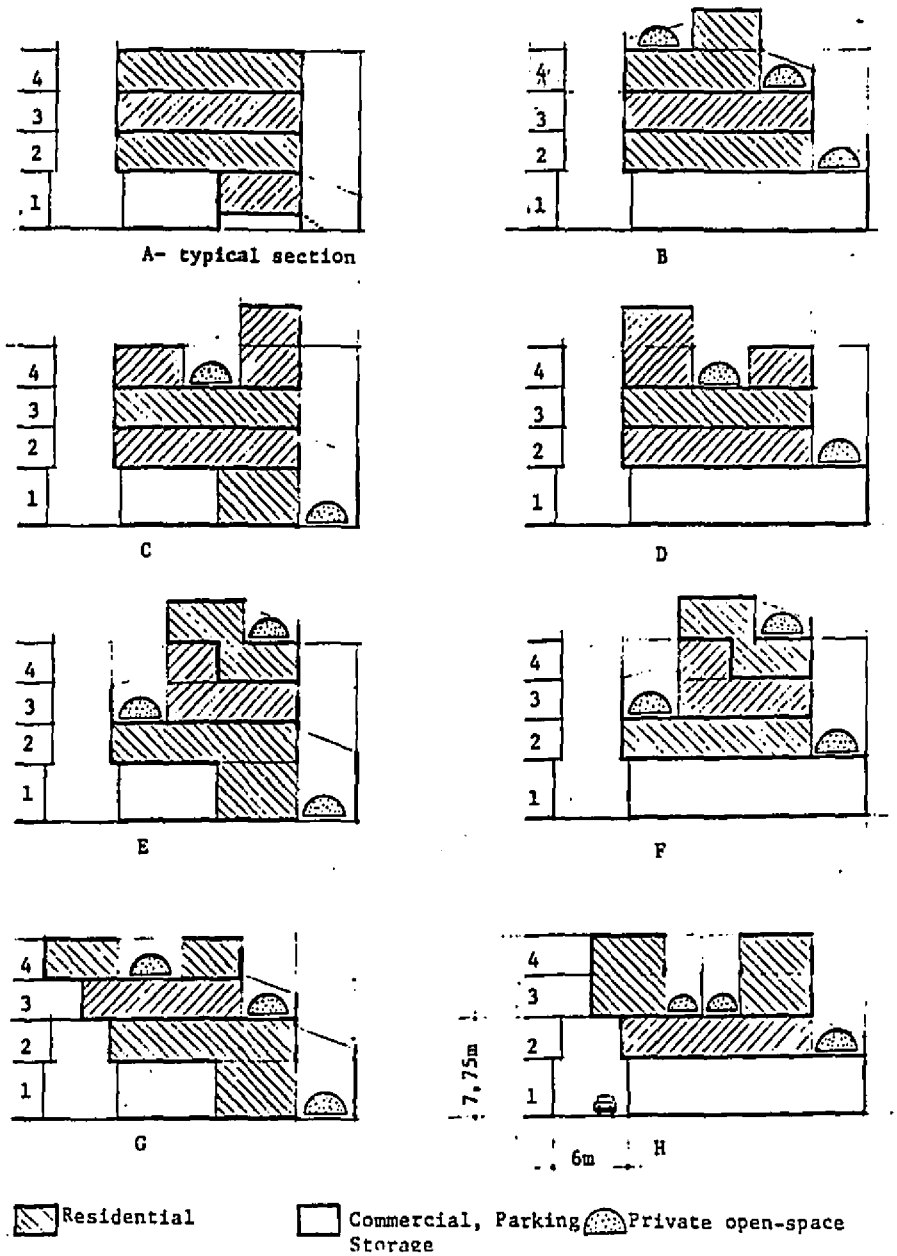
[138] *According to the Building Code, any change in the house layout is considered a violation, though in practice, municipal officers do not report changes in interior partitions as long as these modifications do not encroach on a light well, a staircase or reduce kitchen or bathroom areas.*

construction. In fact, the lower floor could be used for indoor parking as well, since there is no designated parking area in the municipal plan.

The enclosing of balconies is another subject which should be reconsidered in the Building Code. Being the most common violation, either for privacy or for more space, or both, closing or opening the balcony should be to users' discretion. This freedom of choice would facilitate needed privacy and reduce the use of imported materials such as glass and aluminum. The creation of small openings in the building's exterior wall and the use of effective local insulating materials will improve the climatic condition of the indoor space and reduce the expenses in both the short and long terms.

The introverted housing type, through its thousands of years of trial and error, has stood the test of time in the Middle East. The Municipality, through its Building Code, should encourage owners to reuse the courtyard house wherever possible, combining floors in apartment building if needed. This paper recommends a reinterpretation of the courtyard house type that could be deployed which is illustrated by a hypothetical example (Figures 4-1 and 4-2). The courtyard house does not have to be completely enclosed, it can be only partly enclosed or even consist of a walled terrace. The degree of enclosure depends on the physical constraints and the users' desires. Figure 4-1 shows a section through the hypothetical site with a few options for private open space in an apartment building.

For the dwelling on the fourth floor (Fig. 4-1 A, C), a portion of the built up area may be moved to an upper floor, leaving a private open space at the entrance level. This enables the users, especially women, to enjoy all the advantages of the courtyard house, such as natural lighting, air circulation, and most of all, privacy. Of course, care should be taken to ensure that the part of the built space taken up by the upper level does not intrude on the privacy of other dwellings by placing windows above eye level or using the projected type windows. The shape of a given site might restrict some of the illustrated options, while stimulating others (Fig. 4-2). The creativity of a less inhibited user or designer can create unlimited options. Chapter One illustrated a good example of an irregular solution under a paradigm different from that of the Building.Code. The Building Code should provide incentives to the owner who adopts the introverted housing type by granting him or her the right to build on the roof, creating either a fifth floor or encroaching above the street (Fig. 4-1 G, H).



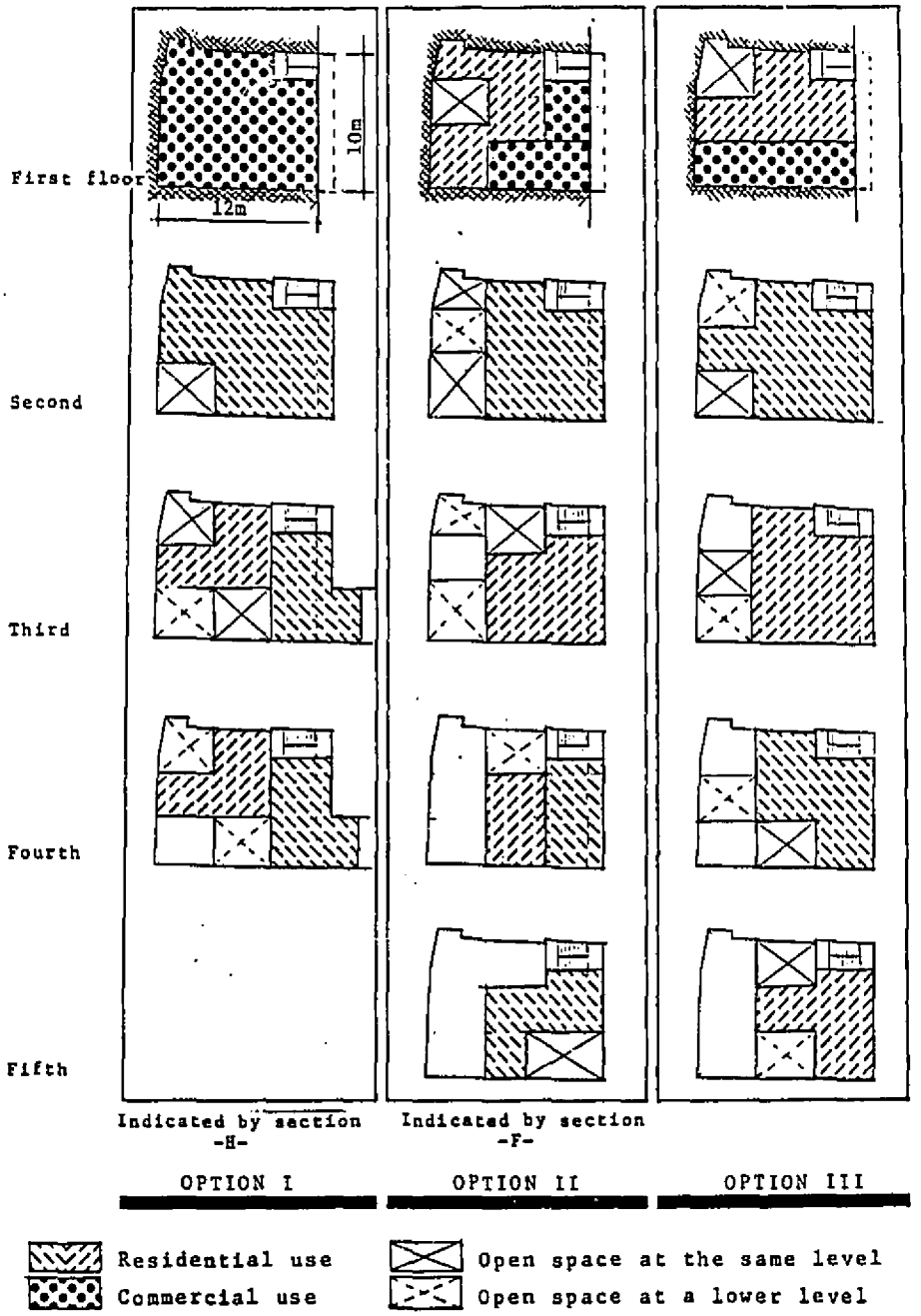
** The commercial, parking or storage area could be a part of the residential unit in the first floor.*

** The wall surrounding the private open-space goes high to the point that there is no visual harm to any party.*

** Some windows have to be placed high in order to prevent any visual intrusion. Using the projected window type is another option.*

A hypothetical section suggesting reinterpretations of the courtyard house type in the apartment building

Figure 4-1



Options of inserted open spaces in the apartment building on site 715

Figure 4-2

Finally, the minimum or maximum areas of allowable private open space is a very delicate issue. It has to be balanced between motivating people by rewarding them with extra space to build and restricting people from being greedy. As mentioned above, specifying the exact width, distance or area of any urban or architectural element would revert back to the existing Building Code. Instead, the local committee--the PWD and the concerned parties--could be given the responsibility of deciding these matters together, keeping the 'Harm Principle' as the main reference for resolutions of conflicts.

This Building Code and other housing regulations, presumably, are concerned with the performance of the built environment. Judging from the action of the people, this study has indicated that residents of the new settlement are not satisfied with their new houses. Compulsory requirements have catalyzed their deteriorating social relationships. Rigid prescriptive standards have made the new buildings inflexible and incapable of responding to changing needs. Moreover, the new settlements do not go hand in hand with basic cultural requirements such as privacy and security. If we are to learn from our mistakes, this is the time to modify these requirements and focus on flexibility in building with culturally-sensitive codes.

CHRONOLOGICAL SEQUENCE OF CIVILIZATION IN DAMASCUS[139]

BC	
Paleolithic-Neolithic 8th-4th Millennium	Evidences of long-lasting human occupation in this region. Huts built from reeds on top of platforms constructed from hand-made mud-bricks.
3rd Millennium	Damascus mentioned in the tablets from *Tell Mardih/Ebla.*
Early first half of 2nd Mill.	Babylonian Civilization.
Late first half of 2nd Mill.	Hurrian Civilization.
1595	Hittite Civilization.
Late Bronze Age	(*Timasku* or *Damasku*) listed among the conquered towns by the Egyptian and pharaoh Tuthmosis III.
Late 2nd Millennium	Becomes the capital of an Aramean Kingdom.
Early 1st Millennium	Falls to the Assyrian Empire.
333	Conquered by Alexander the Great.
The 1st century	Comes under Roman control.
AD	
395	Becomes a part of the Byzantine Empire and capital of the region.
Late 5th and early 6th	Gassanid Arabs and Sassanid Persians alternate control over Damascus.
634, (13 A.H.)[140]	Becomes a Muslim city.
661, (40 A.H.)	Capital of the Islamic state during the Umayyad Dynasty.
750, (129 A.H.)	Capital moved to al-Kufah in Iraq in the Abbasid Dnasty.
Late 10th century	Hamadanid State with Aleppo the capital.
11th century	Turks (Saljuqs) invade the Syrian region.

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[139] *Wayne, T. Pitard, Ancient Damascus (Winona Lake, Indiana: Eisenbrauns, 1986), pp. 1-58, and P. Hitti Koury, Capital cities of Arab Islam (Minneapolis: University of Minnesota Press, 1973), pp. 61-84.*

[140] *The Islamic Calendar which started in year 621 AD, when the Prophet migrated from Mecca to al-Madina.*

1174	Salah-al-Din (Saladin) occupies Damascus and makes it a joint capital with Cairo of his Syrio-Egyptian realm.
Mid 13th century	Mamluks era.
1517	Ottoman Empire, Damascus serves as a station center in the Pilgrim seasons.
1921	Damascus reclaims its status as the capital of the Syrian region under the French rule.
1946	Damascus the capital of the independent Syria.

The Building Code of Damascus city, 350/M.T 1978, comprises 123 sections, some of which have more than one sub-section. In this appendix the author has selected the sections or sub-sections that he believes ought to be reconsidered. This is aimed at making the building code reflect the traditional social needs of the local population as well as improve the built environment of the settlements where these requirements are applied.

Several checking and scanning processes are conducted to make sure that the Building Permit complies with the Building Code. The enforcement of the Building Code goes beyond issuing the Permit. According to section 20, any violation during the construction process would invalidate the Building Permit. In addition, the architect or civil engineer who is in charge would have his/her license temporary suspended, the developer and the owner would be fined, prosecuted and jailed from 1 to 5 years. Furthermore, power and water supplies would be connected to the new building only after the Municipality confirms to the utility companies that the new building meets the permit specifications, Sections 21 & 22. Therefore, most physical modifications to the house take place after acquiring the necessary utilities.

The Building Code requirements whose implementation help to replace traditional built environments by new settlements are:

Section 6/D: In the Demolition Permit of old buildings, the occupants of the building to be demolished should be informed that the permit is not a justification for their eviction.

Section 11: The Technical Affairs Management in the Municipality defines the buildings and sites borders according to the approved plans as well as the detailed plans. In addition, it controls the layout of streets and the new building levels according to the street plans.

Section 12/A: If the approved plan dictates at the time of a building permit application, that part of the public and/or the private property has to be annexed to the site subject of the permit, then this specified part has to be bought and paid for, before issuance of the Building Permit.

Section 12/B: If this plan dictates that a part of a site that is subject to construction has to be annexed to public property, then the related Building Permit could be issued on the condition that no construction be started on the site before legally giving up the specified parts in the concerned real estate department and before demolishing any existing construction on that part.

Section 13/C: It is forbidden to build on sites that are accessed from passage ways with private real estates numbers as well as sites adjacent to public property accessed by common access streets, as long as the building permit applicants did not give up their rights on the private access streets to the public property, including the right of overpass construction.

Section 13/D: The building permit for a site that is adjacent to a narrow access street will not be issued if these two conditions are not met:

1: To widen the access street to 4.5 m if its length is smaller than 20 m, and to 6 m if length exceeds 20 m.

2: To give up ownership rights as well as right of servitude and overpass on the access street to the public property.

Section 30: Wherever commercial shops are allowed, their floor level at the center of the facades should not exceed 25 cm above the adjacent sidewalk level...

Section 34/D: The distance between a balcony and an adjacent site should be at least 1 m.

Section 36/B: The area of the enclosed balcony projections (enclosed balconies) should not exceed 70% of the total area allowed as projections, according to the by-laws of the sections 33 and 34 of this code.

Section 46: The smallest residential unit has to have at least two rooms with a total area of not less than 20 sqm, where the smallest dimension of the room is not less than 2.5 meters, a kitchen with an area not less than 6 sqm and both a toilet and a bathroom that can be combined with a total area not less than 3 sqm, or 3.5 sqm when partitions are included.

Section 55/A: The roof of a building in any site is commonly owned among all the different sections of the building. Any kind of construction on the roof is prohibited except for the staircase(s), elevator room(s) and water tank(s).

Section 55/B: The set-backs required of a building, imposed by its approved architectural plans, are commonly owned among all sections of the building and are coupled with the servitude right of use for the sections that are directly connected to them.

Section 57/C: When designing the elevations of buildings, color and finishing materials should be unified with those of adjacent buildings.

Section 59: Any alteration or change in the facades of buildings requires a permit to renew the whole elevation. The Municipality has the right to ask the owners or the persons concerned to renew or clean the elevations of their buildings whenever the Municipality sees necessity...In the advent that they refrain, the Municipality can execute the work at their expense and responsibility as stated in section 116 of this code.

Section 84/J/5th/1: In the old districts area and its extension, it is forbidden to build on a site with an area smaller than 75 sqm. However, if this requirement is not fulfilled, it is up to the executive office to allow it, under the conditions the office sees it appropriate.

Section 84/J/8th/3: In case the first floor is residential, the level of its floor should be 125 cm above the adjacent sidewalk.

Section 121: Any violation committed in a construction that was issued a Building Permit according to this Building Code is subject to demolition.

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