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Urban Space Transformation in Old City of Baghdad – Integration and Management

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Introduction

Like all historical sites in Mesopotamia emerged to serve the Humanity all over the world, Baghdad stands on the top of cities giving an excellent example of the dramatic development through decades. The city which stands on the river Tigris and not far away from Babylon faced multi-faceted transformation procedures in the physical and cultural environment due to natural and political issues. Baghdad city has a lot of urban features which belong to different historical periods. The transformation from a circular fortification city to organic pattern reflects the local contents of physical and socio-economic characteristics. The city kept its compact structure till the beginning of British colonial period in 1917. The inner shape and urban components started to change until we reach a very critical situation nowadays. Today this city faces urban decay and segregation due to the uncontrolled planning policies and started to lose its bright heritage architecture and urban fabric in severe way especially after three grinding wars.

The absence of development strategies to protect the urban heritage of Baghdad allowed the modern structure to reach the peripheries of the old part and destroyed the inner part where historical monuments and quarters exist. The approach was to enhance modernism in the 1970s and 1980s trough new architecture and technical facilities. The strong interference in the historical structure accompanied with strong market power extension caused a real damage in spaces that

have spiritual and historical influence and the sever interference caused more devastation of the existing urban places and created also more vacant lands and not defined space. The spatial configuration of the whole city was modified and the city structure was mixed. Conflicts in urban structure and urban space accompanied with socio-economic problems were the result. The old city was divided into several parts and created spaces which are not a meeting points but segregation borders for each part. What made the situation worse was the absence of regulation which controlled any urban development procedure accompanied with a monster of corruption which allowed more destruction for more traditional buildings and sites.

The Transformation of Urban Space from a Geometric Circular City to an Organic Pattern

The round city of Baghdad took four years for construction (762-766 AD). The city had symmetric streets surrounded by geometrical residential blocks and three walls. The city considered as revolutionary aspect in urban planning.¹ The round city had circular and concentric shape surrounded by three walls and four gates (Fig. 1). The third inner wall separated between public and private space. The wall usually separates the private houses from the public courtyard which includes the governmental buildings surrounded by the two main public buildings, the palace and the mosque.²

¹ Al-Ashab, 1974, p. 134-5.

Le strange, 1900, p. 14.

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The round city had no recreation spaces, gardens, statues, and gymnasium and public monuments. The impressive buildings inside the round city were only the Royal palace and the mosque with its market which occupied the four radial streets.

The area of the round city became limited and there was no sufficient space to adapt more facilities or to cope with the increasing population. The city started to expand beyond its wall as a result of increased numbers of immigrants and emerged to the new capital. The urban area sprawled around the walls in a complex of urban elements. Each one has its own market, mosque and institutions. Later the market became the vital part of the city rather than the palace that gave a dynamic power to enhance the city to grow.³ A big quarter was built in the eastern part from the round. The Mosque was the first monument built in the area and the palace was built after. The new city was circumscribed by wall and moat and was connected to the round city by a bridge.4 The city center was moved again and a new palace was built. The main new public center was surrounded by half circular wall. A new expansion took place again and a new wall was built around for more protection from the external powers (Fig. 2). The city kept its structure and wall till the end of 19 Century.⁵ The city was defeated and occupied by the Mongolians and from that time up to the 20th century the city has been occupied several times from different groups.

Baghdad under the Ottoman Period

A sketched map of the 17th century a drawn map shows that Baghdad had a quadrilateral wall with a 4th gate on Tigris River, called the water gate (Fig. 3). In the 18th century a detailed and scaled map based on survey was drawn for the first time. The map documented the city wall with its four gates, Kulwatha Gate or Eastern Gate, Muatham Gate, Wistani Gate and Talsam Gate (Fig. 4). It was mentioned that there were 20 big mosques, 22 Khans and many public like baths in this period.

In the 19th century the urban components were highly ordered and integrated. Its regulation created a kind of homogeneity in an ordered hierarchical relationship and connection. The space of the old city was more organized, according to the geometrical shape of the city. In the second half of the 19th century the

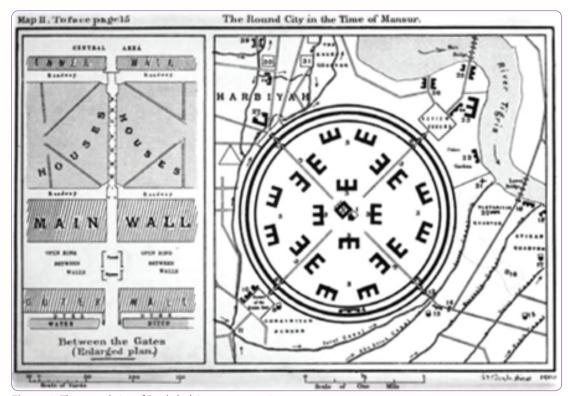


Figure 1. The round city of Baghdad, Le strange s. 15.

³ Allawi, 1988, p. 70.

⁵ AL-Silq, 2008, p. 60.

⁴ Al-Hiti, 1979, p. 15.

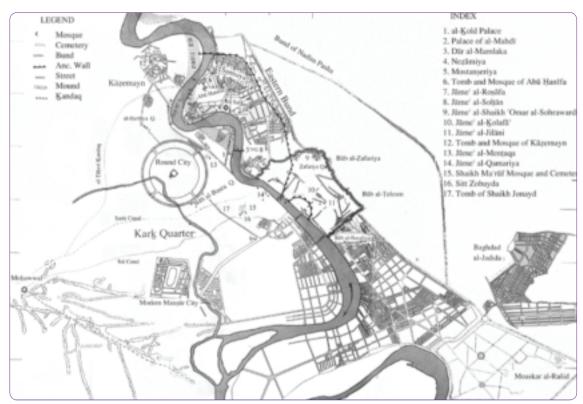


Figure 2. Baghdad morphology till the end of Abbasid Empire (Private collection).

city's isolation was reduced due to technical facilities like steamboats, railways ... etc. The street pattern was narrow and bended. The housing units consisted of two stories with protruding wooden windows covering the streets. These windows created an atmosphere like street tunnels between the buildings. The commercial streets (Suq) were covered to have more protection from rain in winter and heat and dusty storms in summer. The Suq was located near the citadel which was the main administrative center. The houses adjacent to citadel and Suq were occupied by different ethnic groups like Christians, Jewish and Muslims.

The Industrialization in the 19th century had a massive destructive influence on the Muslim city and society, transmitted by the colonization process in 20th century. The Ottoman started to line the first street/axis in Baghdad and tried to transmit the Westernization in the urban development style.

Baghdad in 20th Century

The plan of Baghdad had changed little in 1912 despite the population was doubled since 1853. The map, drawn by German army indicated that some parts of the western wall were removed. It also shows the first car street, the AL-Rasheed Street, in eastern part and the new German rail station in western part. After

World War I urbanism in Baghdad was newly structured due to the colonial strategies of the British mandate and later the establishment of the higher council for reconstruction in 1950 which set the modern planning concept for the city.

At the time of the British mandate which was followed by the foundation of the Iraqi Kingdom, a new axis was build to connect the main points of city.⁶ In the early 20th century four types of land use was found: religious, governmental, residential and commercial. Those types were mixed and not separated considering the main characteristics of Middle East cities.7 In the beginning of 20th century the religious land use had many mosques, churches, synagogues and cemeteries, located near the Tigris River and on the peripheries of Old city. The change of governmental land use was related to the change in government itself. A dyke was constructed to ensure a safe extension of the governmental land use and the whole city. Because of the dykes, the city grew in two directions: the first towards the Northwest and the other towards the Southeast. The growth changed the city in long and narrow shape. As result the governmental land use extended in two directions: the first adjacent to the old citadel

⁶ Pieri, 2008. p. 267. Gulick, 1967, p. 248, 250.

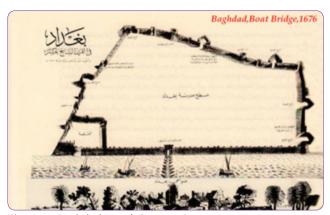


Figure 3. Baghdad in 17th Century, Susa 1952.

and the other to outskirts. One of the most important reasons for country development in Iraq is the prevalence of state-owned land. This allowed a large-scale-expansion in governmental buildings and projects sponsored by the state, like the palace of the Hashemite royal family which was built in 1920 in north part of city. Unfortunately the urban development programs neglected the urban legacy concerning restoration and conservation of the old heritage sites. Some projects were done inside the heritage city, in spite there were many expensive and undeveloped areas around it.8 Clear layouts with streets were founded accompanied by balconied houses which started to change the idea of family privacy. That was the end of the traditional house model. After the regime changed, the governmental center moved to more south of old city across the river. A new campus was also built in the same area to control the volatile students. Between World War I and II, three main streets were penetrated the old fabric parallel to the river. A new western middle class style started outside the old city with detached houses built in the corner and walled garden depending on the plot size. New neighborhoods appeared outside the old city and were not reflecting the traditional houses which belong originally to Sumerian. The city expanded horizontally about 20 km from the old city center in all directions. Plots with 300 to 600 m² were granted to people who were affiliated in different ministries and organizations. The urban fabric expanded in the Northwest towards Adhamiya and in the Southeast towards Diyala. In 1956 Spencely and P. W. Macfarlane proposed a road system connecting the old urban core with new river bridges and the outlined zones. In 1958 The Iraqi Government assigned Dioxides to prepare a master plan to the fast expanding

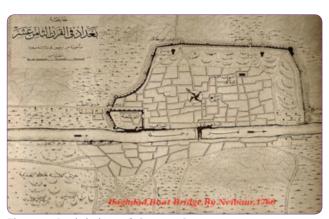


Figure 4. Baghdad in 18th Century, Susa 1952.

city of Baghdad with other projects regarding rural and urban housing. They supposed a rectangular area along southeast and northwest axis of the Tigris River. They suggested a bulk of new roads in addition to the existing roads to subdivide the rectangular area. A grid system was proposed to accommodate the residential sectors and subsectors with a little modification in the middle of the city to adapt the commercial center which located in the old city center and o in its edges. The industrial zones were located at the edges of the rectangular form. 9 A comprehensive development plan was authorized for Baghdad in 1970 by Polservice. This plan set the administrative boundaries for the city and the development strategies till 2000.10 The new master plan took a great attention to develop the suburban as part of the concept of "Greater Baghdad" of the city beyond its existed boundaries. It is suggested to create new counter -magnets in the north and south to reduce the pressure on the city centre meanwhile the city center should play a big role to participate in serving the Greater Baghdad. Polservice proposed to change the functional character of the old guarters with preservation as many as possible of the traditional historic sites and urban fabric. Large open spaces were used for monumental projects since 1980.11 Anew conservation planning concept was proposed in 1982. The strategy was to create a buffer zone around the heritage center by enhancing the development of CBD around. The project was partly achieved due to first gulf war. Due to unstable political situation since 1990 till now the conservation and the urban development projects were not ambitious like in eighties and the city focused more to have proposals rather than the achievements of conservation and restoration works.

Alhaidary, 2009. p. 51.

⁹ Pyla, 2008. p. 8.

¹¹ Nooraaddin, 2004. p. 79.

¹⁰ Polservice, 1973. p. 18.

Baghdad in 21th Century:

Urban Secure Spaces after War 2003

Cities historically initiated with the need to be safe and have experienced many changes to have more protection from violence. Fortifications walls were one of the basics to have more security. The behavior in criminal urban areas is ranged from skip the places, to changing the places and have more protection inside the spaces. Newman believes that restructuring the space elements and zones by clear definition of public, semi public, semi private and private spaces could limit the effect of criminality.¹²

After the war in Iraq 2003 the old city center of Baghdad was a theater for military operations and terrorisms attack. The space configuration, accessibility and functions have changed dramatically. Concrete barriers hindered the accessibility for the main public spaces and isolated the city core from the surrounding expansion area. The result was two separated cities attached to each other. Concrete barriers worked as cordons around main public buildings, main commercial streets and residential areas. They dominated the whole urban scene. This was the only possible way to secure the users and residents in such compact urban form like in Baghdad.

The integration between the old part and the whole city was broken and the central business district CBD was scattered and spread overall the city. The concrete barriers have isolated in many parts the main commercial and public streets which are penetrating the old city core from their walkways sides with special cordons around the main public buildings. Isolated and protected spaces in pedestrian walk ways were connected to each other in both main streets through the central market in between. They look like built spaces inside wider space and have the shape of open tunnels (Fig. 5).

AL-Rasheed Street for example was blocked totally for the vehicular movement and was divided into two sectors, the first one started from the south up to the isolated central bank area, which located approximately in the middle and then connected to the other sector through the main central market by narrow walkways isolated by concrete barriers. The second sector of AL-Rasheed Street continued up to Maidan and was blocked at the end, where the ministry of defense (old castle) was also an isolated cordon. On the other hand AL-Kulafa Street walkways on both sides were isolated

by barriers creating new commercial spaces on both sides connected with each other by small holes in the barriers and connected to AL-Rasheed Street through the main market area (Fig. 9). The space configuration of the whole area was changed and shaped by three meter concrete barriers instead of geometrical buildings. Gentrification problems increased and the residential areas were isolated in several zones, which have their own facilities.

In spite of the collapsed space system, the isolated spaces reflected the necessity to have such pedestrian zones and stopped the vehicular movements in some parts inside the old city like the AL-Rasheed Street and revitalized the traditional compact system in some parts. One good example to what happened in the tradition books markets, after it was destroyed by a bombing car in 2006 and rehabilitated by integrating wide walkway instead of vehicular street (Fig. 7, 8). The number of visitor was significantly increased and it is doubtless the only space now which is freely accessible. The new urban protected method in Baghdad starts to explain the idea of secure spaces. The hierarchy of spaces is getting back one step by introducing semi public spaces instead of having real public spaces. Unfortunately there were not enough references to cover the situation in old city after war and here efforts were briefly done to explain it within space, idea and form. The concrete barriers are going to be removed partially after the improvement in security situation and the feelings to get back free open spaces was urgently needed. The residents started to express their willing to have a vital urban life and they tried to convert the solid concrete in such nice portraits (Fig. 6).

Transform Analysis of Old Baghdad Urban Space

Radical urban space transformation could be experienced in Baghdad during the last decades. It was affecting the homogeneity of the existing urban fabric while Patterns of new urban forms and modernism movements in living were taking place and were affecting the homogeneity of the existing urban fabric. That affects often varied between damage, reconfiguration and remove and were creating new urban typologies with the existing traditional one. The self-organized urban form was interrupted by a planned and planted one. The result was two different space languages competing against each other. Those new added urban elements have created an interrupted urban pattern, which were so far from having continuity, coherence and integrity with the surroundings. The quality, use and nature of the urban space in Baghdad based on different spatial concepts, urban patterns and building

¹² Neumann, 1972.



Figure 5. Baghdad in 17th Century, Susa 1952.



Figure 6. Integrating the concrete barriers within city.



Figure 7. Traditional books markets after rehabilitation.



Figure 8. Traditional books markets after destruction.



Figure 9. Concrete barriers distribution in old city.

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typologies. Baghdad started with a circular geometric shape (round city) between 767 and 912 AD, with clearly defined spaces and separations among different levels of spaces. The public spaces were well controlled because of the defensive nature of the city. That was the main reason why the city expanded outside the wall. New more spaces organized from private to public were created, which had more flexibility and accessibility and could adapt the population growth. The new expanded areas, which configure now the existing city core, have been created vital and valuable spaces since many decades. Shifting the power of creating spaces from designated places like in the round city to natural development, done by inhabitance, has established a clear transition approved by all users from their private life to their public activities. The public and administrative buildings and their attached spaces were located as longitudinal ordered strips along the river frontage. They had high connectivity to other urban components because of the graduation in movement among different spaces. Specified Markets along with public buildings and the river frontage have established well defined and active public spaces. The city kept its harmonized spaces and urban form until the end of the 19th century and the beginning of the following one. Since the modern colonial pattern was implanted in the 20th century the mutual relations and hierarchies among spaces, have been altered and the power to create their spaces has been extracted from users again. The new geometrical spaces were enforced and new wide streets barriers established multisemi closed cordons. The new elements have created more than one district isolated from the others. The expansion of the city has increased the pressure on old Baghdad city's core economically, socially and physically. The rapid transformation in use, from private housing to commercial one, has affected the meaning and the type of spaces. The hierarchies of spaces have been changed since the privacy started to disappear and converted to publicity. The resulted public spaces are still searching for their identity and arrangement. They are looking as fragmented spaces without clear references (Fig. 10).

Space Classifications and Typologies

The development and design of urban open space is based on hierarchies and typologies and is related to the information that could be gained and collected from the surroundings. Many typologies and hierarchies have been developed by grouping categories of spaces as a tool of planning. Krier based his urban space typologies on basic geometrical shapes (square, circle and triangle) found in the ground plan accompanied with space scale.13 He believed that external and internal spaces both committed with function and form. The privacy belongs to the internal space which is covered and protected from external physical and natural environment while publicity belongs to external spaces which are accessible and have freely movement to semi public and private areas.14 The internal



Figure 8. Urban space Transformation in Baghdad.

¹³ Krier 1979, p. 15, 16, 22.

Lynch, 1960, p. 46.

space was categorized by the corridor and room while external one is categorized by square and street. Both categories shared the geometrical characteristics and were distinguished by dimension, function and circulation. Krier mentioned that public space organization has a great affect on private spaces. Lynch went far from the basics of geometrical shape of space and moved to the overlapped unique images of the city which composed by residents. The city is a composition and an integration of many spaces reflects the mental realization and continuity. The visual and functional hierarchies in urban space compose the main structure of the city image. Lynch set some dimensions in urban space to have good spatial form like vitality, sense, accessibility, control, fitting the behavioral actions and efficiency.¹⁵ The urban space is affected by social classes, population characteristics and neighborhood functions. Hillier believed that the space configuration helps to create the relation between people and their living space. 16 Typologies of the urban space, provided by Lynch, based on hard landscape like squares, plazas, linear parks, playgrounds wasteland and parks. 17 Others were using hierarchical approach to classify the urban space and their use depending on planning levels like local district and metropolitan or either on regional levels. The recent trend suggested the classification of space into domestic, neighborhood and civic. The city of Baghdad has a large number of civic and public spaces with valuable historical character. The city core has also an economical importance as part of the main central business districts (CBD). It is also characterized socially by meeting points for the whole community in regional, local and neighborhood levels. In combining the ideas above of grouping and classifying urban spaces typologies and according to the variation of spaces emerged from the transformation process through many decades, the current urban spaces in Baghdad could be classified into two main typologies and transformational categories based on the current arrangement of urban components, accessibility and the relationship between privacy and publicity after the transformation process. The two typologies are Traditional-survived spaces and modern-emerged spaces which divided into Hybrid urban spaces and complete modern urban spaces.

Traditional-survived spaces

The Traditional survived spaces preserved its coherent urban components and the identity of the Islamic

¹⁵ Lynch, 1981. p. 118. ¹⁶ Hielier, 1996, p. 22.

¹⁷ Woolley, 2003, p. 73.

¹⁸ JCP, 1984. p. 10.

walled city. Currently, those parts scattered overall city core and look like spots which are not connected to each other (Fig. 11). The traditional living habits and values are still presented in these parts of the old core, in spite of urban decay and deterioration that has occurred in their physical characteristics. The hierarchies in urban spaces still keep a softer transition character among urban components, accompanied by a regulated relationship, started from the private courtyard house. Neighborhood quarter spaces are configured by an organic pattern with traditional street network like in any Islamic cities. They located normally far from the river front area and are attached to common places which include the secondary local market spines, small mosques and local services. The markets are the main public space at the end of space chain located in the heart of city and configured as central and continuous spines. The main central markets have direct connections with the main public buildings, historical monuments and riverfront areas. The old city is part of the central business district in Baghdad. In 1984 survey it was estimated that the old core occupied about 25% from the CBD. 18 The specialist markets have been well connected to each other since they considered the main carrier to the whole parts of the city. Most markets are covered and have narrow width with small shops with maximum 3 m elevation width. Many monumental buildings scattered along the urban fabric. They are divided into mosques, churches, tombs, schools and Palace. The public spaces inside the traditional urban fabric are a result of connecting those monuments together.

Modern-Emerged Spaces

Hybrid urban space represents the penetration of public spaces and facilities inside the private space. The change in the character of space has modified the hierarchy of space inside the city. More transformation of private spaces into public ones has occurred. This type of space character was configured as a result of the partly invasion of modern urban pattern inside the historic one. After new building typologies and streets have interrupted the old traditional one, different topologies with variation in shape, nature and use were established. This normally can be seen in the modern shopping center inside the traditional Shorja sug and in the edges between high rise buildings and traditional fabric, where three commercial streets (AL-Kifah Street, AL-Kulafa street and Sheik Omar Street) penetrated the traditional fabric (Fig. 12). Another kind of hybrid spaces composed by the alteration of function and spatial context of the traditional urban spaces like





Figure 11. Traditional organic spaces.

Maidan. It is like plazas which considered larger than squares. Its importance belongs to the location, function and the spatial context. In Baghdad city there was a big plaza called Maidan which considered the main public civic center located near the citadel. Maidan is a ground space attached to the north gate of Old Baghdad and used of multi purposes. It was a public space where people connected to the administrative public buildings, although a new urban project converted Maidan to a main bus station; it remains the large space inside the traditional area. As a result of modernization and the invasion of new structures many loss spaces emerged. The loss spaces had no private or public uses and spread overall the city core.

Modern urban spaces were founded through the complete destruction of wide parts of the old structure, substituted by planted big campuses like the central bank of Iraq Campus and mayoralty of Baghdad Campus. The segregation is obvious between those spaces and their surroundings. This type encourages

the surrounding traditional area to transform in the same form and morphology of the new campuses as well as increasing the production of hybrid spaces in their edges (Fig. 13). Modern Urban Planning from 1924 until 1970 converted urban spaces to high speed perpendicular pathways connected by multipurpose squares. The pathways were converted gradually into modern commercial alleys. The results were different urban space form inside the old urban fabric. The central districts were moved on the roadsides and more central cores are created. The old districts loss it's potential after converting the spatial fabric in several segregated districts.

Urban Space Revitalization Strategies Based on Space Hierarchy

Diversity in urban space structure is one of the important factors in Old Baghdad. In the current urban morphology of the city there is neither a defined integration method nor a layout to connect the old part with the surrounding. As a result relationships among





Figure 12. Hybrid Urban space in edges between traditional urban fabric and new planted buildings.

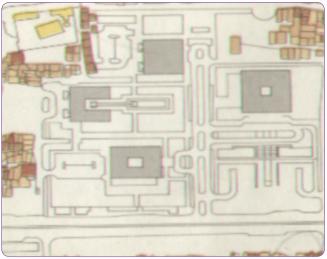




Figure 13. Modern geometrical urban spaces.

urban components are missing. Proliferating urban decay has affected the urban form through a long process of urban transformation leading to more segregation. The old town will not achieve the goal of preservation without managing the integration process between urban morphology and recent contemporary need. The policies of spatial management have to be merged with social processes through urban space revitalization strategies. Urban space is important because of its mutual affect on human behavior in one side and on urban quality on the other. Urban space could overcome the human need and demand as a successful tool in integration between various urban patterns. The urban spatial structure in Baghdad shows an interrupted configuration in different historical periods, the destruction and change in urban structure was the result of a modern planning concept and the loss of the clear definition of urban space. These destruction processes stopped the spontaneous organic development and altered the space hierarchy of the city finding new urban space configurations and functions.

Thus there are a lot of criteria playing a big role to form the space, including historical evolution, geometry and urban morphology, urban form and socio-economic change. ¹⁹ The concept of urban space is renewable changing with time and place and can be considered as the best tool of integration between different urban structures because of its role of interaction among different users and its role of hierarchy. Urban spaces define and explore the sociality, economic and politic of different periods. The clash between different urban patterns could be solved with redefining the space between them, finding a better way to use that space between different users and variable functions.

The blurring between privacy and publicity is obvious in the city core and the city edges of Baghdad and the interlaced problem between the privacy and publicity of urban space still increases the segregation in different urban components. The space lies in edges between old and new structures are suffered from the unstable urban change. The result was far away from the initial spatial concept in both urban patterns. In this case the configuration of place will not be definable because normally it follows the urban pattern characteristics. An Urban hybrid space is the result of the missing achievement of privacy and publicity in the old city. Those hybrid places have the characteristic of increasing the publicity with a severe decrease in privatization.

The use of both clashed urban patterns has to be defined and the spaces in between have to be connected to the neighborhoods and to the surrounding in certain chain through a clear definable order of circulation. This chain will start from the central places in the top of ladder moving gradually to the peripheral. The accessibility will move gradually from the high level to the lower one finding out a filtering function and access relation. With increasing the filtering methods by creating a threshold more privacy and more control between enclosure and connectivity we can get.

Between the privacy and publicity there is an irritated process of given access and giving access accompanied with orientation and filtering relation. Resetting the hierarchy according to urban space use and demand will increase the rhythm in circulation and

¹⁹ Madnipour, 1996, p. 31.

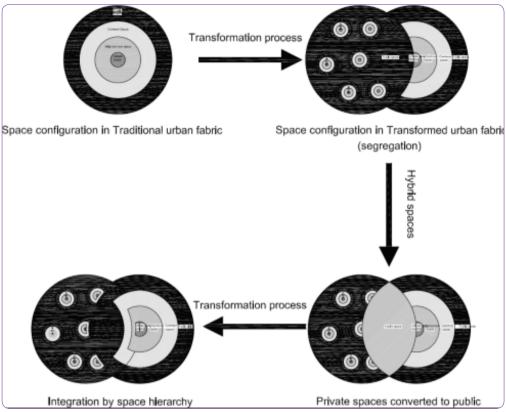


Figure 13. Integration by space hierarchy.

reorganize the space activities between the different urban patterns (Fig. 14). The neighborhood spaces should be created again and connected to the publicity through a clear common space which stands in middle between public and private. The common space should have more publicity and may include some local services to avoid shock during the movement to the public space. The neighborhood space should work as filter and buffer zone for privacy. The only way for Integration is to keep the balance in space configuration.

Conclusion

The previous analysis for the urban transformation in Baghdad showed that the urban traditional form was based on urban space hierarchy accompanied with the surrounded physical elements. The integration between different urban patterns should keep this fundamental key to limit the conflicts through the transformation process, which is self-organized and continuous. Space and form can keep their development with time change if relationship of privacy and publicity is well organized. Plots and their buildings combined with the media of urban space, creating the smallest cell of urban form, which develops according to the different period of social and economical conditions. The integration of different cells typologies can

be achieved by rearrange the cells in one sector and unit and restructuring the urban components of different pattern according to space hierarchy, land use, building rules and enhancing the human activities. Accordingly the social and economical factors will be redistributed and organized. To recognize the urban space structure, the old base traditional urban form may be considered in some cases in Baghdad as basis for integration. The integrated urban space methods will help also to redefine and recycle the urban wasted voids inside the urban fabric. The relationship with city complex, especially the nodes and network is always changing the understanding of space hierarchy. The solution starts with determine the space function and use within the city of Baghdad. The function will be the first step to allocate the user groups which can benefit from the available spaces. Baghdad needs to redefine the spaces according to the historical background, urban structure, policies and regulations, adaptive reuse and new functions. Establishment of balance between economic and residential factor will be the key to reorganize the spaces inside the old city core. The second step is to ensure accessibility for those spaces, which mean creating a transition zone and ensure continuity. The old and new structure determined by space chain and degrees. Control the accessibility by space hie-

rarchy is a success method to organize the relationship between multi spaces and with their surrounding area.

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