Influence of Persian Garden as Urban Green Spaces on Promotion of Social Interactions Citizens; Case Study: Garden Chehel Sotun (Mellat Park) of Behshahr City, Iran

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ABSTRACT: Green space is one of the main pillars in urban and effects on the quality of the urban landscape, and improving the levels of social, cultural and health interactions of the citizens. Persian garden is the best sample of old urban green space and one of the first effective instances in urban landscape. Pay attention to effect of green space in quality of social life, in many modern cities, the parks and gardens has designed and constructed that aren’t responsive for social needs, improvement of communications and the social relations of citizens. This matter appears because of imitation form western countries pattern and inattention to cultural, sociological and psychological needs. Chehel-Sotoun Garden has constructed in 1612 by orders of Shah-Abbas in Behshahr, Mazandaran state. The garden has been used as green space and the city's main park. In this research, that been developed based on descriptive procedure, the elements of a urban green space has investigated and the characteristics of Chehel-Sotoun Garden as an active and vibrant Persian Garden and distinguished form other public green spaces has been examined as an effective factor in improvement the levels of social interactions of citizens. The results of research indicates that the Persian Garden is an efficient green space in improvement of public social interactions, enhancing of efficiency of an urban green space arises the life quality and specially, social interaction level so that can be said the public social interactions cannot be developed in an unfavorable green space and the Persian Garden characteristics are standards for design of urban green space that is appropriate for social and cultural needs.

Keywords: Social Interactions, Persian Garden, Park, Green Space, Urban

INTRODUCTION

Urban public spaces in urban development programs have an important place. Creating appropriate public spaces, meet the needs of social relationships. In terms of psychological and emotional spaces that been active and provides the possibility of leisure and human face to face communication within urban community. Man in his development needs appropriate leisure and continuous social interaction. The most important factor of social life is attending suitable communal spaces and communication with others. Parks and green spaces is also one of the urban public spaces. Nowadays city's parks and public spaces are as part of the integral elements of biological complexes, especially in large cities that could be provided a good platform to the welfare and recreational, leisure and citizens social relationships and in this regard are close to each other in society (Meymandi Parizi, 2011). In the realm of social life in our country, evolutions were born from urban parks and methods of gardens and which along with other aspects of architecture and urban planning started from the Qajar era and main results has stepped into the realm of urban space in the last half century. An appropriate urban park with social, economic and ecological functions, has an important role in quality of urban life, and is one of the preconditions for sustainable urban (Amirfakhrian et al., 2011). Iran Garden, makes space clean, relaxation sinks, free of any stress and thought-full environment, has a long history of Hakhmaneshian era. With spread of Islam in Iran and its impacts on architecture, art of Persian garden are also influenced, thence the palace gardens, urban gardens and urban marginality gardens is constructed at the best spots in architectural history of Iran. The greatest achievement at the Safavid government era obtained in the field of architecture art that Safavid Garden is the most important in the history of the Persian garden (Seraj Mehdizadeh, 2010). This paper is followed to examine an efficient public green space, role and impact of Chehelsotoon Garden (Mellat Park) in Behshahr city as a Persian garden on promotion of social interactions citizens of this city.

Review of Literature

The essay about the role of public green space for social inclusion of youths from different cultures, will illustrate the above idea by showing to examine the role and functions of green space in Zurich. This essay has shown that Public urban green spaces were found to play an important role for children and youths in making contacts and friends across cultures, which is considered a prerequisite for social inclusion (Seeland et al., 2009). Are urban green spaces optimally distributed to act as places for social integration? Title of research by the German
Chiari and Seeland, 2004, has been in Swiss urban areas. The objective of this on-going research is to analyze the social potential of urban green spaces to create opportunities to integrate youths, elderly people, foreigners, unemployed and other social groups into the urban life of large Swiss agglomerations. Urban green-space data are linked with social demographic data for these particular social groups.

Results of another essay about residents and urban green spaces in Bari city (Italia) show that respondents perceive the green areas as a life quality enhancer in accordance with some previous studies carried out in Italy and in other countries. Citizens are moreover conscious of the limitations in quality and quantity of green areas in their own city, although this result needs to be more closely analysed in the future. The results moreover underline how citizens see the public and private green areas as single beneficial system.

Another essay about «Social interactions in urban park: stimulating social cohesion? » shows that urban parks can be seen as possibly favourable spaces for social interaction. It is generally claimed that social interaction can contribute to social cohesion It is important to note that interactions are not just conversations between people; eye contact and all forms of non-verbal behaviour are considered interactions as well. The objective of this paper is to find out to what extent urban parks are indeed meeting places. It aims at taking a closer look at the use of urban parks and the meaning of those parks for people with various ethnic backgrounds and to see if inter-ethnic interactions do take place and whether those interactions contribute to social cohesion.

Different ethnic groups are going to urban parks for relaxing and spending time with friends and family. In urban parks inter-ethnic interactions happen and that those interactions take place more often during all different types of events (Peters et al., 2007). Urban green spaces are affected the behaviour of citizens and can be applied to regulate behaviour and basically this is possible through the planning and design of urban green spaces and the combination of such plans with the regulator system of hierarchy of promoting of ethical and social society members provided. So that only contact with nature is capable of providing compensation for the damages of identity and character development is harmonious (Salehifard et al., 2008).

Green space impacts on a wide range of social and community issues ranging from community involvement and empowerment to issues of safety, inclusion, equality, civic pride, education and play. Green space provides opportunities for community and social interaction, and attractive landscapes can also contribute to a sense of community identity and ownership. Green space is important for recreation and play, and research highlights the benefits in relation to child development. Linked to this is the role of green space for education and lifelong learning which reflects the benefits which can be gained from the use of green space for formal education in close proximity to schools. Green space also provides an informal learning experience through providing the opportunity to explore and experience green space and presenting opportunities for stimulation and discovery (Ferguson, 2002).

**MATERIAL AND METHODS**

This essay is descriptive – analytic and required data were collected from the library and documentary for this study and in category of applied Research.

**Green space an urban space**

Urban space is part of the city's identity and this identity is defined by the presence of people. One of the pillars of urban spaces is green space that has significant impact on the quality of the urban landscape. Today, the ideal city is inconceivable without the green spaces. Actually the ideal green space is solution for many of the acute problems of urban that in addition to improving the quality of urban landscape is effective in issues of aesthetics and perception of identity that can prevent the destruction of the economic and physical quality of life, pollution, congestion and middle-class exodus from the center of city and brought vitality to the downtown and surrounding areas and it encourages people to voluntarily participate (Yousephi, 2006). Green space is symbol of ideas, social and cultural a society and important factor in urban space that it's aspects of social, cultural and psychological Is considered for public always and plays an important role in urban planning (Figure1). The importance of green space in cities is great enough that it is remembered among the five major urban usages (Amirfakhrian et al., 2011).

![Figure 1. Conceptual relationship between green space, quality of life and sustainable urban](image)

**The definition of urban green space**

Green space is part of the urban landscape which consists of the types of manmade vegetation and as a living and vital factor besides body of building determines the morphological construction of the city and eligibility of social and ecological efficiency.

**There are green spaces in urban areas can be divided into several categories**

1-Public parks and green spaces are proposed as recreational spaces for the general public.

2-Green spaces of squares and boulevards, and fringe of streets which are effective to create cleaner, healthier air and a beautiful landscape for the city.

3- Protected forests and gardens and green spaces which are effective to create a cleaner and healthier air.

Green spaces can be divided into two groups
Suburban green spaces generally
Green spaces of the fringe or suburban green spaces on one hand, the role of inhibitory uncontrolled growth and on the other hand ecological efficiency of the city's environment and includes all urban environment.

Within urban green spaces
Green space within urban can be generally divided into several cases
1. Public green spaces
2. Semi-public green spaces
3. Green spaces of street
4. Private spaces of courtyard houses
5. Roofs and balconies

Urban green space, protecting valuable space
Urban green spaces can to protect people and buildings. Protecting the value of green space can be examined under the following topics
1. Turn in harsh climate
2. Absorb pollution
3. Prevent Flooding
4. Safety
5. Maintenance of Historic Landscape
6. To screen undesirable elements
7. Providing a framework for planning initiative
(Khabbazi et al., 2009)

Benefits of visual features of green spaces
The main role of green space in quality of human perception is importance of landscaping in the urban space. Landscaping is the use of plants in design and form of visual effects that improve the environment. Plants are one of the main pillars of green space. Plants are one of the main pillars of green space that growth habits, form, texture, color and size are important factors in selecting plants to create an image of lasting beauty. The plants can be used for guiding pedestrians, encourage them to spend time in public open spaces, increased social interaction, creating a sense of vitality and memorable in the environment and can be used to create solidarity in a visually chaotic scenes. Persian Garden is typified by the use of visual and functional features of plants (AleHassan et al., 2012).

Social effects of urban green space
Public green spaces in the urban environment in terms of needs and providing an atmosphere of leisure and social context and social interaction are prominent place. The main objective in the design of green space is accessing to social and psychological effects to approximate people and nature together. In a general classification social impacts caused by expansion of urban green space presented as follows;
1. Effects of sociological
2. Effects of cultural
3. Effects of psychological (mental)

Sociological impacts caused by expansion of urban green space on Citizens
Social relationship occurs in space and time, proximity could be due to start social relationships but its conditions are not enough and to keep these relationships the degree of congruence is necessary. Green spaces are including a sense of social space and allowing the man to learn from others and create an opportunity to demonstrate their personal and social values enhance their spiritual growth and their sense of freedom and autonomy. Public arenas are the most important cities and urban areas. In such arenas there is more contact and interaction between people. An Urban environment must be a dynamic space and the focal for gathering and social interaction among all social groups. Because the basis of designing of the urban landscape is attention to humanitarian needs. Chehel Sotun garden as a Persian Garden is dynamic space in its ventricle due to the design in line with human needs. Therefore the sociological effects of green space on the citizens expressed as follows;
1. Creating better social interaction between citizens in urban areas
2. Creating employment and new job
3. Cognition some indicators of social (norms, values, subcultures)
4. Socializing people and finding new friends and filling the emptiness and loneliness
5. Formation a number of nongovernmental organizations (NGO)
6. Publishing valuable ideas
7. Increasing sense of kinship or unit benefits
8. Creating a favorable environment for recreation and leisure time
9. Territory of social groups (Amirfakhrian et al., 2011)

The cultural impacts caused by expansion of urban green space to Citizens
Green spaces and citizens act as an open system while the mutual influence one can have an impact on another. The most important cultural influences;
1. Expansion of urban culture and citizenship rights
2. Familiarity with national Famous people and valuable concepts (human)
3. Publishing valuable thoughts and ideas
4. Holding training courses, research, festivals, night of poetry, painting competition for children etc.
5. Forming art, sports and culture associations (Salehifard et al., 2008)
6. Social Inclusion: Social inclusion is central to all community based policy and is based on the need for all people to be able to participate in society. One particular advantage which parks can provide in relation to social inclusion and this is that they have the ability to include everyone due to the fact that there are no barriers to entry or exclusions based on age, race, gender, ethnicity, sexuality, education or economics.

7. Civic Pride: The concept of civic pride along with that of sense of community due to the social focus which green spaces can provide. A sense of civic pride may be fostered through not only the historic, but also the social or horticultural value an individual or a community attributes to a particular urban open space. Urban open space is not only important for its uses, but also for the other perception based benefits that it can bring (Ferguson, 2002).
Effects of psychological (mental) expansion of green space to Citizens

Influence of natural landscape and green space on mental health has expanded in recent decades and different theories have been proposed about it (Salehifard et al., 2008). Although the natural environment’s effect on the mental health of adults has been well documented, Dr. Nancy Wells suspected that nature’s moderating influence on stress might be even stronger in children. Her research has shown that having nature close to a home protects the psychological well-being of children. And the impact is strongest for children with the highest levels of stressful life events. In addition, having green space around the home boosts their cognitive functioning (Wells, 2012). In general, the psychological effects of green space on the citizens expressed as follows;

1-Creating mental peace
2-Positive impact on the physical health of people
3-Improving the efficiency and performance efficiency (increased productivity)
4-Solving the challenges and limitations of people through the exchange of ideas, friendly advice and etc. in formal and informal centers located in parks and green spaces
5-Influence on human behavior and dynamism their minds

Scientifically the psychological comfort in green spaces that it is due to the trees such as walnut and pine etc. release a substance called Forphyton (Phytoncide) in the space. This substance has pleasurable effect on human. In such a way, it can establish a good balance between the two hemispheres of the brain and gives normal relaxation and peace to humans (Salehifard et al., 2008).

Persian Garden

Arguably, the first spark of green landscape can be seen in Mesopotamia and Persian Gardens such as hanging gardens of Babylon, hills of Mousian and Alikesh. The Persian Garden is one of the most outstanding gardens in all over the world and the Pasargad Garden is the oldest in Iran. The Persian Garden format is old pattern from pre-history that has formed and established in the mind of Iranian people. All of gardens in Iran form Achaemenid Cyrus time to middle of Qajar time are Persian Garden but involving minor changes.

Persian Garden Elements

1-Natural Elements: Plants, water, air and light are four important natural elements that play main role in formation of spaces in the cities and gardens.
2-Architectural elements: Pool, entrance, garden walls and garden furniture (Zare et al. 2012)

Persian Garden; A green blob or city turning point

Today, the important cities of Iran are in transition between tradition and modernity and with the arrival of Western Urbanism, the spaces such as parks, entered into Iran urban elements that did not attractive earlier. In addition to authority’s attempt, there are fundamental problems in developing of urban green spaces that not only the development process has encountered a problem, but also due to lack of attention, the constructed green space Were useless.

Generally, the park as a green blob is imported space form western urbanism that used without localize in Iran and is in spread by all of problems. In European cities and most of American cities, the parks use as a green and expand blob for creation of various small climates. The compatibility of spaces with climate facilitates the possibility of construction, maintenance and management of them extensively and impressively (Rismanchian, 2012). The Persian Garden unlike common parks because of its attention to people and Iranian culture in design, not only is not in seclusion, but also always was welcomed during history and has performed very efficiently as a space for improvement of interactions and social relationships.

In many modern cities, the spaces has created as garden, park or green space that their design and construction has done by taste methods and without theoretical basis usually. By attention to contemporary parks and gardens appears that although, Iran as a civilization that is creator of garden and has an important style in garden construction has not new style for design of park and garden.

Case Study

Chehel-sotoun located in Behshahr at Mazandaran State in Iran, that named King garden or Nation Garden, is stepped garden and legacy of Shah-Abbas Time’s Iranian-Islamic garden that ordered in 1612. The garden has an area of 8 acres and has outline common Persian garden with water views and pools that coupled with two-way passage waterways and there are 1000 places of candle along the waterways as light source (Figure 2). A building exist at the end of garden, near the hillside, that was court home (Divankhane) at the time of Shah-Abbas, and for this reason in Pahlavi time, the new building that constructed on foundation of destroyed Building, changed to municipal building because of its court and official role. However, due to lack of sufficient knowledge in the course of repair, this beautiful mansion was not rebuilt properly (Figure 3). Length of this construction is three times its width. Open front but walls exist in back and sides of building that covered by multiple windows. The long cobblestone street is in front of building and waterway in middle of street started form pool in front of summerhouse and continues to the foot of the hill and the bottom of the garden. Now the large pool does not exist and changes to green space. Based on existence of 12 columns on huge porch, has names Chehel-Sotoun (Forty Columns) that the number 40 is used for prevalence and frequency of columns. After destruction of court home, its name has changed to King Garden and now has named Nation Garden. Therefore having a dual role as administrative and resort, somewhat plays the role of town Palazzo and different aspects of social functions of a green space appears in this garden (Figure 4) (Moradi et al., 2012).

Ashraf (or Behshahr) city garden has been a low populated rural area in the year 1021 AH but from this date onwards, Shah-Abbas sent skilled architects to Behshahr and gave them order for construction of
magnificent buildings. Because the village was a sparsely populated, several families of Georgia (Caucasus) migrated to the area to catch the boom in the area and providing of sufficient human resources to constructing of magnificent building. However, it should be noted that, Ashraf (Behshahr) was the second capital of Shah-Abbas at this time. The Garden was designed and built in Behshahr are known as a famous gardens on the southern coast of the Caspian Sea. The collection that was designed and built as garden in garden is actually the residence of Shah-Abbas in the winter and beginning of spring. Now from seven-concentrated garden in garden in town with names North Garden, Haram o Khalvat Garden, Saheb Al Zaman Garden, Chehel-Sotoun Garden, Tappeh Garden, Olive Garden and Cheshmeh Garden, the Chehel-Sotoun Garden and remnants of Cheshmeh Garden has remained (Moradi et al., 2012).

Figure 2. Chehel-Sotoun Garden in town and its waterways and passages

Figure 3(a). the building at the present, Figure 2(b). primary building

Figure 4. Schematic section of garden (Moradi et al., 2012)

Water is always a key element in the design of Persian gardens. Also in the Chehel-Sotoun Garden, water plays an important role in the landscape and climate. Water originates from end of garden, near the foothills, comes down stepped from the foothills, drips from the central summerhouse and continues to the bottom of the garden (Moradi et al., 2012). Most of the trees in the garden are just a few hundred-year-old cedar trees and citrus. As the every Persian garden, tall cypress trees along the main road from the entrance to end of garden create emotional bond for inviting people to continue its path to the bottom of the garden and surf in the garden (Figure 5).

Figure 5. Water Transition Plan for Gardens, plan of placement of cypress trees in the garden (Moradi et al., 2012)

Pattern of garden in garden

Because of specific geographic location, such as a temperate climate with extremely high humidity, Behshahr is quite different from climate characteristics of other parts of the Iranian plateau so that Peter Della Valle (1630) was hesitant to write the Behshahr and city forests or forest dwelling people in the city-state have taken (Moradi et al., 2012). Garden construction in favorable climatic conditions for kings has been used for two main purposes. One is for security and other for the glory. This type of garden construction is only possible for powerful kings that they have had ability of construction of landscaping and buildings associated with them. Series of Safavi’s Gardens in Behshahr and series of Safavi’s Gardens in Isfahan, adjacent to Alighapoo can be considered as a garden in garden (Heydarnataj, 2010).

Figure 6. Garden in Garden Concept

CONCLUSION

Chehel-Sotoun Garden characteristics, as an Iranian garden has made distinguished its form other green space of Behshahr so that this characteristics appears this garden role in improvement of social interactions level;

1-The garden as an active space in city: King Garden, involving two roles Garden-Park and official role,
is known as an active and vibrant green space in the city center.

2-Creation of purposive and thematic Garden instead of green space only: Chehel-Sotoun Garden in addition to involving natural and beautiful landscape and several hundred years old trees is an active green space with different objectives that is effective in enhancing engagements and participation of citizens.

3-Implementation of cultural and scientific programs, such as international day of astronomy

4-Hosting of classic cars exhibition for reconcile people with older cars (Figure 7).

5- Signing for Nowruz every year on the occasion of the arrival of the New Year (Figure 8).

Figure 7. classic cars exhibition

Figure 8. Signing for Nowruz

1-Spaces are designed open, semi-open and closed for more communication

2-landscaping of public and governmental places

3-The garden has been designed moderate, so that been coupled of a direct axis deep view, sub-passages, and locating of individual spaces in adjacent to sub-passages. This matter provides an emotional bond to surfing the garden and increase in the random meetings.

4-Every of spaces in garden is acceptor of society (Leng 2010).

5-Persian Garden has the highest sense of place, therefore this matter causes enhancement of relationships and belong in the citizenry.

6-Wide view of the garden because of natural position

7-The fertile green space and attractive in all seasons of the year

8-Privacy respected garden (Figure 9).

9-All of main spaces have rectangular geometry, so that the visual and perceptual geometry of garden is orthogonal.

10-The use of natural elements such as water in the middle of the main axis and tall trees on the edge that leads to long perspective. Forming the sense of a close relationship between nature and man leads to formation of relationships between humans together.

11-Water in the Persian Garden is beautiful by itself, the tranquility comes from sound of running water in the waterways and arises the social security of citizens that walking down in the park and develops the social communications (Figure 9).

12-Height of edge pool and water views is so that more surface of water is visible (Figure 9).

13- Alignment and creating a flat platform (Figure 10).

14-Entrance of garden is very attractive in the set. It is proportional to its scale and functions and invites everyone to the garden space (Figure 11).

Figure 9. Water in the middle of the main axis and tall trees on the edge

Figure 10. Alignment and creating a flat platform

Figure 11. Garden Entrance

The appropriate designed and variety of spaces is one of the success factors of garden in attracting citizens and creating a sense of belonging and ownership in people and this proves the efficiency of Iranian architecture such as introspection, self-confidence, knowledge of construction and avoidance of the futility. Because of context changing of city from a northern city with a one or two-story houses with steep roofs of clay to an Urban with dense residential apartments and commercial complex, today this garden plays important role on citizen life. The Garden - Park there is in City Center range and access path for residents. Therefore, for creation of active and vibrant public green space that will be respond social,
cultural, mental and emotional demands, it is necessary to been patterned from Persian Garden construction.

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