



Deconstruction of Urban Space in Saudi Cities

Dr. Yousef Neyazi

Department of Urban and Regional Planning, College of Environmental Designs

King Abdulaziz University, Jeddah, Saudi Arabia

Email: yneyazi@kau.edu.sa

Email: yousefneyazi@yahoo.co.uk

Post Address: Yousef Neyazi, P.O. Box: 80368 Jeddah 21589, Saudi Arabia

Abstract:

Space is formed by people who live in. They shaped it as they need and with regard to culture they have. Yet, structures of houses, neighbourhoods, and cities differ from one society to another. In some even in one country different urban forms of space exist with different cultures to each region, territory, or city.

Saudi Arabia is the centre of Islamic countries, and has the two Holy Mosques. In the past it had various traditional forms of urban patterns, but now days, it has almost the same form "cities became the same and local identity been lost in most"¹. The disaster here is when urban heritage is demolished, buried, and developments became unrelated to residents.

This paper aims to show the traditional forms of urban patterns in Saudi Arabia, which been transformed, and how it been generalized to contemporary urban form. At last it gives some policy proposals for reconstruction of contemporary urban form with regard to traditional forms in each hierarchy of space and each region, territory, and city.

The paper's approach is divided to three parts. The first is a historical background about the urban change and transformation in the Saudi traditional urban forms. This part shows the causes of that change and transformation from traditional urban forms to contemporary ones which are partly been assumed as temporary. The second is about effects of contemporary urban form with regards to spatial, social and economic approaches. The last part is proposals for the Planning authorities in Saudi Arabia to change the current urban policies in term of urban regulations.

These regulations will enhance reconstruct space in dwellings, neighbourhoods, and cities. Such change of policy will reconstruct cities with controlled developments with regard to actual needs of population in terms of space and with regard to their social and economic characteristics.

(Keywords: Transformation, Urban patterns, spaces syntax, Saudi cities,)

¹ Y. Neyazi, 2007

Introduction

Planner differs from the others when looking at cities. He looks at city as a book to read, as spaces and buildings, people and culture, nature and development, art and dynamic, heritage and transformation, and traditional identity and globalisation. Overall, cities are the final product of human's culture, development, knowledge, technology, environment and people. Yet, each city was different from others, or in some words had its own local identity in terms of the form of spaces, and so each city or 'a book' has its own language, approach and subject.

The subject of this paper is limited to Saudi cities and deconstructed urban spaces within. Each Saudi region² had its own urban form and traditional architecture. After the discovery of Oil, new housing projects were built in the Western region between 1938, and 1944 in Dhahran, Ras-Tanorrah, and Bigage³. Those housings were built for ARAMCO members who were mostly imported experts, engineers and labours. These settlements were the first industrial towns with imported urban form for those people. Then in 1947 the surrounding major cities were planned with grid iron form of land subdivision for local residents. And this urban form and were forwarded and generalised as the modern planning process for land subdivision and development for all cities in Saudi Arabia. The result of this vast development was the fragmented urban patterns.

In old towns, few were either completely demolished as Al-Madinah and Makkah, which were diagnosed as urban disasters by new development. Others were neglected with the migration of residents to new districts and new form of dwellings in new developments. This was a general behaviour in most Saudi cities such as Ar-Riyadh, Jeddah, Makkah, Hail, Abha, and Al-Khobar⁴. Cities were changed in terms of urban spaces, and urban spaces transformed from social to segregated ones. Yet, cities and life within will not be the same again unless urban spaces will be restructured. The structure should regard the traditional urban form and heritage for each city and region to bring the life back to those cities. On the other hand it should regard provide both segregation between vehicle and pedestrians' routes, and integration of open spaces with dwellings around. Yet, Social life may will be formed again and the identity of community will be preserved.

Main Objectives:

- To explore traditional urban patterns in Saudi Arabia, and transformation stages
- To propose a concept model of urban space for Neo-traditional neighbourhood for the future's Saudi Cities.

² Saudi has five regions which are: Northern region, Southern region, The middle region "Najd and Qasim", the eastern region, and the western region "Al-Hijaz".

³ Al-Hathloul 1994, pp: 130

⁴ Al-Fozan, A. (1993).

Main difficulties

- Most of Saudi cities were redeveloped in a conflicted urban pattern to traditional ones
- The fragmented pattern is coupled with fragmented community and missing the meaning of neighbourhood
- Lack of such old detailed maps for the traditional patterns for all Saudi cities and towns

Opportunities

- The initiative is as a concept model of Neo-Traditional neighbourhood for Future's Saudi cities not in the shape of city but the morphology of urban spaces between dwellings
- The shared open space will recall of neighbouring relationships and spirit of community

Methods and techniques used in the project or the initiative

The paper is theoretical in term of analysis of space syntax for the transformation of urban spaces in Saudi cities. Analysis shows the three stages from traditional neighbourhoods to a cluster of dwellings in high rise building; from both then to a block of detached villas; and last to the amended form of block to a cul-de-sac form. Gamma diagrams of space syntax are simply abstracted figure to show the morphology and structure of spaces in each stage of transformation (Hillier 1996, and Onder 2002)

. Yet, the analysis is also shown for the initiative proposed for better urban design for neighbourhood as a concept. This methodology is used to simplify understanding the urban pattern of space in Saudi cities in past, present and how it should be in future to preserve the traditional urban pattern with modern design, which regarded to segregation between vehicle's routes and pedestrians' ones, and integration of space and consequently the community in Neo-traditional build environment. But to design urban pattern neo-traditionally, designer must read the traditional patterns and its space morphology of various cities that reflect the culture and the community.

1- Traditional urban patterns in Saudi cities

As Saudi Arabia is the centre of Islamic countries and has the Two Holy Mosques in Makkah and Madinah, it became a destination for most Muslims to perform Hajj and visit the Prophet's tomb. Islamic law was the main legislative frame for formulation of spaces and cities there and in most Islamic cities. Quran, Sunnah⁵, Ijma'a (Consensus) and Ejtihad (Endeavor) were the main resources of Islamic law⁶. The first Islamic city was Al-Madinah. It was planned by the Prophet Mohammed fourteen centuries ago. Until 1990 such urban pattern was existed when the new development for central zone was started and demolished the old Madinah completely⁷.

⁵ The Prophet's sayings.

⁶ Kaki, W. A. (2000)

⁷ Neyazi, Y. A. (2007)



Fig. 1: Old Madinah and its traditional pattern of Hoash as neighbourhood unit.

Key: ①: Prophet Mosque, ②: Attached buildings of housing, and ③: Open space 'Hoash'

Urban pattern of the old Madinah shows radial routes which approach the Prophet's Mosque as the core of the city. Neighbourhoods were closed urban units which were called 'Ahwash' or courts in English. Each 'Hoash'⁸ is formed by a group of buildings surrounding an urban space. Such Hoash was a model for urban and civic life which was mainly based on the Islamic neighboring's principles (Neyazi, 2007). Such urban form and patterns was unique as it was the origin where it was created and lastly buried. The urban space between buildings (houses) was the space for multi functions, where social coherence and neighbouring activities were occurred. Figure 1 shows the old pattern of Madinah.

Other cities had almost the same urban pattern with narrow routes, and small plots for buildings. But they did not have the courts always between buildings such as in case of Al-Madinah. In some as Jeddah in (Fig 2), there were some open spaces and they were called 'Barhat'⁹. Neighbourhoods were called in Hejaz as Harat as same as name in Egypt, and Syria. But in Ar-Riyadh (Fig 3), traditional buildings had their own courtyard inside.

⁸ Single of 'Ahwash', it mean court

⁹ Plural of 'Barha', it mean open space for playing and other activities.



Fig.2: Old Jeddah and urban pattern shows Barhat (open spaces) between dwellings
Source: Sijeeni, 1995, pp: 164



Fig.3: Old Riyadh and urban pattern shows courtyard inside dwellings and sometimes there are some courts between dwellings.
Source: Mofti 1981, pp: 82

2- Transformation of urban patterns of Saudi cities

Economic growth since the discovery of Oil affected the urban growth in terms of importing experts, professionals, engineers, surveyors, and architects. Those experts - who were lacked in Saudi Arabia in that time- were specialised in of Oil industry, and all what related, plus those who will design the residential areas and dwellings for them as they used to. Consequently, dwellings designs, urban pattern were imported too (Bianca, 2000). The problem is not in such time and such locations of implementation but in the generalisation been taken after for such designs and pattern of dwelling and residential areas. It was the main factor that enhanced the transformation from traditional cities to contemporary ones.

Transformation was in three processes (Neyazi, 2007). The first was to take dwellings and neighbourhoods off the lands. It was as same as taking trees off which were rooted in the land. The process segregated the dwellings those were attached together horizontally to attached dwellings but vertically. The common open space is fragmented into small spaces (stairs and lobbies between apartments). Consequently, life in open space for children and elderly people changed. They mostly used for direct access to open space, but then they were forced to stay segregated by the walls of each dwelling, and the height of dwelling from land. Yet, they are kept inside dwellings and lacked most activities they used to do in traditional environment. Moreover, dwellings have multi utility spaces before access to streets but not the open space as it was in Traditional Hoash.

The second stage was when cluster of the attached dwellings in high-rise building, and traditional neighbourhood were changed to detached dwellings and here where the cluster was fragmented into segregated dwellings and so the households within. This stage is as same as throwing the fragmented dwellings to lands. The resulted pattern is a block or cluster of segregated dwellings and households with its own space of setback from all sides which are useless and early children can play, but lonely within the setback but not with neighbours as going out will have risk of mobility. The fragmentation in dwellings caused difficult chances for relationships between neighbours and consequently fragmented community.

The third stage is when Municipalities wanted to solve such problems, and then proposed Cul-de-sac pattern to reduce speed of vehicles and offer safe routes for pedestrians. This provided a cluster of parking spaces not more, where most of such spaces were asphalted and yet not suitable for playing, setting, and social activities. Moreover, such pattern segregates the block to smaller blocks around Cul-de-Sacs as shown in Fig. 4 below.

Saudi cities in most have lost their local identity and national one too. The change affected most Gulf cities (Hamouche, 2004), and most cities there have the same urban pattern. This transformation has changed the social life and spirit of community in Saudi cities. Though Eben Saleh states that modern urban development destroyed intimate scale of traditional towns¹⁰.

Yet, urban pattern should be designed neo-traditional¹¹ with regard to mobility, segregation from pedestrians, and integration between dwellings and open spaces by rings' movement.

¹⁰ Eben Saleh 1998 " Planning Perspective", 22, pp:212

¹¹ Neyazi, 2007, chapter 9

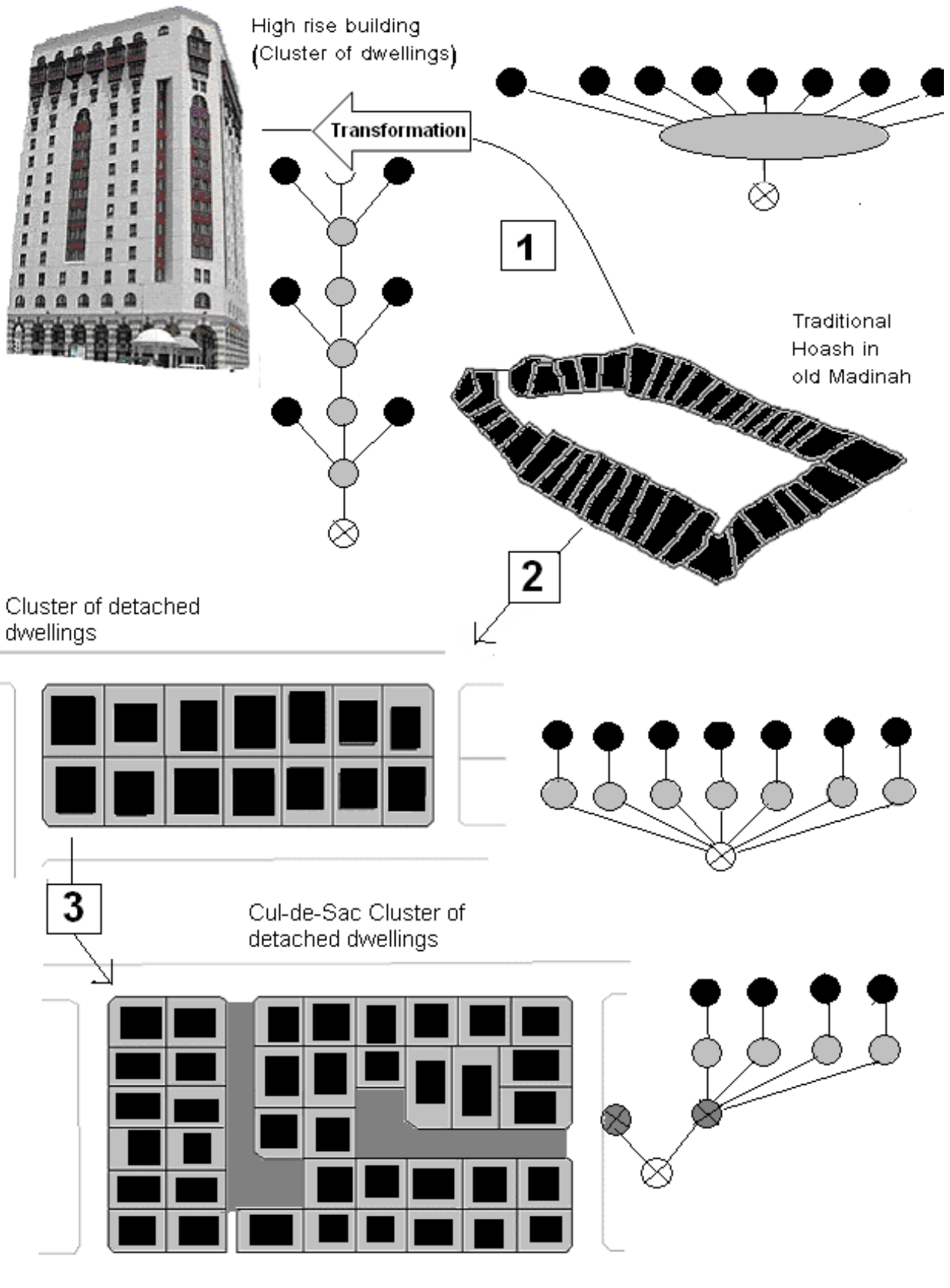


Fig. 4: Stages of transformation in Saudi Cities

⊗: Street's space, ●: cul-de-sac space, ●: open space, ●: dwelling's space

Neo-Traditional Urban pattern for Saudi cities

As shown above in Fig.4 that dwellings in contemporary Saudi cities are segregated from each others and lack open spaces. Even the initiative of Cul-de-Sac was not appropriate for space which residents around feels with belonging. This is because the space is considered as a public space in term of possession or holding (Akbar, 1995). The space needs some treatment as simply by adding a gate to the start of Cul-de-Sac as stated by Hakim (2004). The space then will be considered as semi-public space. Responsibility of the space then will be partially to residents around, and they might require from municipality to upgrade its design with playgrounds, setting area, vegetation, lightening, and special type of pavement to reduce speed of vehicles. Moreover, they might do such requirements privately for their children with permit form Municipality. This would be as an initiative for already build block of Cul-de-Sac pattern (Fig. 5a). But, Cul-de-Sac still segregates some dwellings far from direct access to it (Semi-public), and yet even after add the gate, it is not an good enough to be neighbourhood model to be called a 'Hoash' as in Madinah Municipality.

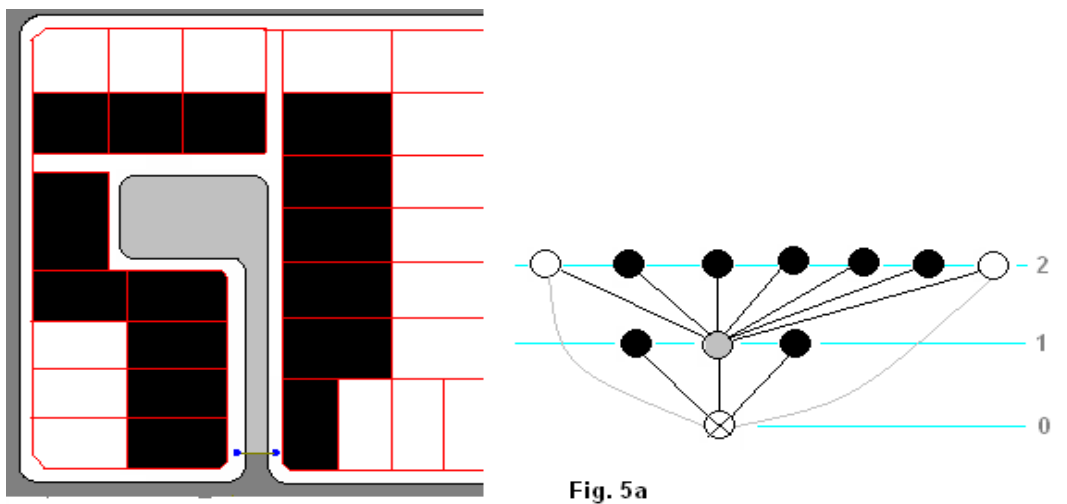


Fig. 5a

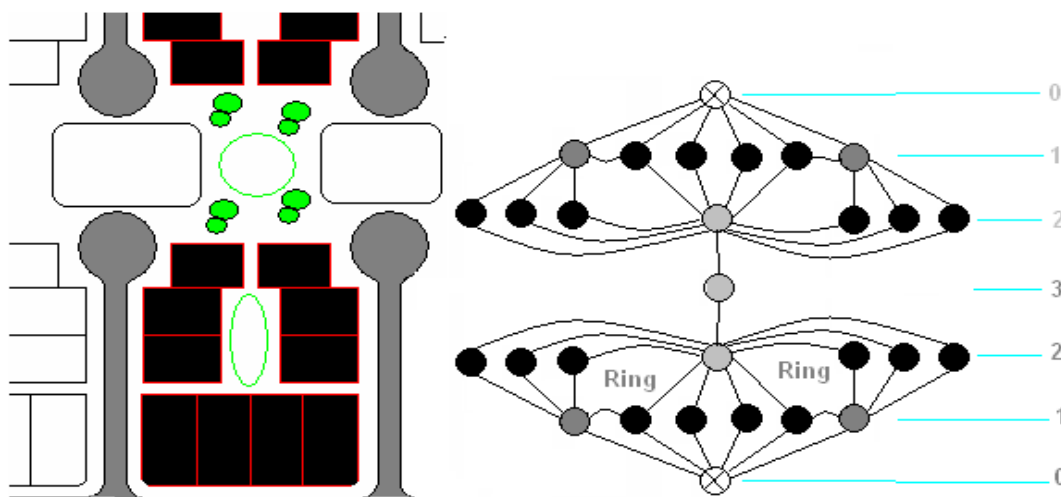


Fig. 5b

Fig. 5: (a) shows Gamma diagram for Cul-de-Sac, and (b) Eben Saleh concept.

Eben Saleh (1998) states that open space was for fulfilling religious, social, security and economic requirements. Such needs and activities was the core of coherence of both society and the physical elements of settlement. Moreover, he mentions that the form of detached houses was emerged in Al-Akhalaf (South- Western region) for security reasons after the unification of Saudi Arabia. Then he recommends balancing between modernization and traditional values and states:

'the exercise for architect, urban designer, and planner in this process is not to produce an "open museum" but to preserve the integrity and values of community itself, creating buildings those comply with modern standards'.

Bianca (2000) states that formation of urban fabric is not a division of large space into smaller fragmented ones, but it is based on the organic integration between dwellings and open space in between to reweave the social relationships of micro spaces (dwellings and open spaces) within the larger one (cluster or neighbourhood) and then get the urban fabric. He states that integration between open spaces and pedestrians walkways should be formed as traditional patterns were in traditional cities and started from micro level.

In 2004 Eben Saleh proposed a design of neighbourhood which he argues that it is applicable to whole Saudi cities. His proposal was not based on space analysis to examine the integration of all dwellings with open space in equity form, and segregation from traffic even in Cul-de-sac level. The proposal is examined and Gamma diagram shows in (Fig.5b) that dwellings (●) are integrated with open space (●) but in different levels (some depth 1 and others from depth 2), which means that they do not have equal opportunities in direct access to open space. Consequently, for some open space is considered as semi private space, but for others it is semi-public one especially for those on corners of the streets and Cul-de-Sac's. Moreover, integration between open space and Cul-de-Sac is shown by the ring in between, which seems as risk of mobility for early children. Yet, his proposal might be suitable for exact case study he has (A-Horaidhah), or Riyadh where houses have inner courtyards for early children. Moreover, it might be applicable where villa type of dwelling is popular and traditionally was there.

Neyazi (2007) states that Neo-traditional neighborhood model is a cluster of about forty attached dwellings (Not villas) around open space¹². His study was based in the statistics analysis (SPSS) to the all the old neighbourhoods 'Ahwash' in Al-Madinah. Moreover it based on the requirements of present residents. But Neyazi (2007) argues his generalization of concept to be applicable to all Saudi cities in term of the Neo-traditional model of neighbourhood while Neo-traditional design of dwelling is only applicable to his case study Al-Madinah. He argues that because dwelling's design in terms of both quality and quantity are based on socio-economic characteristics of local residents, and their actual needs and satisfaction' levels. His proposal is analyzed in spaces syntax. Gamma diagram shows that all dwellings (●) are in the same level of depth (---) with integration with open space (●). This mean that equity is regard for all households surrounds the open space in having direct access and yet it became semi private space. Nonetheless, it is totally segregates the open space from the mobility, and though more safety for early children. Number of dwellings is cultural referenced, and traditionally based.

¹² King (1998) is also mentioned component of Al-Madinah traditional Ahwash and described the attached houses were about 40 houses, and Koshak 1995 did as well

The concept which is shown in (Fig. 6), is a flexible one to be applicable to all Saudi cities. Its shape is not strictly square or rectangle, but is can be triangle, oval, hexagon or any shape. This will depend on the urban designer and how he/ she will design the routes around to serve the dwellings. These two processes are the main to reconstruct the fragmented spaces in contemporary built environment in Saudi Cities. Neo-traditional Neighbourhood is a modern design with residents' needs and traditionally based.

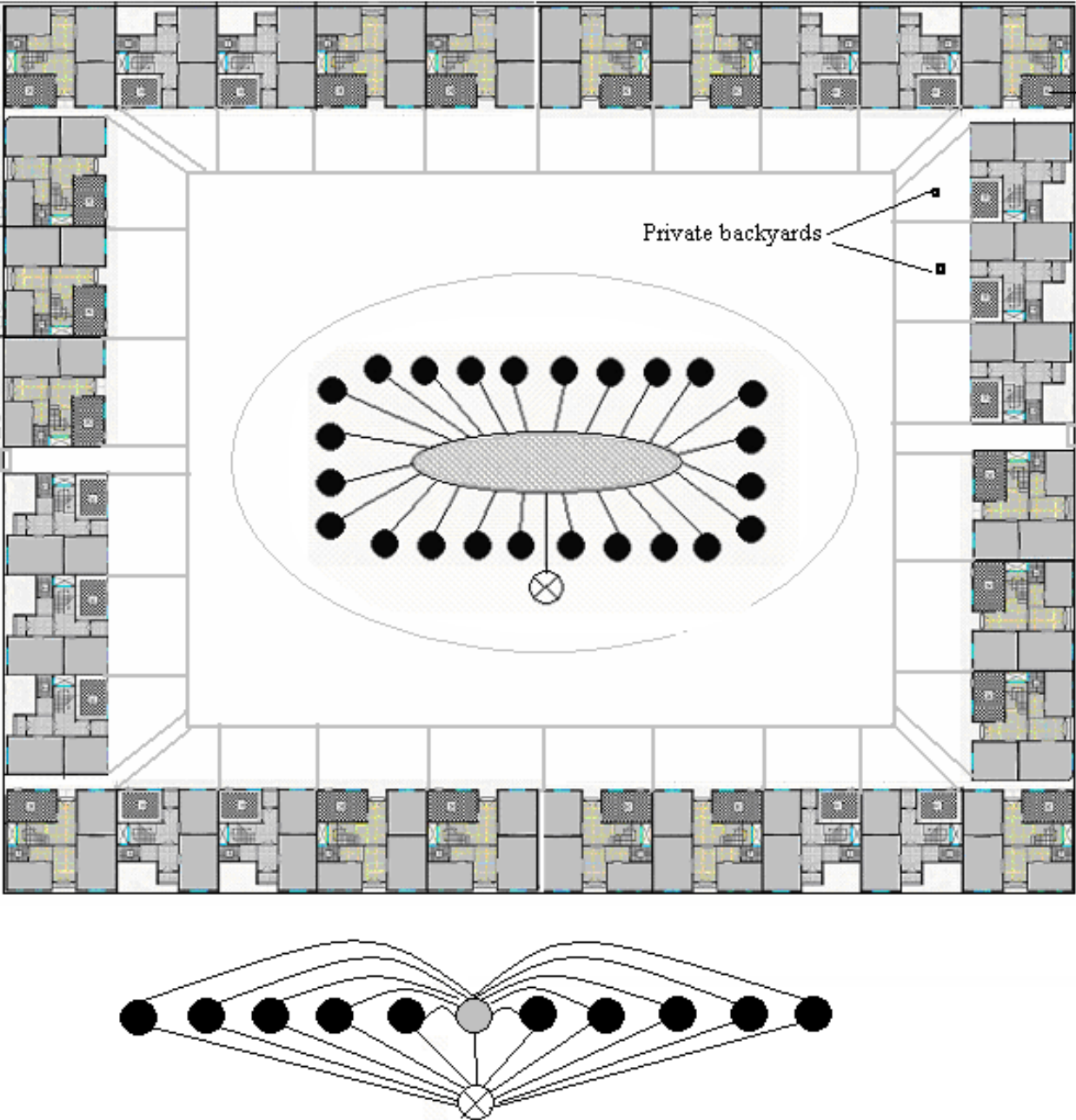


Fig. 6: Neighbourhood concept Model and gamma diagram for integration of dwellings and open space in between.

Conclusion:

Key Lessons Learned (you may complete this section in the box):

- New urbanism is to design a modern environment with regard to its culture and tradition.
- Culture is reflected in the morphology of spaces in dwellings, open spaces and networks between.
- Saudi cities which are mostly transformed could be reconstructed in term of deconstruction spaces and communities within by recalling traditional pattern of space morphology.
- Emergent of Neo-traditional urbanism

References:

- Akbar**, J. (1980). Support for Court-Yard Houses: Riyadh, Saudi Arabia. Department of Architecture, Massachusetts Institute of Technology: 111.
- Akbar**, J. (1995). Creation's tools in Islamic Architecture 'Arabic'. Problematic between theory and practice in Traditional Architecture 'Arabic', Bahrain, Bahrain Engineers Society.
- Al-Fozan**, A. (1993). "Real Estate's Tumors; 'Awraam aqariah', 'Arabic Article.'" Al-Yamamah (1279): 92-93.
- Al-Hathloul**, S. and M. A. Mughal (1999). "Creating identity in new communities: case Studies from Saudi Arabia." Landscape and Urban Planning **44**(1999): 199-218.
- Al-Hathloul**, S. (1994). "Arabic Islamic City: the Role of Islamic Law in formulation of built environment "Arabic", Nihaal Publishing Centre, Riyadh.
- Al-Hathloul**, S. A. et al., (1975). "Urban Land Utilization: Case Study, Riyadh, Saudi Arabia, Cambridge: MIT School of Architecture and Planning, Educational/Research Program: Urban Settlement Design In developing Countries.
- Al-Naim**, M. A. (1998). Continuity and change of identity in the home environment: development of the private house in Hofuf, Saudi Arabia. Newcastle upon Tyne, University of Newcastle upon Tyne: xvii, 453.
- Bianca**, S. (2000). Urban Form in Arab World. London, Thames & Hudson.
- Bukhari**, A. (1978). Jeddah: a case in Urban Formation. Pennsylvania, Pennsylvania.
- Eben-Saleh**, M. A. (1997). "Privacy and Communal Socializing: The Role of Space in The Security of Traditional and Contemporary Neighbourhoods in Saudi Arabia." Habitat International **21**(2): 167-184.
- Eben-Saleh**, M. A. (1998). "Place Identity: The visual Image of Saudi Arabian Cities." Habitat International **22**(2): 149-164.
- Eben-Saleh**, M. A. (1998). "Transformation of Traditional settlements of southwest Saudi Arabia", Planning Perspectives, 13: 195-215.
- Eben-Saleh**, M. A. (2001). "The evolution of planning & urban theory from the perspective of vernacular design: MOMRA initiatives in improving Saudi Arabian neighbourhoods." Land Use Policy **18**:179-190.

- Eben-Saleh**, M. A. (2004). "Learning from tradition: the planning of residential neighbourhoods in a changing world." *Habitat International* **28**: 625-639.
- Hakim**, B. S. (2004). *Eco-cities Embedded Locality: Learning from Tradition and Innovating Now*. Heritage, Globalization & Built Environment, Kingdom of Bahrain, The Bahrain Society of Engineers.
- Hamouche**, M. B. (2004). "The changing morphology of Gulf cities in the age of globalization: the case of Bahrain." *Habitat International* **28**(2004): 521-540.
- Hillier**, B. (1996). *Space is machine*. Cambridge, Press Syndicate of the University of Cambridge.
- Kaki**, W. A. (2000). *The Structure Approach to City Image (Al-Madinah Al-Monawarah)*. Architecture, Faculty of Environmental Studies. Edinburgh, Herriot-Watt University: 405.
- King**, G. (1998). *The Traditional Architecture of Saudi Arabia*. London, I. B. Taurus Publishers.
- Koshak**, A. H. (1995). *Islamic Concept in Design Built Environment. Problematic between theory and practice in Traditional Architecture 'Arabic', Bahrain*, Bahrain Engineers Society.
- Mofti**, F. A. (1981), *Urban Housing Design in the Context of Saudi Arabia's Cultural and Physical Condition: Potential and Constrains*, PhD Research, Rensselaer Polytechnic Institute, Troy, New York.
- Onder**, D. E. (2002), "A new housing group for Sub-residential area in Samarkand: a morphological comparison",
- Sijeeni**, T. A., |(1995), "Contemporary Arabian City: Muslim Ummah in Sociocultural and Urban Design Context", PhD Research, The university of Michigan.
- Neyazi**, Y. (2004). *Traditional Hoash as Neighbourhoods Unit in Al-Madinah/ SA*. Heritage, Globalization & Built Environment, Kingdom of Bahrain, Bahrain Society of Engineers.
- Neyazi**, Y. A. (2007). *De-Fragmentation of space in dwellings, neighbourhoods, and city of Al-Madinah: using Urban Information systems*. GURU. Newcastle upon Tyne, Newcastle, University: 90.

All your references must fit in the 13 pages allowed for the papers.

Summary of Author's Biography

Photo here



Dr. Yousef A. Neyazi

- Bachelor degree in Planning and Urban Design, 1992, Department of Planning and Urban Studies, College of Architecture and Planning, King Saud University, Riyadh, SA
- Planner In Municipality of Al-Madinah, Dep. Town Planning (1992-1994) , Al-Madinah, SA
- Teaching Assistant, Dept. of Urban and Regional Planning, College of Environmental Designs, King Abdulaziz Univeristy, Jeddah, SA
- Designer of Project of National Guard Towns in Jeddah, with Al-Harasani Consultants. 1996-1997
- Master of Art in Planning Studies, 1999, "Review of transport planning process and integration of Metro Network in Newcastle City", Dept. of Town and Country Planning, School of Architecture, Planning and Landscape Architecture, University of Newcastle, Newcastle upon Tyne, UK
- Doctor of Philosophy, 2007, "De-fragmentation of Dwellings, Neighbourhoods and the city of Al-Madinah USING Urban Information Systems", GURU (Global Urban Research Unit), College of Social Science, University of Newcastle, Newcastle upon Tyne, UK
- Assistant Professor, Dept. of Urban and Regional Planning, College of Environmental Designs, King Abdulaziz University, Jeddah, Saudi Arabia.