Full Length Research Paper

An analytical approach to domain concept in Iranian traditional cities

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Human need for comfort, tranquility, a sense of security and meaning in his life as well as respect for his domain by others and desirable settlement shall be made possible by way of obtaining proper trends in specifying private and public areas of his life and establishing accurate hierarchy in functional, and physical aspects. Analysis of this structure that we can find in Iranian traditional cities increases his sense of belonging and dependency to place and makes his habitat meaningful. Therefore, the aim is to manifest the importance of domain concept in urban design and to achieve appropriate domain and privacy in designing urban space in which learning from the past can be useful. Consequently, from the analysis of historic fabric in a traditional city whose historic fabric has been preserved, we can observe and analyse their physical aspect such as NAEEN; to help us provide some resolutions and principals to practically employ such concepts in future designs.

Key words: Domain, privacy, frontage, Iranian urban space, hierarchy.

INTRODUCTION

A human being requires efficient, desirable, and safe environment appropriate for his needs and wishes, but we must consider that all human beings do not have similar environmental conditions. Consequently, the role of climate, geographic location, economic, political, cultural and social statuses which are closely interrelated must be considered while providing solutions to meet human needs. Therefore in urban studies, climate studies and geographic location are considered so as to have the best design of correspondence with climatic conditions of every place; which must be considered while providing solutions to meet human needs in the possession of culture, social relation and special traditions of every society that would be investigated (Wrirth, 1992). Therefore every culture requires its own special urban design language.

In recent years, critics of Athens's charter which has been the face of modern urbanization caused much damage to twentieth century urbanization. Supporters of urban design made a declaration called Charter 2000. Fundamental points of this view considered the subjects below (Moudon and Wayne, 1993):

i. Establish place against space/ paying attention to nature.
ii. Paying attention to human scale in settlements.
iii. Creating variations in accessibilities and tranquillize traffic in districts.
iv. Increasing face to face human communications and social interactions.
v. Paying attention to norms, culture, and wishes of beneficiary and influential groups and communities in designs/ Endogenous development.

Such charter promise dimensions of cohesion and healthy settlements. With regard to this, paying attention to influences of culture of communities on traditional cities and learning from their physical values help designers to build better places. Physical values occur in relation to local culture. Consequently, the main goal of the research, which is the case study of the historic fabric of Naeen located in hot-arid zone of Iran, was chosen. .Thereafter, the physical main structure, districts, city, community centers and path network, were observed, surveyed, and analyzed to state domain and hierarchy in

that field.

Objectives

i. Statement of domain concept and hierarchy in urban space.
ii. Investigation of domain concept and hierarchy in traditional Iranian cities and generalization of its positive points into contemporary urban design, considering modification of time and consequent changes in society and all related aspects of it.

MATERIALS AND METHODS

Materials under consideration shall be used to provide acceptable criterions to determine domain and provide indemnity in urban space, especially at the neighborhood units' level and communities (*mahalle*) which are constituent components of Iranian urban structure. Considering such concepts has different dimensions where each is inclusive of several indicators. At this juncture, all the emphasis of the discussion will be focused on physical aspects. An implication of rapid and unlimited growth of cities is as a result of rapid and unprecedented increase in the city population. Creating undesirable and insufficient structures of city that was triggered in the past decade (Jacobs, 1961) the statement of a principle called sustainable development in all environmental contexts and cities are set in its agenda as main human settlements. To establish sustainable settlement, attending to some points are essential, paying attention to natural environment, ecology, energy, recycling materials and sustainable social cultural environment, heightening the quality of life, providing justice and social supervision and enforcement of cooperative and pluralism attitude. In such a city, ones sense of belonging should be established and increased (Lynch, 1976). Desired social relations develop and enhance citizenship meaning (which is forgotten in contemporary cities) and transform a passive citizen to an active citizen. Hence, in this research historic fabric of NAEEN which was preserved was chosen. Thereafter, components of urban structure were codified, and hierarchy of its urban spaces according to domain and privacy concept in Iranian culture were studied and analyzed to find dominant influences. In Iranian traditional cities the city center(courtyard of *Jame* mosque) and community centers (*takaya*) are quite different from the Western cities; here we can observe an inside order and a very clear hierarchy in spaces ,so this hierarchy of spaces clarified and from the smallest part (home- which studied by plan-section and observing 10 traditional homes were remained) extended to the whole of the city (studied by surveying 7 *mahhale* and their *takaya* and the main structure of old fabric of the city); and with the use of graph, map and pictures the establishment of the concepts are explained.

Investigation of domain concept in urban design literature and previously published

In late 1960's a behaviorism movement started, which emphasized on human values of space and it was opposite point to theories which reduce urban space to abstract geometry. John Zeisel (Krupat, 1985) in his behavioral theory counted six specific needs for all people which are: Security, clarity, privacy, social relation, comfort and identification.

Every creature due to its nature claims specific territory and defends it against members of other types of groups. Heidegger (Sommer, 1969) believes main components of territory are private concept, being specific and also the question of defense. He believes every animal is surrounded by a bubble with irregular shape which keeps appropriate space between them. He determined them as escape, sensitive or critical, personal and social distance. Hall (1969) determined and defined sincerity, personal, social, and general distances for human beings. He points out to neighboring and communities issues which are very important in planning and design of cities. The important principle in neighboring is indication of a behavior which is called determination of domain (Newman, 1972) boundary or ownership and it is instinctive to all creatures. Sommer (1969) emphasizes Personal space which is a limitation with invisible boundaries which encompasses all around the human body and there is no place for intruders. Beschell (1987) states differences between: perception through senses which are perceived, and acknowledgment in its most extensive limits includes, senses, perception, and understandings. It should be considered that humans are living in different sensorial worlds and spaces. Individuals do not relate to their surrounding world in just one way and this difference in individuals with different cultures are more intense (Hall, 1969). Spaces are not good or bad on their own, but by creating congruence between design places and human needs and function. One of the most fundamental steps in the determination of domains is to consider special hierarchy (Hakim, 1986). Chermayeff and Alexander (1965) emphasizes division state hierarchy of private and public urban spaces as follows; urban public spaces, semi-public urban spaces, public spaces special to one group, private spaces special to one group, family private spaces and individual's private spaces. Such division could be set forth in a more general form: that is, public, semi-public, semi-private and private. Sometimes different spaces have common boundaries which themselves are effective in determination of relative measures of neighboring spaces.

RESULTS

Results from the case study, shows that the home is the smallest component or the cell of the body of a city. Home relates an individual to his environment (Figure 1), bounds him to it. Consequently, equilibrium should be provided between being the crowd and privacy. Local communities or neighborhood units which called in Iran as *Mahalle*, could be considered as smaller limitations and as part of bigger communities which have built urban structure from previous history. *Mahalle* is the domain of a social group in which social interrelations is practiced. Consequently, it is so difficult for an alien to recognize and specify a domain which has been considered personal by different groups but the members of these groups recognize and know the boundary of their domain as well. In general many factors are effective in the way space is used .For resident's, neighborhood units is an opportunity to hold usual meetings, interactions, interrelations and create Cohesion. Recognition and distinction of locations and domains and organizing them in mental structure, not only permit individuals to function effectively, but also is a source of security, desire, pleasure and Recognition .On the other hand _Mahalle_in all of Iranian traditional cities is defined by symbolic and cultural concepts. The *Mahalle* is recognized best when its physical boundaries merge with symbolic concepts. Many of the social behaviors possess
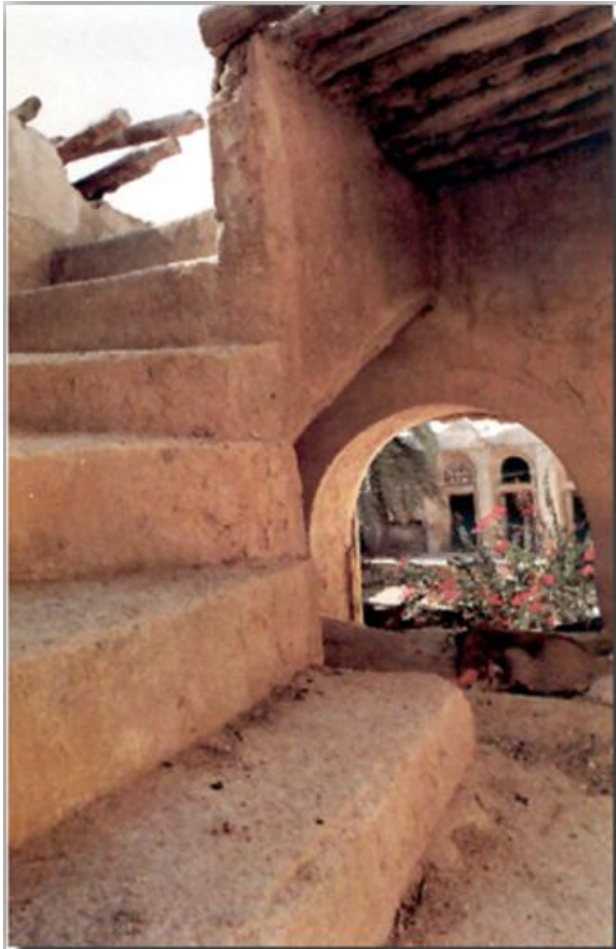
Figure 1. Interior view from an Iranian traditional courtyard which shows privacy and family domain.

domains and providing privacy in urban spaces. There is always a pass way from one domain to another and this space that belongs to the pass way often is the most attractive location for a person to be in and it introduces to him the meaning of a threshold. Shape of entrances in all locations is important. Thereafter, an element called gate appears which is symbolic for physical, ethical, race, and religious domains. Feeling of privacy and security is not synonymous but there is a kind of privacy which is secure. Also, paying attention to scale to convenience a location is fundamental.

DISCUSSION

Human being can relate better to small and appropriate spaces of his own scale and feel more security. Aesthetical aspects should not be left out and unification of vision should be under consideration. There is a symbolic language to define limitations and statement of domains and privacies. Some indicate true obstacles and some display symbolic obstacles. From ancient times cities in the east and west with functional similarities have displayed their differences of structure and physical aspects. Definitely there have not been similar views of collective life and private life of individuals in east and west. As we see from ancient times (Greece and Rome) public life of citizens in the city have had priority to their private life. While the frame of Iranian traditional city has been shaped on the basis of respect for privacy of families and importance of privacy which shaped an inside order for urban spaces. Therefore in this regard, knowledge of how to use concepts under investigation in Iranian traditional urban spaces is essential. Consequently, to achieve results, brief investigation of main components constituent of urban structure of Iranian traditional city is essential.

Home

Home is basic unit of social and urban life, and its central courtyard is basic and principal element and organizer of its space (Figure 2). In designing homes and neighboring units attention to spatial hierarchies from the private and secure home and care for method of connection to its entrance to path network (Figure 3)and care for the privacy is important from four points of view: Visual, sound, security and psychological.

Outside walls of the building to keep the privacy of the home is flawless and simple, and in case a window is needed, windows should be placed in a height over the vision of viewer and brick grids should be used to limit the view from outside to inside (Figure 4) .Entrances in uniform and undecorated continued mud and brick walls of the edge of the paths were the only signs which emphasized privacy of the residential unit. The overhead space of the entrance was a semipublic space and would

territorial concepts. Domains are specified, monitored and defended. Behaviors are also specified in this way. Variation is an element which causes heightening urban identity. Today's cities are a mixture of suburban cultures. To increase cultural enrichment of the city and increase communications, each one of the ethical groups and sub cultures of the city requires having its own special territory and continuing its own special life – style. As the results of case study mentioned Center of *Mahalle* is social and physical focal point.

A reasonable community establishes equilibrium between needs of residents and privacy required for them to establish certain degrees of contacts. Togetherness and teamwork are important in the design and in this regard livable streets are vital in urban life: in which every age group seeks to meet portions of its social needs in them. Another important point is consideration for hierarchism, which possesses different dimensions and such hierarchy has indiscrete relation with the concept of domain. Consideration for two important issues which are spatial hierarchy and access and functional hierarchy in the city studied is a step towards determination of proper

Figure 2. Pirnia House in Naeen – central courtyard Family domain-space organiser-private inner order.
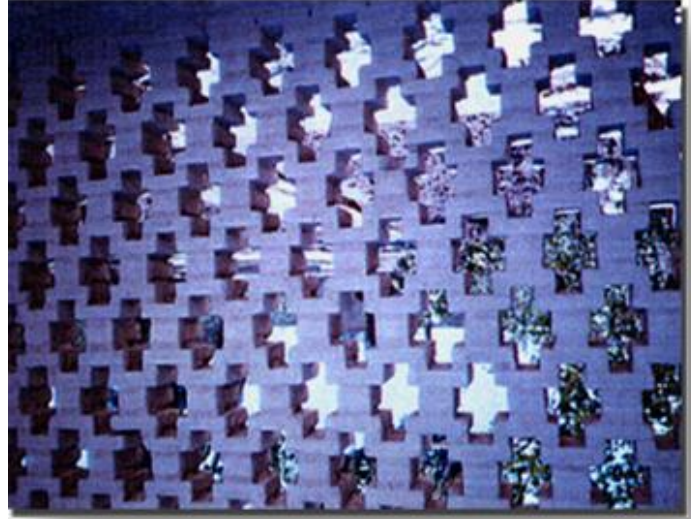

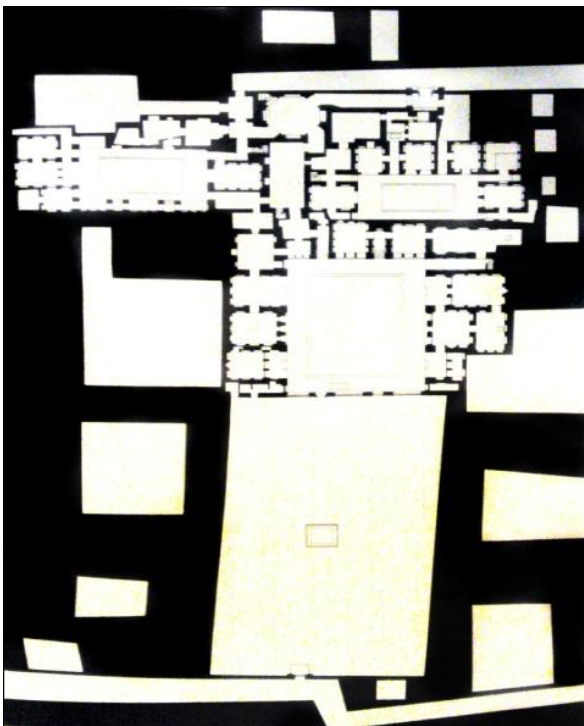**Figure 4.** House in Naeen – Brick grids,making privacy in andaruni.

Figure 3. Plan of Pirnia House in Naeen showing hierarchy in access from outside to inside.

take different shapes to itself (Figure 5). The design of entrance was emphasized by drawl and ornaments

arrangements. Forecasts of a platform in both sides of entrance door which is called; *"pakhor, khajeh Neshin, or pyrneshin"*, provided space for pedestrians to rest and friendly discussions of owner with others (Figures 5 and 6). Door knockers are also another issue in privacy hierarchies of home. Consequently, on each half door one type of knocker would be installed, the circular type with low sound for women and hammer with bass sound for men, therefore residents of the house would know if the person at the door is a woman or a man (Figure 7). Figure 8 presents the hierarchy; the arena and domain concept of components of a traditional home as micro scale element of the city and represents the figure and function and the role of home components in space organization.

Mahalle-communities

Specifications and major compounds of traditional urban structure were *mahalle* and neighborhood units with specific boundaries and sometimes they were totally closed. *Mahalle's* configuration on the basis of ethnic, local, religious, union, specifications, and cohesion of districts in some cases is based on their religious identity, but there has never been separation between the rich and poor social class. Some districts had gates and fortifications which specified the boundaries. *Mahalle* was a set of houses and network of pass ways and had a center (Figure 9) which contained facilities for residents that is, public services like educational, health, business and religious spaces which had been created for the districts self sufficiency, and it is even certain *Mahhale* had their own special cemeteries. Gates served as thresholds which separated the city from villages around.

Figure 5. Entrance of a traditional house in Naeen showing Sardar-Dargah-Pakhor_Khajeneshin.
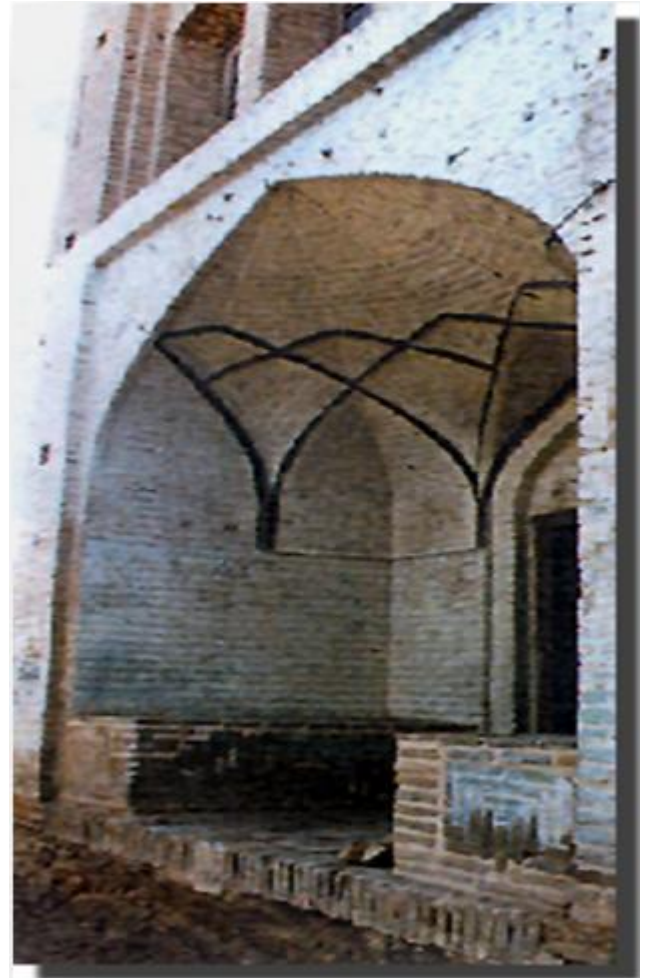

Figure 6. Entrance of house showing,khaje neshin Dargah-Sardar,Pakhor the element of entrance.

Path network

Traditional organic fabric specifies accurate and logical Hierarchy which connected most private paths to most common one of them with elegantly introduced thresholds. Hierarchy of paths was: private (Bonbast), semi-private (Gozar), semi-public (Raste), side-public, main-public paths or in other words major paths. All paths possess similar specifications which are:

(i) Close ended allies with small width.
(ii) Provide thresholds which make possible paths from crowded public space to privacy.
(iii) Space to monitor individuals at entrance of Mahalle (Figure 10) which are called : Sabat
(iv) Provision secured space for children to play and gathering of the neighbors
(v) Side public paths as collectives with limited width connect minor allies to major paths and provide intra-community communications while limited width connects minor allies to major paths and provide intra-community communications.
(vi) Forecast of houses include: arches and shelters, covered spaces, tight and wide with sharp curves completely in the shape of gates that specified small

dimensional and psychological domains in a public space (Figures 11 and 12).
(vii) Often at the vicinity of the cross-section of major paths, centers of a community and most religious, educational, and service places are constructed. Major paths provide connection between centers of communities and important city centers and are important in urban life and establishing communications.
(viii) Often in the intersection of major and minor paths there has been a symbolic element like an entrance of a house or covered space and usually elevated which, have specified boundaries of a path.
(ix) Public drinking places were important and symbolic elements which were in the direction of major paths and often their intersections. Curves in such paths were much more fluent with different views, spaces and applications which were set at their vicinities gave most attractive, more active and living condition to this public portion of the city.
(x) In addition to major paths, squares had fundamental

Figure 7. Door knocker on a traditional house circular type with low sound for woman and hammer with bass sound for men.

role in spatial continuity of urban structures.

xi) A collection of major paths, local, small and large squares, connect districts and therefore clarity of directions and orientation were made possible.

xii) In traditional urban fabric creation, paths and nodes attracted considerable attention and by creating *Mahalle* spaces, different public and private places were shaped up.

Community center - *Takaya*

Most public and local places of the district and places of meeting and gathering for residents were generally in the shape of small squares with regular and irregular geometric shapes with local small marks. Public bath, mosque, and other religious places, schools, and service spaces were established around them. District centers were sometimes linear and where part of a major path. Existence of a holy shrine was very effective in forming the center in a special place and therefore, this was not necessarily the physical center of the community.

City center (Downtown)

Downtown was the main constituent component of traditional Iranian urban structure with special attraction, in which markets and mosques were of importance.

Mosque

Everywhere at the side of the road, bazaar, or small squares of the city were constructed. Generally, in old

fabric number and location of mosques were such that voice of *"muezzin"* could be heard around the community. Thus mosques themselves determined specific domain. Many doors in the courtyard of the mosque changed the mosque into a public urban space for citizens. Large mosques had entrance to square, small squares or local centers and main paths and existence of public drinking places or related applications such as selling candles, signet and beads or book – sellers shop in the vicinity introduced closeness to religious space boundary. In old fabrics, mosques, *"hosseinieh"*, and *"takaya"* especially in local scales were very valuable in social relations especially for women and gathering spaces. This in addition to establishing religious relation most local affairs and disputes between people were resolved. Dome and minaret of mosque which are visible from side and main paths would help more clarity of space and distinguish local domain orientation and create diversity.

Marketplace

Major roofed market of the town with inside order, most major path of the city and its heart which was the main structure of the city.

Conclusion

Principles to consider in domain and privacy

(1) People's cooperation in city affairs, design and approval processes, makes them possible to utilize initiative suggestions and a range of abilities (Figure 13).

The role of component in space organization	Meaning & symbolic elements	Function		arena	Figure	Spatial Hierarchy And Components		
		connection	Relation transfer					
In between space between home unit and bombast Shaping skyline	Adjacent family & resident Domain Identity			Semi public Semi Private		Sardar Dargah Pakhor Khajeneshin saku	Entrance	MICRO SCALE - HOME
In between space between entrance & Biruni & Andaruni (as family Domain)	Adjacent family & resident Domain Identity			Semi private		Domed Enclosure Small space	Hashti	
						Linear Interior Roofed path	Dalan	
Close ended space Ad joint to home with one way conection	**Man Domain**			Semi private		According to economic situation of owner can be one room or a part of house with its inner courtyard and rooms	Biruni	
Space organizer & focal spatial element	Family Domain family Identity			Private		Hoze Favare Baghche Inner paved paths	Inner Central Courtyard	
Arrangement around inner courtyard	Family Domain	to pasto	-	Private		3 doors 5 doors Talar Shahneshin tanbi	Rooms	Andaruni
In between space between inner courtyard & rooms	Family Domain			Private		Sofe Mahtabi baharkhab	Eivan	
Close ended spaces with one way connection	**Woman Domain**	-		Very Private		Hozkheneh Balakhaneh Sardab Pastoo Matbakh Services Zavie room	Private Inner core	

Figure 8. An analytical approach to hierarchy of components and domain concept in Iranian traditional home.

(2) Our cities considering immigration are a combination of different cultures. Therefore social, ethical and religious groups may have special domain and desired neighborhood of their own and shall live their own special life style. This will add to cultural, social, and physical diversification and heighten the quality of the city. Such domains do have required attraction to increase reciprocated communications and social terms between

Figure 9. Entrance of community center – takaya Naeen.

Figure 10. Entrance of Mahale (community)showing Sabat,shaping the semipublic domain.

residents.

(3) Memories, events and reminiscence are effective in shaping domain.

(4) Lack of considering   privacies: bring fundamental harm to people's psychological state therefore providing accurate sociological and psychological studies for every community.

(5) Consideration for demands of age and sex groups and handicapped with respect to accessibility to security, tranquility, privacy or space movement creates diversification in urban space in which every group assumed a territory for themselves and relates to urban life in urban space.

(6) In addition to real ownerships of spaces which indicate supervision and control of spaces, symbolic ownership of public spaces with forecast of live and attractive activities, intensive use of public space, enforcement of social communication should be considered, so by increasing the sense of belonging to place, enforce responsibility and optimum utilization of place.

(7) Determination of physical privacy of community and neighborhood unit by designing edges natural obstacles, paths, and activities. Paying attention to entrance of community and creation of entrance perception (real or imaginary).
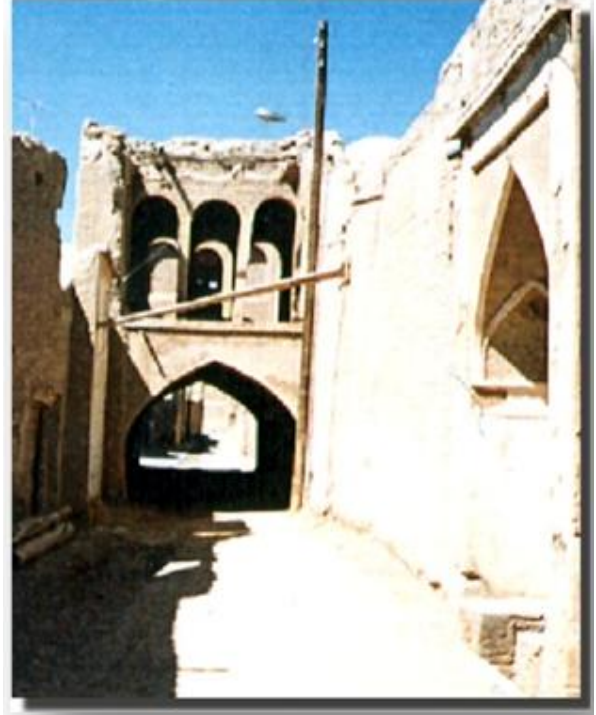
(8) Considering proportionate and consistent functions for relative self – efficiency of Mahalle by informant of community center and forecast of tranquil and on foot accessibility from every point of district to it.

(9) Observance of demands by different age and sex groups.

(10) While considering the range of most private spaces to most public spaces, we should always pay attention to types of access points and their hierarchy. One of the most common ways to determine domain of communities was its limitation of access from different angles of it.

(11) Privacy of a residential unit demands most quiet type of access and in hierarchy access in urban space is from most public parts of city to residential areas which width of paths number and type of vehicles always change and reduce and the complexity of roads increase.

(12) Construction of circular and close ended paths, promotion of allies in neighborhood scale with narrow and traditional paths, increase of access for pedestrian in addition to providing services and tranquility required would contribute to promotion of social relations.

(13) Activities are kind of boundaries which increases clarity. When we cross from public space to private space, always transparency of space is reduced.

(14) Avoid height differences between buildings and keep enough space between high and low   buildings and forecast of natural and artificial obstacles for reduction of vision.

(15) Using plants and green space for limitation and

Figure 11. A long straight road which has little impact because the initial view is soon digested and becomes monotonous. The human mind reacts to a contrast to the difference between things. Our original aim is to manipulate the elements of the town so that an impact on the emotions is achieved.

Figure 12. These sequences, try to recapture in the limited and static medium of the printed page a little of the sense of discovery and drama that we experience in moving through traditional fabric. This is the unfolding of a mystery. An archway dividing the prospect into two things, the street you are in and the place beyond into which you emerge so that you move out of one.

definition of domains, reduction Edges and land marks could be used as indicators of domains.

(16) Nodes shall make access to network more legible, therefore, as important crossroads are valuable in Iranian traditional urban fabric by covering some of these passages and forecast of public functions we can lay some importance on them and in such spaces create active public spaces.

(17) Arches, houses, different kinds of access spaces and gates are important in introducing thresholds and spaces which can be used with respect to their styles.

18) Using native water and plants is recommended not only for separation of functions and keeping privacies but using them because of their symbolic value of inducing kind of privacy which increases city heightening.

(19) To build dynamic places, domain should be specified and defined. Lost, surplus and undefined spaces by diminishing the continuity of space principle and Visual and psychological turbulences intriguing many social violation.

(20) Enclosure of space and way of access to it is very effective in definition of domain. Human perceives enclosure spaces better. Considering features of distinct spaces, shape of spaces and static and dynamic specifications of them we can benefit in design, definition, and limitation of domains to establish enclosure spaces proportion that have been considered at all time, which do not create sense of fear of space.

(21) Attention to introversion traditional concepts: Forecast of central yard in modern ways, such that enough conditioning is provided for the building.

(22) Consideration of changing material and color of flooring. Forecast of difference of levels, maintaining curves will calm access and specify domains.

(23) Creating distinct spaces: change in width of paths and height of surroundings create openings. Covering paths, change in rate of enclosure spaces, in addition to creation of diversity and enrichment of space; it is effective in determination of domains.

(24) Use of flexible and organic patterns to determine domain

(25) Planting for limitation in visual access to privacy of houses and reduction in sound pollution.

(26) Emphasis of entrance space of units through difference in levels with respect to path, with drawl

The Role in space organization & Domain territory	function		Arena	Figure	Spatial hierarchy & components			
	connection	Relation transfer						
Symbolic Identity specific physical boundary community domain in between space from city to homes			Semi public		Kuie barzan (neighborhood unit)	Homes residential units		
Hierarchy in space organization & urban facilities & urban amenities distribution symbolic boundaries			Semi public		Entrance mosque takaya saqahkhane public bath bazarche (market) hoseinie abanbar	Center of mahale (community)	Mahalle	
Hierarchy in space organization & function shaping domains			Semi public		Bombast (koldosak) gozar1 gozar2	Path network		Macro Scale - city
In between space with connect the inside of city to around environment & nature			public		Sardar dargah warder sentry	City gates (Borj & Baru)	Physical Main Structure of City	
Public domain with hierarchy to access different part of city in between space as macro scale witch connect all parts of city together			public		Gozar asli (main st.) civic sq.	Squares & path networks		
The main structure , organizer & shaper the whole city body determine city public domain the main element extent body of city around it main symbolic element of city as a main joint & main pivot			public		Sara sugh karvansara Tim Timche dokan bath mosque zurkhane (gym) schools (hoze)	Bazar & its combinations		

Figure 13. An analytical approach to hierarchy of components and domain concept in Iranian traditional city.

and respect to path, using plant and green coverings and proper lighting.

(27) Forecast of indirect entrances and division of spaces shall reduce direct vision into privacy of houses to a

large extent.

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