

ORIGINAL ARTICLE

Analysis of ecological status of Iranian garden towards development of sustainable urban landscape from the modern art approach

Hamidreza Ahmadi, Reza Jafarpour Hadie Kiashari

*Department of Architecture, Islamic Azad University of Varamin
Pishva, Iran. E-mail: hamidrezaahmadi227@yahoo.com, r_jafarpour_had@yahoo.com*

Received: 12.02.2018. Accepted: 02.04.2018

Urban landscape is one of the most important issues and issues of interest to architects, planners and urban planners. Hence, the urban landscape is a concept beyond an urban planning and design problem, and primarily includes human goals and social interactions between people and people with the city. Therefore, at the outset, is an objective that is due to quality the emergence of physical factors of the environment is present, but gradually, due to the historical conditions and the repetition of it against the group of perceptive humans. It becomes a kind of mental aspect and becomes a common element of the linking of the people of the community. On the other hand, art is closely linked to human life, and its wisdom is woven from human experience and always seeks to establish a relationship between men and his transcendental needs. In this context, one of the main attractions of Iranian art during various periods of history is Iranian architecture and gardening. However, today, the advancement of technology, modernization and the growing trend of Western culture in our society have greatly affected the art and architecture of this land. As it is no longer a trace of the color of Iranian art in the city, especially in its architecture and urbanization. Particularly the design of urban green spaces and parks, generally based on the European park design and decorative design and design, and has no link with the rich archetypes of Iranian art and architecture. On the other hand, urban parks and green spaces are one of the most important elements and elements of the city and dynamic institutions and play a major role in the urban structure and urban structure, and their absence can seriously undermine sustainable development. In addition, the future life of each city, therefore, green spaces as the focal points and concentration of activity are one of the important indicators of urban development, which is very high in metropolises with numerous environmental and social problems. Thus, the purpose of this paper is, to explain the process of achieving and creating a sustainable urban landscape with dynamic and community based applications by restoring the spirit of Persian historical gardens. Introducing people to the latest news and developments of art, and eliminating the minimum need for educational space, recreation and culture, which is a new and unique approach in its kind.

Key words: Urban landscape; sustainable development; Persian garden; modern art

The urban environment is a product of collision and integration of three distinct dimensions of the natural environment, the human environment and the socio-economic environment, and the single attention to each of these dimensions, without regard to the other two dimensions, leads to the instability of the urban environment. Metropolises, especially in developing countries, are constantly subjected to very complex and complicated urban dangers. Therefore, in order to achieve sustainable urban environment, in order to solve structural problems, development of infrastructures and services to control pollution and urban ecosystems, it seems necessary to overcome these problems, much more awareness and insight than environmental considerations in the project. Urban and general urban management in general, but nowadays these dimensions are less noticeable in urban design.

Human society has gone a long way in understanding and appreciating nature and the environment, which saves its health and well-being in relation to its environment. Therefore, modern progressive societies are trying to create a healthy environment (Rouhani, 1991). In the past, gardens and in the present days, parks are part of urban green spaces, which have played a major role in meeting the physical and psychological needs of the people. Persian Gardening as one of the main phenomena in the structure shaping the landscape architecture and the construction of open spaces in the history of Iran and all the territories under its influence, and due to this presence, Iranians in all aspects of individual life and their collective has been closely associated with this tradition and the ancient phenomenon (Wheatley, 2014).

In this paper, we are going to explain briefly the urban landscape, the dimensions of the Iranian garden and modern art, and, by the end of the interactions, concluding remarks.

Research Methodology

In the forthcoming research, for collecting information and literature of research including backgrounds, theories of scholars, thinkers and theoretical topics, the library study method and to collect the major part of the information that has been analyzed, the field study method of interest has been chosen. The method of research based on the purpose is of applied type and based on the method and nature of the analytical-qualitative and empirical-survey. Therefore, in order to recognize the traits and characteristics and to establish a link between the indices, a survey method, also in explaining the literature and backgrounds of the research subject and providing an analytical model of library studies and for collecting information, based on the nature of the research, field methods used.

In other words, this research is descriptive and of a practical nature. Descriptive because the researcher describes the situations accurately and realistically, and tries to deduce and describe what exists or is observing without interference, inference, and description. According to this method, it is possible to first measure the observations and studies in the field of operations and then analyze, and interpret their descriptive and inferential interpretations. In addition, in the different stages of the research system, the following qualitative criteria are considered;

- Intrinsic credibility; which covers the main concepts and stages of the research well.
- External Credit; which will extend the research results to larger environments than our research, and make the results of the research more credible.
- Validity, which relates to the sustainability of measurements and findings, and it is assumed that the results are the same if the research is carried out in the same conditions or at other times.
- Objectivity; removes the potential orientation and personal involvement of the researcher in the research process.
- Accreditation ability; considering the complexities of the studied conditions with a general approach to the subject matter of the research.
- Reliability means the existence of a fundamental consistency between research data.
- Neglecting to explore social, cultural and physical dynamics in the field of research.

Urban landscape

The city's perspective is the most important result of the city's identity because it re-creates concepts derived from the mass of space and various urban elements that have been created throughout history and in the interaction of humans with the environment and with each other.

The landscape encompasses all of the outside environments around us, the intrinsic features and notions of buildings, streets, open spaces and trees, and their interactions with each other within the human environment, are important components of the landscape (Medghalchi et al., 2014).

- Landscapes constitute the essential part of basic natural resources.
- The landscape is the habitat of all species.
- The urban landscape is a valuable resource for recreation.
- The landscape is like a treasure that elicits human emotional, cultural and spiritual reactions and enriches the quality of urban life (Medghalchi et al., 2014).

Sustainable landscape

The concept of sustainable development is related to a comprehensive solution for environmental considerations and at the same time to achieve a level of quality of life and cultural, economic, social and comfort values, thus, has a sustainable, climate-oriented landscape, in the direction environmental preservation goes hand-in-hand with the design and development of social interactions. To this end, three basic principles have been formulated in the 1992 Earth Summit declaration for sustainable landscape development and its visual dimensions;

- Environmental protection, as an integral part of the development process, to achieve sustainable development.
- Participate at relevant levels among all responsible citizens for dealing with environmental issues.
- The need to assess environmental impacts on developments that may have adverse effects on the environment (Faizi, 2001).

Urban green space

From the urbanization point of view, a part of the city's image of a variety of plants, if open urban spaces are opposed to urban built spaces, then the potential spaces for developing urban green spaces are introduced. From the environmental point of view, the relatively large area is composed of forest-planted and ecological and ecological yields appropriate to the environmental conditions governing the city (Shibani, 2002).

Urban green space is primarily an environmental concern that includes ecological and social impacts of psychology, and the use of citizens in their leisure hours, as a recreational, cultural center and so on, is of secondary importance.

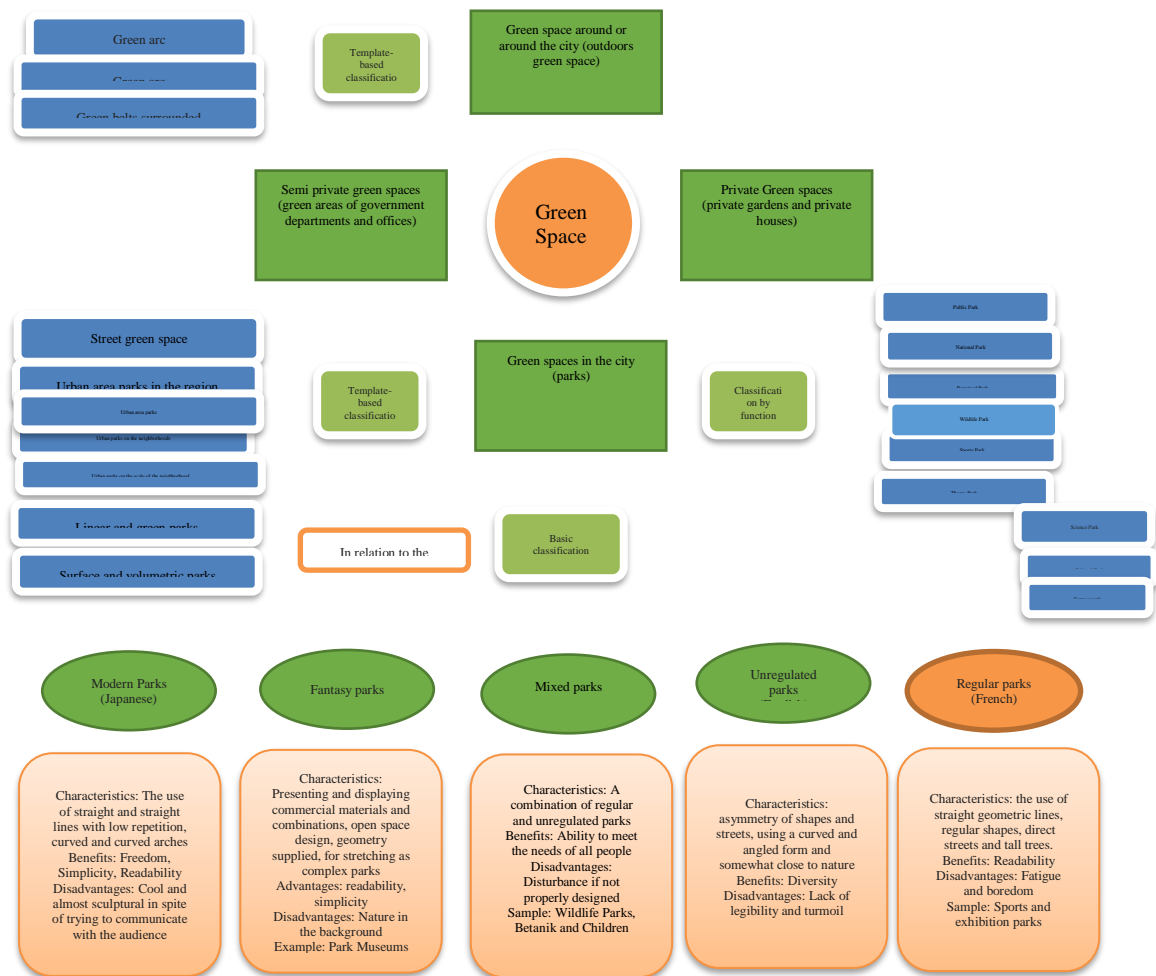


Fig. 1. The classification of the types of green space diagram (Source: Writer).

Garden and campus

Gardening is the combination of architectural elements, plant elements, and water displays, so that the result of the work, given the climatic conditions, responds to the expectations and aspirations of specific cultural people about the garden (Daneshdost, 1965).

Persian garden is a kind of gardens with distinct geometry, consistent with Iran's cultural and religious beliefs and climatic conditions, and the result of the combination of architectural elements (palaces, courtyards, service buildings, stairs and walls). Plants (trees, shrubs, decorative flowerbeds). And various effects of water (waterfront, pool, atmosphere, fountain and waterfall with the possibility of providing water for spring, well). And this formation in relation to Iranian culture and taste using elements of Iran, native plants of Iran and special flowers of lands with Iranian culture (Jim & Chen, 2006). In general, Iranian gardens have the characteristics listed in the table below. The case is categorized and presented.

The Old Persian, in the Achaemenes era, said the garden or enclosed arenas of fruits and flowers as "pairs of dezās". This term came into the language because of the political relations of the Achaemenes or Semitic tribes. The same word later turned into Campus and paradise, and in Persian, it was also used in the form of "Paliz", which has been written in the Avesta in the form of the word Deze.

Many linguists consider the word garden from the root of the word "bagh", which in addition to the meaning of gain and forgiveness, in Zoroastrianism means God, Ahuramazda, and in the Avesta also means the Lord and the great Servant. In addition, the garden, in addition to its heavenly and holy roots, is also divided into several parts, which represent the earthly and material meaning. In fact, the term garden includes both spiritual and material themes in one form. It is clear on the root of this term. The fact that the gardens are actually called a sacred place that has the characteristics of all the mentioned meanings and is the place where the divine forgiveness is granted to the inhabitants, and that Sun grants and mercy with the creation and construction of the garden while doing the divine work (Wolch et al., 2014).

One of the general goals of the garden is always to come together with nature, which is tensile in the structure of human beings. The urbanization of humankind separates man from nature; gardening is an invitation from nature to the city and society, and the result of coping with each one. The elements of the garden with other elements (Jim & Chen, 2006). Generally, garden designers, in order to meet the physical and emotional needs of gardening, pursue four objectives for the creation of a space

for the improvement of the environment, the construction of a space for children's play, the creation of a place for learning and gathering people (Wheatley, 2014).

The goal of Iranian gardening

The purpose of creating the Iranian garden was not the confinement and limitation of human perception, but the purpose was to create an infinite space for the use of all human senses. "Infinite and infinite" means "reflecting the whole world", not having the high area (Asadi et al., 2017)

The vast majority of theorists look for the most important factor in the construction of the gardens in the cultural and social manifestations and ritual roots of the garden (Khorrami et al., 2017) while in the Iranian gardens the most ceremonial ceremonies were held. Moreover, reading poetry as one of the most important goals of Iranian garden (Javaherian, 2005). In addition to the above-mentioned factors among the set of gardener-forming factors, the causes such as fruit and beautiful landscapes can be considered as common and common in many historical gardens. While, according to the tastes of each period, sometimes the main reason behind the creation of the garden was the religious, sometimes recreational and, in many cases, the political-governmental cause (Khorrami et al., 2017).

Modern Persian Garden

At the end of the 13th century, the shape and design of the gardens of Tehran changed, and a kind of garden was created with the name of the park. Although the form of gardens was still in line with the gardens of Qajar in Tehran, but some changes in the gardening and makeup of the plants. The desire to grow plants and flowers was characterized by different landscapes from the landscaping of official gardens, which were the result of new horticulture and the beauty of the compositional images created by the plants. (Mahdizadeh & Rajendran, 2018) In general, from this time on, gardens have gradually lost their past conception, and in turn, parks have been taken into consideration in the Western style of production. Garden Qajar properties in the table below.

Table 1. Characteristics of Qajar Gardens in Iran (Source: Writer with the impression of Behbahani and et. al., 2003; (Hanif et al., 2017)

Settlement system	<ul style="list-style-type: none"> • Building gardens - Mansions in the mountains to use the surrounding countryside • Arrivals of royal outings in the city and turning them into inland urban resorts • Locate in popular government collections (Arg Square, which includes government, folk, amphitheater and royal palace gardens. 		
Water system	<ul style="list-style-type: none"> • Use pool or dock as the focal point of the garden • Increase the percentage of water content and number over time in gardens • Use a circular shape pool • Create artificial ponds • Use as a container and water as intended: the presence of a pond inside the building • Use of water as a container and as pertinent: creating ponds in this period (entering the curve in this period) with an island such as the Garden of the Shah 		
Planting system	<ul style="list-style-type: none"> • Use of hills, flower platforms and pots with perennial flowers that can be moved in different seasons • Planting massive decorative shrubs as well as tropical entry • Use of scrollable plants • Planting decorative flowers with color contrast • Spice planting instead of alfalfa 		
Division system	<ul style="list-style-type: none"> • Use of geometric order in the construction of gardens 	<ul style="list-style-type: none"> • Create stretched schedules 	
	<ul style="list-style-type: none"> • Use the main axis and organize the garden based on it 	<ul style="list-style-type: none"> • Create a central axis 	<ul style="list-style-type: none"> • On flat terraces such as the commando gardens of Tehran • On sloping terraces along the slopes, such as Tehran's Qajar Palace
		<ul style="list-style-type: none"> • Create two axes 	<ul style="list-style-type: none"> • In a garden like a Tehran military

			perpendicular to each other	
Building system	Head	<ul style="list-style-type: none"> • Unlike in the past, there is a relationship from within • The display of the interior glory of the garden 		
	Bush	The placement method	<ul style="list-style-type: none"> • At the end of the main axis or at the intersection of two axes in the middle of the garden 	
		Form and geometry	<ul style="list-style-type: none"> • According to the owner's taste and not the current architecture, symmetric, linear or centralized (mostly imitative) • Enhance the transparency and fluidity of space • Construction of a statue of the building and the use of a circular form in the construction of the beds in order to allow more visibility into the environment (imitation) 	
		architectural elements	<ul style="list-style-type: none"> • The prevalence of using metal and fencings in the environment and mixing with bricks 	
	Wall	Wall type	<ul style="list-style-type: none"> • Use of tall walls for private owners to use • In the case of securing by slopes, removal of walls and separation by walls exclusively in internal and external refinement 	
		Wall form	<ul style="list-style-type: none"> • Appearance of complexity in the form of walls and giving new functions to it by adding scrolls, vaults and living room to the wall 	
Decorative elements	<ul style="list-style-type: none"> • Build platforms and stairs to display plants in pots • Making decorative minarets on the second floor of the mansion, putting Santouri in the third floor of the mansion, using imported elements such as pillowcases, European decorations and crowns • Use binary divisions on the main axis • Spatial relations in accordance with the principles of Iranian architecture and alignment of the plan with the facade • Access the staircase to the main axis of the building as a decorative element • Use of an arched structure in open spaces and in spaces within the building • Insert the sculpture in the main or inside of the swimming pool (imitation) • Making the altar in the middle of the garden in order to rest (imitation) 			
Communication system	Movement control	<ul style="list-style-type: none"> • Possibility of choosing the path of motion (the emergence of a warp cross path) • Create curves in the garden for pedestrian navigation 		
	Association of the garden with the building	<ul style="list-style-type: none"> • The stretching of the garden space in the valley due to the transparency of the villa 		
	Garden connection with the surroundings	<ul style="list-style-type: none"> • Viscous connection, not garden with beautiful scenery • Stretching the garden behind the wall in the garden • Mixing the exterior of the garden with the geometry of adjacent government uses and refining it from non-governmental uses. • Introducing a new circular geometry and creating a new kind of circular geometry linkage to the surrounding area such as the Mahāan Prince's Garden 		
	Relationship between internal and external buildings	<ul style="list-style-type: none"> • Restricted by the wall • Link buildings with multiple yards 		
User system	<ul style="list-style-type: none"> • The emergence of a zoo in gardens • The emergence of museums inside the palaces with exclusive use • Build a park at the end of the Qajar period 			

Semantic system	<ul style="list-style-type: none"> • The philosophy of this course is to imitate the Garden of the Renaissance and Baroque palaces, the center of human attention and, as a result, create an intimate relationship with the surroundings, so that the garden axis guides the view from the villa to the distant landscapes and horizon. • Transformation of form rather than content transformation due to the emergence of agile architecture, honey and imitation • The emergence of a new individuality in the contrasting space arrangement with the traditional look of the space • The emergence of modernity and the creation of transparency, creativity and spatial diversity
-----------------	---

Art and modern art

In the terminology of art, many differences indicate that art, due to its depth and breadth and elegance, is invisible at the same time. As Tolstoy writes: "Art is a means of recording and recording human feelings in a specific way as well as the transfer of it outside of the mental worlds and also the perception of that sense of art to others (Nattaj, 2017). Francis Bacon believes that art is a person who has been added to nature and wants to use it intelligence, subtlety and theoretical knowledge of nature have transformed the material into useful and valuable objects. "But the definition of" Hegel "increases the importance and credibility of the artist, because he values the artist's creative mind. He believes that "the art of thought wants to dominate the rebellious material (Shaqaqi, 2005).

The art is valuable to men from so long. As in every historical period, according to cultural, social, political, technological advancement and so on, changes in the attitude of people towards life and subsequent art have been created. The great transformations that took place in the second half of the nineteenth century in three areas of technology, science, philosophy, economics, and politics deeply affected the worldview of artists. These developments transform both, the material status of artists and the value and their spiritual aspirations. Now, after centuries of reliance on supporters, including kings, masters, popes and aristocratic nobles, artists now feel free to stand on their own. In this era, the artist does not merely make light changes, and, while using traditional instruments and materials, uses new materials and tools in his field that result in the transformation of the concept of painting and sculpture. He sought to emphasize the autonomy of art and pursue the ideal of art for art, and erode the traditional and interrelated boundaries between them. And especially in the later period - to combine various artistic disciplines, including painting, sculpture, graphic and even music, dance, theater, literature, and rebellion to cultural and civilization other than western culture and civilization, which began with Gauguin and its influence on the life and culture of the inhabitants of Tahiti. In addition, in African masks and sculptures and art of the Buddhist artists because Henry Matisse and Pablo Picasso are strongly followed (Taylor, 2004; Linton, 2004).

Postmodern art

The decades of the late twentieth century saw profound changes in the concept of art and the beautiful structure; modern art museums encountered a growing identity crisis after half a century of experience in the 1970s. Many artists and visitors of these museums have considered contemporary works as a retrospective aristocracy. They did not like the lack of active participation in the field of contemporary art and culture. The new tendency of modern art to the technique and artistic concepts involved them seriously in addressing human and social issues, to the point where art was only tied to itself. On the other hand, developments in the evolution of communications technology and the expansion of new media such as photo, video and the Internet were seen. With the same motives, the Museum of Contemporary Art, with the aim of introducing a new and evolving artistic development. It was emerged and created a new stage for the promotion of new art, which in its essence experienced a return to the emotional commitment of romanticism and to the plan important human issues and, in some cases, contributing to social controversy and political conflicts (Smith, 2004).

In this period, given the circumstances and contexts created during the century, conceptual art was presented as a symbol of artistic freedom and the most important art of the modern age. This art, based on the ideas of the French artist Marcel Duchamp (1978-1887) about the "idea" and its role in an artwork, believes that the idea of any work of art is more important than its product, and what the artist it can express itself, and the concept that is considered to express its creativity is art itself. Contemporary art tries to reduce the physical and apparent aspect of work as much as possible and instead reinforce the mental force created by the work of art. The audience of the work of art is invited to the creator with the accompaniment and discourse, the final decision, understanding of the work is left to the audience, and the process of creating the work is linked to the process of perception and reception (Jokilehto, 2007).

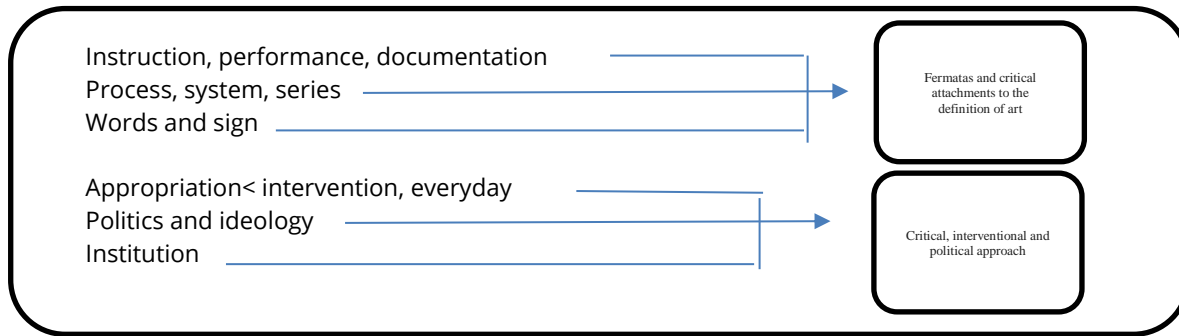


Fig. 2. The branches of Contemporary Art (Source: Writer with the Remnant of Azburn, 2004)

Thus, the artist freely presents his mentality with any technique and form of expression and media, and does not follow the rules of the predetermined order. If the audience is an exhibition with the title of new art, with a set of objects, sounds, light, Music, fragrances, video images, or even creatures that have become a work of art based on a general idea. The artist begins to create artistic work by placing artistic objects in a particular and artistic way (Wellness and et. al., 2009). What is striking in this art is its interactivity and the meaning of the work of art in the presence of the spectator and in opposition to the spectator (Tavares et al., 2013).

Examples of contemporary art use in western architecture

Below is the introduction of works such as the Hofstree Blue Road, the Shellag Energetic Gardens and the Bill Vivella Corsica Exhibition.

The Blue Carved Artwork by Hong Hofstra

In this work, which is a kind of urban public art, the road surface is one kilometer long commemorative of the waterway previously located on this road, and the word "water is life" is written alongside it (ONG'ESA, 2011; Baharloo, 2011)



Fig. 3. Use coloring by Hoffstra in order to refer to the history of the area. (Source: www.itmounehus.nl)

Andreas Schlegel's Energy Gardens

In the 16th edition of the "Long Physical Night with Artwork of Museums", this work, entitled "Energetic Gardens" for the Berlin Waterfall, designed at about eight minutes, with the help of spotlights and opacity and turning windows they turned into hundreds of square meters of projectors from the entrance to the cascade to a nearly visual and real garden. The arrangement of these gardens displayed a discourse among the virtual plants (Liu, 2002).



Figure 4: Use of new technology to create virtual gardens (Source: www.spacetransformed.blogspot.com)

"Corsa" Exhibition by Bill Viola

In this work, the spectator enters into a dark space, where he is invited to walk on a large carpet. In this carpet, images of half-body figures of a number of women and men are displayed in such a way as to be they are caught up in the lane. As the audience walks inside the gallery and in fact pictures of men and women, the images are angry and screaming. The steps of the visitors are portrayed by the reaction of the people, and as a result their whisperings are raised, their bodies move and the anthem of their suffering (Smith, 2004).

Given the above, it is clear that when the work of these artists is displayed in a museum, the museum becomes a public entertainment venue, and offers a new definition of its functioning, regardless of visual and intellectual research. The odd and, to some extent, the surprising point, is that this most technical contemporary art is now the most stimulating moment for emotion rather than thought and thought (Smith, 2004).



Picture 5: Bill Viola's Dramatic Art. (Source: www.wikipedia.org)

Division of Art Types

The following diagram summarizes a variety of arts types in Iran and the world.



Fig. 6. Classification of Art Types (Source: Writer)

Conclusion

In ancient times, the survival of the city depended on the existence of the garden, and the city could have continued to exist until it was located at the entrance of that garden. In different times and in the world, the holy place of gardens has been a place of memory, a place for experimenting in agriculture and horticulture techniques. During the nineteenth century, with the increasing development of cities and the formation of metropolitan cities in the area of public space planning, wild spots in the name of the park were replaced by private gardens in order to meet the social and beautiful needs of the urban landscape. Ancient redevelopment of the Persian garden pattern throughout history has taken place from a scale of architecture to city on a variety of scales. It is on the scale of a courtyard design, and sometimes in the size of a public park in the city. In some works, the element is either part of Iranian garden components are seen to have become modern today. In general, Iranian gardens are designed in a variety of ways in today's society, which is the result of the architect's efforts to create a space similar to the Iranian gardens. Considering the above, it can be seen that the perceptions focus mainly on the ancient Persian garden model and its physical geometry, and it is not overlooked in the perceptual process and the disposition of the five senses, which contribute to the creation of a sense of homeland and the place and thus a relaxing atmosphere of contemporary humanity. In the creation of contemporary gardens, based on modern art and the requirements of the postmodern society, it should be noted that any plan, including the garden design, should be interpreted in its temporal and cultural terms. Since many of the factors affecting gardening the past, including the number of audiences, the type of use, the amount of water, environmental pollution, etc., has undergone major changes, so it is evident that the design of the green spaces of the urban scale varies with the shape of the function and structure of our past gardens.

The contemporary garden is the garden which, based on the teachings of the past gardens, is in the midst of distancing itself from gardens with a past political philosophy and the possibility of security through public surveillance or security cameras that the post-modern society has brought. The context of history, culture, religion, climate, needs, concerns, technology and expectations of the contemporary society, is located in the urban context and is able to continuously stream in the city and according to the needs of contemporary man, in addition to maximal absorption Individuals, combining different urban landscapes and creating visual richness.

Urban spheres have lost their active role in parallel to the city's growth and the increasing variety of environmental and environmental pollution. Therefore, the necessity of considering urban green spaces is one of the necessities of urban life. By enhancing the quality of life and the vitality of cities by influencing the various environmental, economic, and social aspects that are the basis of urban sustainability, these spaces are effective in aesthetic functions to achieve a more favorable urban environment. Urban gardens, in addition to affecting the quality of urban environment, create services and space for increasing social interactions, and since they make the city more readable, in addition to local identity, they are considered part of national identity and play an important role in development sustainable cities. Meanwhile, gardens with historical monuments as a national heritage and a valuable document of historical and cultural identity represent a close relationship between civilization and nature, and as one of the effects of cultural assets, the physical effects of the past the reasons for their intrinsic value and their usefulness are taken into consideration for society. These works are an integral part of the cultural identity of the community, and in a framework of local, regional and national criteria, they create a strong sense of the concept of place. Therefore, in maintaining, developing and updating the artistic and functional values of these valuable uses for achieving the goals of the great sustainable urban development should be done as much as possible.

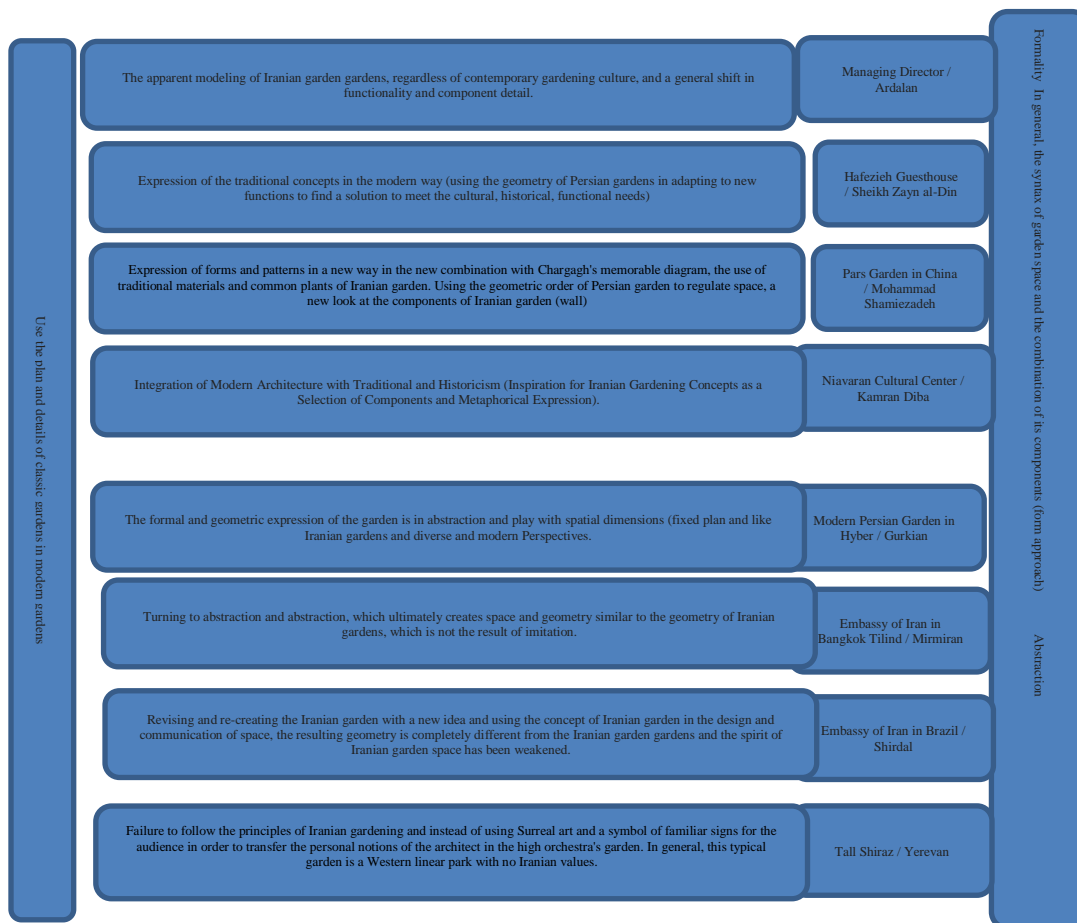


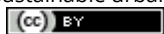
Fig. 7. A diagram of the design of space sequences in modern Iranian gardens. (Source: Writer)

References

- Asadi, P., Ataie-Ashtiani, B., & Beheshti, A. (2017). Vulnerability assessment of urban groundwater resources to nitrate: the case study of Mashhad, Iran. *Environmental Earth Sciences*, 76(1), 41.
- Faizi, M. (2001). The Persian Garden: Echoes of Paradise by Mehdi Khansari, M. Reza Moghtader, Minouch Yavari. *Garden History*, 29(2), 228-229. doi: 10.2307/1587390.
- Hanif, E., Hashemnejad, H., & Ghafourian, M. (2017). The Concept of Sustainable Dwelling Epitomized in the Courtyards of Iranian Houses: A Case Study of Houses in Kashan in the Qajar Period. *Journal of Engineering and Applied Sciences*, 12(6), 1482-1491.
- Jim, C., & Chen, W.Y. (2006). Impacts of urban environmental elements on residential housing prices in Guangzhou (China). *Landscape and Urban Planning*, 78(4), 422-434.
- Jokilehto, J. (2007). *History of architectural conservation*. Routledge.
- Khorrami, Z., Etemad, K., Yarahmadi, S., Khodakarim, S., Kameli, M., Hezaveh, A. M., & Rahimi, E. (2017). Urbanization and noncommunicable disease (NCD) risk factors: WHO STEPwise Iranian NCD risk factors surveillance in 2011. *Eastern Mediterranean Health Journal*, 23(7), 469.
- Liu, K. (2002). Energy efficiency and environmental benefits of rooftop gardens. *Construction Canada*, 44(2), 17-23.
- Lucy Smith, E. (2004). *Globalization and New Art*. Tehran.
- Mahdzadeh, S., & Rajendran, L.P. (2018). A renewed approach to conservation policy of historical gardens in Iran. *Landscape Research*, 1-14.
- Medghalchi, L., Ansari, M., & Bemanian, M.R. (2014). *Spirit of Place in Persian Garden*.
- Nattaj, V. H. (2017). The Role of Landscape Elements (Water and Geographic Context) in the Configuration of Bahrol-eram Garden. *Bagh-E Nazar*, 14(54), 5-20.
- Ongessa, E.O. (2011). *The fourth dimension: exhibition of recent stone and wood sculptures by Elkana O. Ong'esa*, 29th April - 6th May 2011. Hong Kong : Lingnan University.
- Rouhani, G. (1991). *Garden design and construction of green spaces*. Tehran: Culture Jame Publishing.
- Shaaqi, P. (2005). *The Body of the Gods: An overview of how to visualize the Holy Scripture in the architecture of various civilizations and cultures*. Tehran: Ghesid Serra Publishing.
- Shibani, M. (2002). *Homogeneous Parks and Urban Green Space Development*. Paper presented at the Proceedings of the Educational and Research Conferences of Green Space in Tehran (1), Tehran.
- Tavares, A., Costa, A., & Varum, H. (2013). Timber roof structures of centenary earthen buildings. Case studies. *Proceedings of CIAV*, 371-376.
- Taylor, B. (2004). *Collage: The making of modern art*: Thames and Hudson Ltd.
- Wheatley, D. (2014). *Connecting landscapes with built environments: visibility analysis, scale and the senses. Spatial analysis and social spaces: interdisciplinary approaches to the interpretation of prehistoric and historic built environments*. Berlin: De Gruyter.
- Wolch, J.R., Byrne, J., & Newell, J.P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities 'just green enough'. *Landscape and Urban Planning*, 125, 234-244.
- Polat, H.I. (2017). An Approach to the Green Area Parameter in Urban Transformation. *Civil Engineering Journal*, 3(11): 1020. doi:10.28991/cej-030934.
- Younesazadeh, H., Ardeshir, A., Sebt, M.H. (2017). Exploring Critical Success Factors in Urban Housing Projects Using Fuzzy Analytic Network Process. *Civil Engineering Journal*, 3(11):1048. doi:10.28991/cej-030937.

Citation:

Hamidreza Ahmadi, Reza Jafarpour Hadie Kiashar (2018). Analysis of ecological status of Iranian garden towards development of sustainable urban landscape from the modern art approach. *Ukrainian Journal of Ecology*, 8(2), 175-185.



This work is licensed under a Creative Commons Attribution 4.0. License
