Comparative Analysis of Urban Construction Patterns in Historical district and Spontaneous Settlements (Case Studies: Historical District in Yazd and Baghshater District in Tehran)

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Abstract
Investigation on modern history of urban planning in Iran shows that there are three approaches in the subject under discussion: "Modernism and Westernism", "Traditionalism and anti-Westernism", and "Adopt and Adapt". Proponents of the first approach believe in encouraging methods to use the external concepts. The second, is the idea about cultural and religious values, thereby everything with nontraditional orientation is rejected. In the third approach the thinkers believe that if the parts of tradition are synthesized by modernity, culture and religion can adapt themselves with the development. The purpose of this study is to evaluate the adaptation of traditional urban design patterns of Islamic-Iranian cities in incompatible district of new Iranian cities (spontaneous settlements) and to focus on the application of the third approach in the current situation of Iranian cities. On this basis, the method of comparative analysis has been applied to survey the differences and similarities between historical districts and spontaneous settlements. Studies show that there are rather similarities among physical - spatial parameters (such as structural and environmental criteria) between the two types of districts; because both of these residential districts formed as organic structures that are unstable against unexpected risks and earthquake. However, there are the differences between these two types of districts in organized and formed periods. Despite historical districts that have been consolidated and organized during hundreds of years, spontaneous urban textures formed quickly and without any plan and planning. Meanwhile, the historical districts have usually integrated townscapes and unique materials such as clay, bricks or stone, while this character (integrated townscape and unique materials) never have been seen in the spontaneous settlements. There are similarities in economic and socio- cultural characteristics between residents in the two the types of districts. The residents living in poor economic condition, but under a very strong socio-capital and traditional beliefs; There can be seen several socio-cultural and particularly religious characteristics in people of historical residential districts that are similar with the spontaneous residential places, such as "strong relationship among families, friends", "hospitality", "mutual relationship among family members", strong religious beliefs and the needs for privacy and security. However, these communities are different in some principles such as quality of life and spatial and physical qualities especially in favorable and beautiful urban landscapes. So it can be extracted and adopted excellent principles from traditional and historical districts and adapt them to the inappropriate modern urban districts. With regard to the existence of these similarities, we explain applicable principles of the spatial characteristics and designing quality in the historical district of Yazd to apply in Baghshater District in Tehran as a spontaneous settlement. Findings show that we can use several solutions to reconstruct this zone included: 1) land readjustment as the suitable solution in Baghshater District with regard to the familial residential pattern in historical zone of Yazd such as Fahadan District. 2) Focusing on the traditional concept of mutual relationship in residential houses. 3) Emphasizing on the hierarchy of The entrances and exits of the residential units.
Keywords: *Tradition, modernity, adopt, historical zone of Yazd, familial residential pattern, Baghshater spontaneous settlement.*

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Introduction

Generally, by looking at the contemporary urban development history of Iran, we can point out to three approaches of "Modernism and the Occidentalism", "Traditionalism and Anti-Westernism", and "Adaptation and Adoption'. The first approach (modernism) sees the modern West as a coherent system and does not proceed through understanding the social and spatial realities of current space. Proponents of this approach are oblivious to the formation of the social natural processes and believe that the public mind would be more influenced by the external and unhistorical realities. The second approach (traditionalism) intends to preserve the cultural and religious status above all and rejects and denies almost whatever that has a non-traditional flavor. Declaring independence from the West and having the notion that all human needs can be easily satisfied with the religious advice, this approach looks at the material and spiritual aspects of modernity as a conspiracy. Both of these currents of thought (modern and traditional) share ideas in some cases despite fundamental differences, means that they recognize themselves right and obliterate others. Both views are idealistic and imaginative. One searches for its aspirations in the future and the other looks for them in the past. The third approach is "Adaptation and Adoption". This approach was formed owing to the intellectual and practical failure of the first and the second perspectives. This group believes that the necessary development will be achieved besides preserving religion if some parts of tradition and modernity are combined (Mohammadzadeh, 2009:87). According to each of these three perspectives, the Iranian cities have shaped their spatial organization throughout history. It can be said that until the modern times, the spatial organization of the Iranian-Islamic cities ha formed slowly and logically based on culture, religion and traditional principles and has covered the unique characteristics of local architecture and urbanism over years. After the transition to the modern era, with the introduction of exogenous theories of modernism in urban development realm of the country, the cities appearance seems like the Western cities rather than making any change in the content. With the collapse of organization of production, the relationships cities and villages are disrupted and the cities become an arena for the influx of the rural population. Although the policies have been such adopted that the Islamic-Iranian cities could maintain a mix of modern and traditional aspects after the Islamic Revolution, this adaptation and adoption approach has not been yet generalized. This study aims at practical application and adaptation of one of the successful structural-residential patterns of a traditional city (family residential complexes) in one of the Iranian modern city neighborhoods (spontaneous settlements). It seems that most of the current problems of modern urbanization can be resolved by generalizing and applying the positive characteristics of traditional urbanization principles to the contemporary cities of Iran in order to claim that the Islamic-Iranian urbanization has, in many cases, the required space to adapt the past conditions to today's and future conditions. This research will, first, review the features of modernity and tradition and the effects of these two approaches in the Islamic-Iranian cities. Two examples of concrete manifestations of traditional-Islamic urbanization (family residential complexes: Neighborhood Fhadan, Yazd) and modern urbanization (spontaneous settlements: Bagh Shater Neighborhoods in Tehran) will be, then, discussed. It can be said that both of the above examples are the effect of the dominating condition and atmosphere on the development trend of the Islamic- Iranian city in different historical periods. At the end, the ability to generalize the principles and construction of family residential complexes in spontaneous settlements are discussed.

Research Methodology

The research methodology is based on descriptive- adaptive approach. In fact, this research

summarizes the both concepts first by reviewing descriptions of the concepts of tradition and modernity through the historical return to the patterns of construction and urban design in the historical context of city of Yazd and examines the ability to implement these properties in Bagh Shater residential neighborhoods in the northernmost point of Tehran (as a spontaneous settlement influenced by the exogenous development changes in the Iranian city). To recognize the sociocultural features of the residents of Yazd historical context and Bagh Shater neighborhoods and identify the physical characteristics of the two regions, priority is given to the field data and is, subsequently, emphasized on library resources. The research questions were raised as below: 1) how can the principles of traditional-Islamic urbanization be generalized to the Iranian modern urbanization? 2) How can the principles of organization and construction of the historical context of Yazd be adopted in order to be adapted to the spontaneous settlements (resulting from the unbalanced development of the modern Iranian city)?

The following hypotheses have been proposed based on each of these questions:

1) It seems that the Islamic-Iranian urbanization principles and criteria will be compatible with the existing conditions throughout the centuries. 2) New residential complexes can be designed by the analysis of qualitative features of the historical contexts and applying new solutions such as land aggregation in the distressed and spontaneous contexts which are constructed on the basis of modern architecture and urbanization principles besides having traditional features.

Clarification of the Concept of Tradition and Islamic-Iranian City from the Perspective of Traditionalists and Modernists

Islamic religion is so mixed in the Iranian culture that their separation cannot be imagined by the Iranian. An introduction to the Iranian-Islamic city or city in the Islamic era has greater affinity to the traditional Islamic viewpoint because this process observes religion in the context of culture and on the basis of the local structures. The Islamic tradition does not intend to depict a utopian society based on religious sources but the proponents of this current intend to recognize the "alive, dynamic truth based on the historical trends that during fourteen centuries of Islamic history, theologians, jurists, philosophers, scientists, artists, poets, mystics and ordinary believers around the world have lived with the traditional Islam and the vast majority of Muslims are still its followers"(Nasr, 2007: 18). In the recent years, the Iranian architecture and urbanization that has been isolated from the traditional structures and follows new development currents has faced numerous problems including absurdity and meaninglessness of the urban human life, fragmentation and separation of activities and land uses, disfiguring city environment, defiance of nature, and disturbing the balance between man and ecosystem (see Kamrava, 2007 for further reading). New urban relations and new types of behavior resulting from evolution of thought have led to the new urban formations or new expectations that could be no way satisfied by the traditional cities. For example, the standards of living and health have improved significantly in the contemporary cities. Traditionalists are also well aware of the mood and look of the urban human; however, they refer to the proven and transcendent principles which organize a city beyond shape and form and give meaning to the urban human life. Since the introduction of modern concepts in Iran, struggle on surviving what has been left from the past and the renaissance current has continued. The reactions may be considered in two schools of thought of revival of tradition and moving towards modernity: On the one hand, there is a current emphasizing on the local and traditional values and, on the other hand, there is a current which intends to direct a city towards improvement and progress (Milani, 2003:20). The nineteenth century can be seen as the first echo of influence of mo-

dernity on the Iranian urbanization (known as the Tehran-Style). This current is seen in the middle of the Qajar era and the reign of Naser al-Din Shah; however, at the beginning of the Pahlavi dynasty, the Iranian city turns into the operational and administrative arena of this thought (known as The Pattern of Tehran). If Tehran style was in consistent with the past and the East was, ultimately, right in the eclectic concepts, Tehran pattern in complete interruption of the past would include rejection of the East and overcoming the Western thinking. In other words, while Tehran style aimed at incorporating the new concepts of city with the traditional concepts of flux (a combination of exogenous and endogenous concepts in a proper manner), the pattern of Tehran merely encouraged and strengthened the exogenous concepts and intended to eliminate the endogenous concepts (Habibi, 2001). What is clear is that our society was completely blinded by time, place and content in dealing with modernity, and did never find an opportunity to clarify and think of modernity and make it indigenous. External aspects affected content and social factors and intended to compensate for the past backwardness and achieve development community without clarifying the profound changes, process of changes and intellectual and philosophical improvements of the subsequent consequences, but almost through the imported technology and abandoning historical experiences and achievements. According to Katouzian, the growth of modernity in Iran was long-lasting and superficial and has acted quite realistic due to lack of an intellectually coherent totality and a systematic orientation (Mohammadzadeh, 2009:84). Therefore, this necessity is felt more than ever in today's urbanization process that taking advantage of traditional principles in many cases can solve modern urbanization problems provided that such use is entirely deliberate, introspective, and based on assessment techniques and adaptability.

Theoretical Framework of Research
As pointed out in the introduction and research methodology, this study initially intends to discuss the issues related to quality of place of living and residential environment (with emphasis on the feature of family residential complexes) by referring to the features and environmental qualities of the historical context of city of Yazd. Further, it is intended to extract general points and conditions in the adoption and extension of the efficient features of the Islamic-Iranian historic city through comparative study of the differences and similarities between the said complexes in the historic districts and the spontaneous settlements (that result from the urban and regional policies and planning affected by the modernism perspectives). To this end, the characteristics of both samples are examined in structural, physical, environmental, economic, cultural and social cases to make a comprehensive comparative analysis. It is to be noted that this study does not merely intend to appreciate the past architecture and urbanization but it aims, by adoption of the principles and characteristics of the endogenous urbanization style, at presenting an indigenous prescription to solve physical and environmental problems for the new samples.

An Overview of the General Features of Residential Neighborhoods in the Historical Context of Yazd
Compatibility between the material and spiritual aspects in organization of traditional cities that have been formed on the basis of an organic discipline establishes a hierarchy of activities ranging from public activities such as market to private activities such as home. Lanes find their way to the neighborhoods by the market and are gradually divided into the smaller and more private routes. Every neighborhood in the traditional city was the settlement of a specific ethnicity, race, religion or sect. At the beginning of construction of the Islamic cities and even before Islam, each nation or tribe built a separate neighborhood in the city under family conditions, common

	Structural aspects	Physical aspects	Environmental aspects	Economic aspects	Cultural aspects	Social aspects
Yazd Historical Context	Evaluation of networking and spatial organization	Study of the composition and strength of building components	Evaluation of spatial quality and visual aspects of environment	Evaluation of income and employment status of residents	Evaluation of cultural and religious activities	Evaluation of communication and construction of the population
Spontaneous Settlements of Bagh Shater						
Comparative Analysis (Similarity or Difference) of Features in Both Contexts						

▲ Table 1. the theoretical framework of the research

interests and kinship networks. For example, construction structure of Kufa and Baghdad was based on the neighborhoods that belonged to a particular race or tribe (see Kiani, 1986:205 for further reading). The need for internal cohesion on the one hand, and the threat of social groups against other groups, on the other hand, was the reason of development of a mental factor of belonging to a neighborhood, following the same customs, and having the sense of discrimination towards other people's neighborhoods, in a sense that there was such a cultural homogeneity in each neighborhood within the organic social relations that no social class differences were found between the rich and the poor and from the poorest to the richest people lived together in every neighborhood. These social relations were subtly effective in the formation and structure of a neighborhood and defined the communication network, the neighborhood center, and other structural elements such as water storage, mosque, Hosseinieh, Sagha khaneh, and bathroom (Tavassoli, 1991).

It can be, generally, said that Yazd is one of the few historical cities of Iran that the spatial organization of its historical part has been still partially preserved with the same old structure,

and integration and connection among the elements, the concept of neighborhood life, and spaces and activities of the ancient cities of Iran can be seen in the historical part of this city to some extent and this has been achieved through maintenance of the most important spatial principle of the city i.e. the principle of continuity (Utopia, 2007, Vol. 5:4). Therefore, it should be said that the main structural feature seen in the historical context of the city of Yazd is an "organic" and "automatically-formed" context that has been turned into a coherent structure over years which enjoys a hidden, planned order despite the apparent disorganization. On the other hand, this spatial coherence and integrity has brought a visual and color similarity and homogeneity in the physical model and the use of materials and the materials used in this context were made of mud and clay. However, all materials are manufactured from the local materials. This refers to the concept of "self-sufficiency" (see Pirnia, 1995 for further reading). Although construction quality and technology has not been such improved in that period to guarantee the resistance of buildings against the natural disasters (especially earthquakes), the concept of environmental quality in the traditional cities of

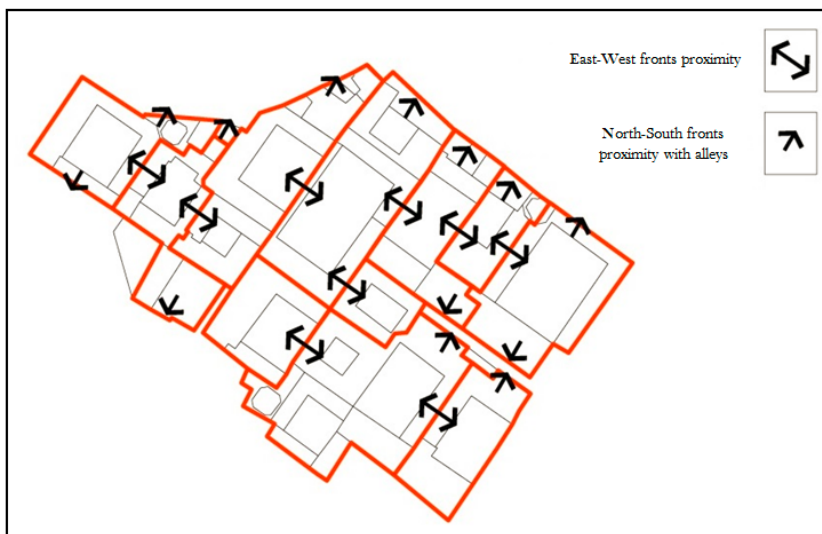Iran can be specifically studied.

While the historical context of the Iranian city manifests the best sample of the environmental and spatial quality, the lack of such qualities can be remarkably seen in shaping today's urban spaces. Therefore, the traditional, ancient part of the cities is the best ground for extraction of these qualities. Visual features such as spatial restriction, diversity, spatial dynamism and stability, frequency and continuity, composition, meaning, efficiency, human scale, proportion, etc. are among the typical distinguishing environmental features in the historical context of Yazd that can be used in the modern patterns of urban development (see Utopia, 2007, Vol. 6:6-9 for further reading). In addition, color and visual unity and harmony can be found in the urban view of this context due to the use of mud and clay. Concerning the economic conditions of the inhabitants of the historical context of Yazd, it should be said that this area that was once the main core of the Iranian cities was the place of working the majority of the residents who were mainly involved in the service activities (business, trade) or industrial activities (handicraft production workshops) and the gardeners and farmers were working in the agricultural land surrounding cities. However, today, simultaneously with the trend of population migration and depletion of the central contexts, the former residents have been replaced with the lower-income residents. For example, the field studies show that residents of Yazd historical context are employed in service jobs with low-income, low-level, and second business class (Utopia, 2007, Vol. 12:7). In the cultural-religious domain, owing to the strong historical and religious bond existed among the residents from the past, this cultural potential is still seen among the people and the inhabitants of the historical context despite the major population movements which indicates existence of a strong religious context among the residents. However, from the social perspective, the majority of the residents of Yazd include the rural immigrant popula-

tion and foreigners (mostly Afghans) who have settled in this region due to their less economic power for buying a house in newly-constructed and modern areas. What is prominent among the residents is their strong social bond which leads to development of a strong social capital among the residents. This was already seen among the ancient residents of these contexts as if the structure and spatial organization of the historical context could still emphasize this social bond.

Characteristics of Family Residential Complexes in the Historical Context of Yazd

When speaking of the family residential complexes, first of all, the sociocultural structure that has formed such residential complexes comes to mind. Style of living has the strongest links with the cultural features and lifestyle of the people. Realizing the lifestyle and customs of people of a region direct us toward the physical structures of the inhabitants. In other words, the organically-formed residential complexes have a strong relationship with the social and cultural features, in a sense that their physical structure has derived from the social structures of their residents. Although other forces such as economic and climatic forces have a significant influence on the formation of physical structures, the effect of social forces is stronger than the other forces in regard to family complexes. Recognizing the sociocultural structure of Yazdi citizens demonstrates the reasons for the existence and quality of family residential complexes in Yazd. Thus, a brief reference is made to the social characteristics of the ancient residents of Yazd in this section (which seems to play a role in the formation of family complexes (consanguinity):

1) Relative Affinity: People of Yazd have a particular affection to their family and relatives, such that, for example, they insist on marriage between family members. **2) Hospitality:** People of Yazd have great respect for guests, in a sense that the guest room is considered as the best space in the traditional houses of Yazd from ancient times to the present. **3) Introver-**

▲ Fig 1.Access and spatial relationship among the residents of Arabha family residential complex and communication with the adjoining streets (Source: authors)

sion: Most people live in their private homes, and the residents rarely intervene in the affairs of others and exchange information. 4) Religiosity: The majority of Yazd people are Shiite and no one is found, at least ostensibly, irreligious. Muslims have a particular bias towards their religion and customs. 5) The need for privacy, security and not being overlooked by others: the religious atmosphere of the family and the introverted life of people in Yazd have caused the social behavior of residents has a limited style by avoiding supremacy and is defined within its specific framework. Family residential complexes, in response to tribal and kinship bias, have been such constructed that the members of a tribe have their own privacy while residing next to each other, as if the nomadic life of a tribe has changed into a definite fixed and physical life while maintaining the relationships. This privacy has been respected through various yards. Social relations between the residents of these complexes and neighbors have a physical form in spite of security and privacy. The restricted formation and division space such as vestibule is the physical manifestation of these relations, such that these spaces are regarded as the place of occurring social interactions among the residents. This type of organization is remarkably seen among a com-

plex of residential units in the historical context of Yazd. Family residential complexes of Arabha, Lariha, Mahmoudi, Malekzadeh, Dehghan, and Abdolalian are only some examples of these complexes that have the above-mentioned characteristics. The spatial relationship among the residential units in the family complexes is notable. For example, Arabha residential complex is a collection of several yards in the half-open and closed spaces. Regardless of the open spaces with merely communicative and service use, there are 18 yards (empty space) and 12 buildings (occupied space) with a central courtyard, that each is regarded as a center of an independent part (Fig. 1). The complex texture is irregular and organic. Although the dimensions of land plots and the constructed space (occupied space) are quantitatively different, the construction model of each residential unit follows the central courtyard model. Family residential complexes used other models in terms of climate, religion, performance, privacy, etc. which ultimately led to a paradigm and achieved an integrated totality. Proximity and spatial relationship of residential units in the residential complex was such that every accommodation was associated with the adjoining streets besides communicating with other dwellings within the complex (Fig. 1).
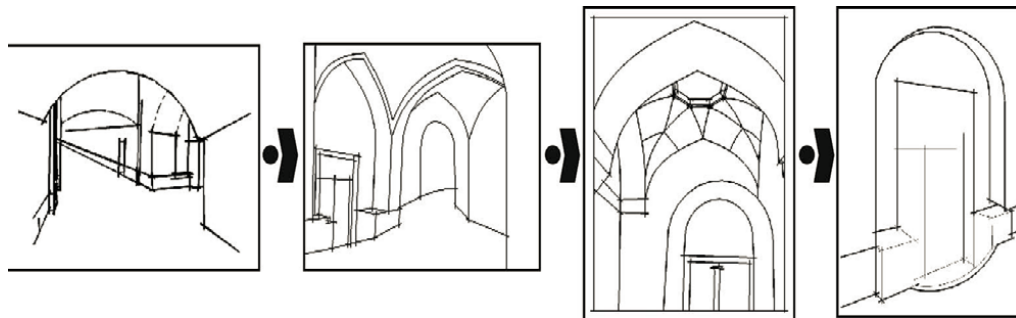
The general elongation of this complex is from the northwest to the southeast. In all these cells, the hall and porch are located on the southern side that is toward Qibla (Mecca). This direction (direction toward Qibla) was not only affected by the religion but was the outcome of the climatic, cultural, and access effects which were effective in its formation. The east-west fronts that have the most proximity to other domains cover the least spaces so that they can have the least exchanges of noise, vision, smell, and the like. So, the most important spaces in the building are located at the northern and southern parts which act as the spatial entry and communication. This organization shows that how a complex of these residential units maintains their spatial integration and relationship while being independent. The roofed walkways at the entrance of each neighborhood or a residential complex somehow reflect a group or an individual domain which inspires the sense of privacy and non-invitation to the observer. The arch over the walkway separates the surrounded semi-private space from the semi-public space and inspires the sense of a domain to the pedestrians. Emphasizing on existence of a domain will automatically inspire the sense hierarchy to the viewer. This hierarchy will, indeed, raise the sense of privacy and security for the residents. Fig. 2 shows the hierarchical and spatial sequence at the entrance of Arabha family residential complex. The entrances are located in a proper depth in the public passage and will first reach to the surrounded semi-private space and finally to the private porch and the entrance of each house and make their privacy more definite.

It can be, generally, said that the family residential complexes in the historical context of the city of Yazd have been organized considering the religious, cultural and social features besides economic and climatic features exist among relatives. These communications and features are clearly seen in the physical structure of family units that has resulted from the social structure of each complex.

An Overview of the Process of Formation of the Spontaneous Settlements and their Characteristics

Urban informal settlement in Iran is affected by several factors such as the political processes of macro planning, the adopted patterns of development, and domination of mandatory and top-to-down planning system (Boochani, 2007). Economic and social developments of the fifties have been considerably effective on the development of informal settlements. Changes resulting from the formation of the international division of labor and the transformation of the economic structure of Iran, increase and accumulation of oil revenue and land reform have been the major reasons of acceleration of urbanization process and the subsequent formation of informal settlements. In the following decades, reliance on the income and the increased economic gap between the urban and rural economy, the imposed war, natural disasters, and macro and micro management problems have greatly extended the scope of this phenomenon (see Habibi, 2001 and Mashhadizadeh Dehaghani, 2002 for further reading). What is seen in the spontaneous settlements in terms of the structure and networking system is in direct relation to the legal status of the possessed lands. Violation of the official laws and regulations of the urban land is, in fact, the basis of formation of most of these settlements and has developed a spatial, organic, spontaneous and automatic structure; the difference is that in contrast to the organic historical contexts that have been formed logically and slowly over thousands of years, many of these contexts aged less than three decades while less spatial integration is be seen in their spatial structure. In most cases, no accuracy is found structurally in design and construction of these buildings due to the high speed of construction of the buildings in these settlements. Poor infrastructure and superstructure service is seen in terms of infrastructure, and there is, practically, no water and wastewater distribution network.

▲ Fig 2. Spatial sequence from the semi-public space to the private space in Arabha residential complex (Source: authors)

Moreover, the houses and buildings established here are highly unstable. Anyhow, materials used in these settlements are of a great variety and no unity and homogeneity are seen in the visual appearance of the materials applied. Also, materials are of very low qualities. In fact, it can be said that the initial purpose of the residents has been provision of shelters in the first instance and no special attention has been paid to the qualities and types of the materials used. Another considerable point about these settlements is their environmental characteristics. As it was mentioned, these settlements are often organic and irregular structurally. Thus, although they have a great similarity to historically organic textures based on spatial structure, there are radical differences between them and historical textures based on visual and environmental qualities due to lack of application of suitable regional materials and spatial qualities of the designs. Actually, no visual and color unity is seen in the urban landscapes of these textures. For instance, although such elements as Sabat , vault, and Tavize refer to sequence, continuity, and spatial enclosure of historical textures and continuity of clay application in the majority of buildings highlights a special visual and color unity in the walls of these textures, no spatial quality and visual and color unity are seen in the so-called spontaneous textures. On the economic basis, livelihoods of the inhabitants of these settlements are frequently informal and on service, low and second-hand levels depending almost completely on the Metropolitan economy. Anyhow, the majority
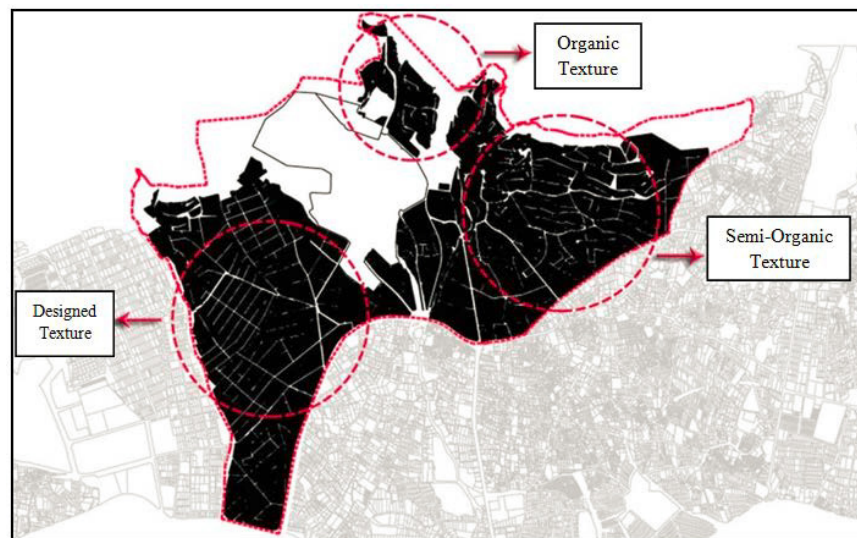
of the residents would find little financial support and thus own little wealth since they have a rural background. From a social perspective, in contrast to the earlier views that regarded marginal settlements as a symbol of corruption, crime, and illegality, recent approaches essentially consider them as a resource of social capital and individual and social skills and motivations. According to them, strong social homogeneity, ties, communications and organized correlation provide an opportunity to develop their strong points. Nevertheless, they approve the existence of areas and contexts of social and psychological damages in them (For further studies, refer to R. G. Sheikhi, 1380: 70-79). Based on culture and religion, there are strong religious relations between the residents (who are mostly of a rural origin) because of the existence of strong social connections between them. For example, studies indicate extremely high qualities of public environment (based on the growth of social and religious communications) in both the spontaneous settlements of Deh Vanak and Islamabad and thus the features of sociability, collaboration, and social capital are clearly seen in these settlements, especially during the periods of mourning ceremonies (For further studies, refer to R. G. Arasteh, 1389: 107).

Bagh Shater Locality: a typical settlement in Tehran

After the arrival of Modernism in the manufacturing organizations and Iran's engagement in the new capitalist relations, many changes were made at the national, regional and mu-

▲ **Figure 3. Organic texture of Bagh Shater locality compared to the peripheral semi-organic designed textures (checkered) in region 1 of Tehran (Source: Consulting Engineers of Architectural texture designers, 1389)**

nicipal levels in Iran and all the traditional relations of production and distribution previously prevalent in the country were left forgotten. Lack of the evolution of the capitalist system in Iran, land reforms in the 40s, oil price increases in the 50's, advent of the Islamic Revolution, and the subsequent imposed war put a wide impact on the pattern of urbanization and cities in Iran (For further studies, refer to R. G. Sheikhi, 1:1380). One of the major influences was caused by the villagers who migrated to big cities, especially Tehran, for a better life and security so as to lead to the increase of Tehran population by more than three times over three decades (1345 - 1375) (From 2.7 to 8.6 million people). As the comprehensive and detailed plan prepared for Tehran city failed to provide population accountability to such an extent, this led many immigrants to enter arid lands with no installations and equipments and form "spontaneous settlements" famous in the urbanization literature of the country, while keeping their own cultural and social conditions.

Bagh Shater locality in Tehran is one of such localities with many similar characteristics to these settlements. Like other traditional mountainous localities in the region 1 of Tehran, this locality has got an organic and worn-out tex-

ture and therefore accessibility to it is difficult because of its mountainous location (Figure 3). What is seen in the developmental trend of this locality is its spontaneous and unplanned development, especially during the post-revolution period so as to be named as a spontaneous settlement with a worn-out texture in the upper-hand plans (Consulting Engineers of Architectural texture designers, 4:1389). Although strong cultural, religious, and social features are seen among the residents with regard to their initial origins, structure and physical organization of this locality is extremely worn-out. Based on the criteria defined about worn-out textures by Iranian Supreme Council of Urbanization and Architecture, the existence of a network of narrow passages and micro lithic fragments associated with physical instability and unsuitable urban landscape are of the major problems of this locality.

A table 2 sum up the studies performed and addresses the summarized comparative assessment of similar and different characteristics of Yazd historical texture and Bagh Shater spontaneous settlement. The final findings of this research show that there are significant differences between the features other than those of organicism and instability of the buildings in both textures based on physical-spatial (struc-

Feature / Case study	Structural	Physical	Environmental	Economic	Cultural - religious	social
Historical district	- organic structure with spontaneous formation over the years - Spatial integrity and continuity in the partial structure	- Use of uniform regional materials Structurally unstable	- Use of a variety of environmental features and qualities - Visual unity of colors and materials	Various levels of incomes and high-level service and industrial jobs of the past residents - low-level service jobs of the new residents	- Strong cultural and religious ties between residents	- Strong social capital - Strong kinship and social ties among residents
Spontaneous settlement	- (General) organic structure with spontaneous formation within a few years. - Lack of Spatial integrity in the partial structure	- Use of various exotic materials - Structurally unstable	- Lack of designing and environmental qualities - Lack of visual unity of colors and materials	Informal and low-level service jobs of Most residents	- Strong cultural and religious ties between residents	- Strong social capital - Strong kinship and social ties among residents
Similarity and difference	- Similarity in the overall structure - Difference in the partial structure	- Differences in the use of materials - Similarity in the instability of buildings	- Differences in the use of environmental designing qualities - Differences in the visual unity	- Overall similarity in the economic status	- Overall similarity in the cultural – religious status	- Overall similarity in the social status

▲ Table 2. Similar and different features of historical textures and spontaneous settlements in Iran (Source: authors)
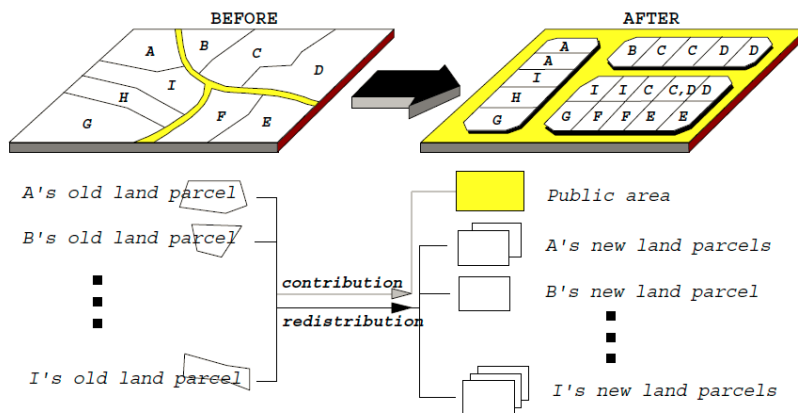
tural, physical, and environmental) criteria, while there are general similarities between the residents of the two textures based on economic-social criteria (including economic, cultural-religious, and social characteristics).

Discussion

Interviews and field assessments represent that there are very strong family and social relations between the residents of this locality as well due to their Azari origins (almost 90% of the residents of this locality are Azari) the same as what was explained about the conditions of family collections in Yazd historical texture. Meanwhile, the residents of this locality maintain their religious propensities and show particular prejudices to their own beliefs. In fact, the residents' strong religious and cultural beliefs (from the objective evidence of which we can mention the existence of mosques and religious bodies within the limits) as well as their deep ethnic and kinship ties can be of the strong points and an opportunity for the development and reconstruction of residential texture of this locality. On the other hand, we can observe an interesting similarity between the organic textures of historical localities and those of spontaneous settlements. The only difference could be detected in the fact that the organic textures of historical localities (either in the Eastern Islamic cities or in the western cities of Middle Ages) have been approved gradually and logically over the years. Therefore, distinctive spatial qualities are seen in these textures the likeness of which could be hardly found even within the urban designed spaces. As Alexander points out, a whole growing thought means a new growth of what arises from nature with its special structure of the past and its traditions. Some substantial features in each of these growing wholes include: the whole gradually grows and comes into existence; changing trends of the whole is not predictable; the whole is integrated; the whole is always full of feelings (Alexander: 1373). According to Alexander, the developments of all traditional cities have enjoyed these properties

and modern urban developments lack these features. In his search of the rules governing forms of the past Islamic-Iranian cities, Pirnia mentions 5 generic principles used in traditional architecture and urbanization, the sums of which cause unity of constructions. These principles include: 1) people-orientation (having a human scale); 2) avoidance of futility (not using what is not necessary and gives humans no benefits anywhere); 3) self-sufficiency (attempting to use accessible regional materials); 4) introspection (placing necessary bodies of a building around a central space); 5) proportion (fitness, statics, structure calculations, science of materials, and building technology) (Pirnia, 1374:37-38). All these features could be observed in Yazd historical texture and family housing complexes (some of which were mentioned above).

Although there are great religious, social, and cultural similarities between the residents of historical textures and today's residents of spontaneous settlements, based on physical-spatial dimensions, there is only an organic similarity between the two textures based on physical-spatial dimensions and no clear resemblance could be seen based on other physical aspects. If we are to base our datum on the 5 principles of Pirna, only the principles of people-orientation and introspection are observable in the residential texture of spontaneous settlements and the principles of self-sufficiency, avoidance of futility, and proportion could not be seen in these settlements. If we consider social, religious, and cultural aspects as strong points and an opportunity to empower spontaneous settlements, the physical feature of these settlements is known to be a weak point and a threat for their future. One of the reasons for posing the issue of family housing complexes is operationalization of these complexes in the textures of such spontaneous settlements as Bagh Shater for we can be hopeful of physical stabilities and suitable re-landscaping of these worn-out residential textures by contemporization and enforcement of a set of principles

BEFORE   AFTER

A's old land parcel
B's old land parcel
⋮
I's old land parcel

contribution
redistribution

Public area
A's new land parcels
B's new land parcel
⋮
I's new land parcels

▲ Figure 4. Mechanism of land readjustment (Source: Yomralioglu et al, 1996: 155)

adoptable from family housing complexes with regard to the existence of kinship and cultural potentials between the inhabitants of these settlements. In fact, superior qualities and characteristics of the Islamic-Iranian urbanization or in other words tradition could be adopted and adapted into the new (problematic) Iranian urban spaces. It seems we can re-regulate arrangement of residential components on a kinship scale specifically at Bagh Shater locality through integration schemes (similar to family housing complexes of Yazd historical texture and Fahadan neighborhood) and suggest new family housing complexes in the worn-out texture of this locality. Figure 4 shows a typical example of enforcement of integration lands in the organic textures.

At the end, we can point out the conditions generally adopted from the studies of family housing complexes that are adaptable to Bagh Shater locality in this research:

Considering the traditional concept of introversion in the residential units: Prediction of the central yard in its own contemporary form and in such a way that adequate light and suitable ventilation are provided for the building; one or more stories are necessary for the residential buildings

Considering openings and windows in the external bodies for minimizing visual conditions and enhancing privacy: This would be possible by taking into account especial shapes and di-

mensions for windows, their retreatment into the bodies, and prediction of different types of brick, concrete, etc networks as well as the windows of the first floors at higher elevations than the visual limits of the observers. The following picture illustrates two windows installed at different heights showing a difference in dominance; the more a window is at lower elevation, the easier inside of the building is seen and this is not appropriate. The following image displays the wall of Arabs' Complex overlooking the road with no openness to outside due to the narrowness of the road, traffic, and the difference of the road and yard floor levels, which makes it problematic to install the windows on the ground floor based on the direct sight into the building, noise prevention, observance of hierarchy, etc.

Avoiding high-elevation differences between the residential buildings: Maintenance of enough distance between high and low buildings and prediction of natural and artificial barriers to reduce visual access.

Emphasizing on the hierarchy of privacy and the entrance space of the residential units: Prediction of level difference of the road, retreatment of passage, installation of a variety of mechanical and electronic systems for traffic, use of plants and green vegetation, good lighting, prediction of indirect entrances and areas of division in such a way to reduce direct vision into the private limits of houses as much

as possible.

Providing a smooth-walled construction and emphasizing on spatial patterns like light-shade effects or narrowness-wideness of space: As it was previously mentioned, in the spontaneous settlements, visual disturbance and mismatches between the materials of the building façade are intensively seen posing a wrong perspective in front of the eyes of the observer. Besides providing a repair of the instability of adjacent buildings, arches and vaults. Based on the perspective arrangement model of Yazd historical texture, inexpensive and yet unified materials could be used for the reconstruction of wall perspective of Bagh Shater settlement both to improve visual and mental qualities of the road space and environmental qualities of the settlement by creating such qualities as light-shade effects or narrowness-wideness of the spaces.

Conclusion

In this study, we assessed the views of traditionalist and modernist intellectuals in general and specifically in the Iranian-Islamic urbanization. What was aimed at by the authors in this research was emphasizing on the beneficial features of the Islamic-Iranian cities and implementing these features in the new Iranian cities. For this purpose, family housing complexes of the historical texture of Yazd City were examined in particular and several features of them were adopted to assess the possibility of their generalization into Bagh Shater Neighborhood (as a spontaneous settlement in the north of Tehran) by examining the physical characteristics of the complexes as well as the social and cultural features of their residents. Studies revealed that unlike other textures, spontaneous urban contexts follow a specific process of development and evolution when the textures of historical neighborhoods are compared to those of spontaneous settlements. While this process occurs in a normal or historical context in the long run, it happens much faster than normal conditions in spontaneous textures due to the wrong policies of national-regional projects and their incompatibility with urban development projects. In fact, a large but unplanned spontaneous settlement may form with no specified equipments in a short timeframe. However, it must not be forgotten that the majority of the inhabitants of these settlements have rural origins with religious beliefs and strong social and kinship ties so as to keep their own social and cultural aspects. As today's urban management of Tehran seeks to enforce reconstruction projects in the worn-out textures through such policies as incentive and integrative schemes, taking advantage of physical designing principles of family housing complexes and updating their regulations can provide a fertile ground for sustainable structural designs with a good perspective access. Therefore, it is suggested that future researches be focused on the principles, policies, and designing criteria that can be extracted from these residential complexes and the feasibility of implementation of these projects be examined in the spontaneous settlements.

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