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Original Research Article

Explaining the Factors Affecting the Realization of Islamic Teachings in the Functional System of the Persian Garden *

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Abstract

Holy Quran and hadiths have provided a detailed description of heaven. It has been described as dense trees and streams flowing under the trees, and magnificent palaces that are the permanent residence of Muslims. Iranian gardens have always been a manifestation of heaven and heavenly gardens. A combination of green space and the function of the buildings within which located, Iranian gardens have been placed in different categories and had various functions. The present study compares the functions of the gardens in Islamic teachings with the Iranian garden and investigates the factors affecting the realization of Islamic teachings in the functional system of the Iranian garden. It also seeks to answer the following questions: To what extent the function of the Iranian garden corresponds to the function of the garden of Islamic teachings? What factors and how do they affect the realization of Islamic teachings in the functional system of the Iranian garden? These questions were answered by a descriptive-analytical method and a comparative approach. In the first step of data collection, using the document-library method, the components of the garden of Islamic teachings were extracted and examined in eleven samples of Iranian gardens. In the next step, with field interviews and using the Delphi method, the factors affecting the realization of Islamic teachings in the functional system of the Iranian garden were identified and examined based on the opinions of experts. In line with achieving the study goal, by comparing the Iranian garden and the garden in Islamic teachings, it can be concluded that the gardens in Islamic teachings can be classified into different categories based on their function, pavilion garden, house garden, fruit garden, Takht garden, water garden, and enclosed garden.

The factors that play a role in the realization of Islamic teachings in the functional system of the Iranian garden include the sociological components of the political and social position of people and the geography component of the climate of the region), which cause limitations in the realization of Islamic teachings. Also, the sociological components of culture, security, and economy and the geography component of land toll are the strengthening factors and are in line with Islamic teachings. The results show that the components of the limiting factors have a greater impact than the components of the strengthening factors, the sociology component has a greater effect than the geography component.

Keywords: Persian garden, Functional system, Islamic teachings.

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As a manifestation of the promised heaven, the garden has always had a sacred aspect among Iranians (Heidar Nattaj, 2014). The history of Arai garden dates back to the time of the Aryans and was present in the art and culture of Iran until the Sassanid era (Balali Oskouei & Kiani, 2020, 74). The creation of gardens was the favorite of the inhabitants in the Islamic period, as before Islam (Bamanian, Taghavai & Shahidi, 2008). Muslim architects designed gardens based on the Quran's descriptions of heaven. The people of this land have always believed in the eternal heaven where the rivers flow under the trees and pavilions and it is a good place for Muslims and they tried to manifest this concept in different Iranian garden systems. God has described heaven In the Quran from human imagination since according to a hadith of the Prophet, heaven includes things that neither eye has seen nor has anyone thought of it.

The description of the garden in Islamic teachings includes heavenly gardens, worldly gardens, and gardens described in Quran stories. The garden as a combination of green space and architecture, which are fixed elements of all Iranian gardens, are divided into different classifications based on the function of the main building in the garden, its size, climate, or special design. Given their diverse functions, they were used as places for residence, government affairs, ceremonies, recreation, and places for planting plants, etc. The garden has always played a significant role in the culture and history of Iran and is considered a national symbol of Iran in the world. Islamic teachings have provided a detailed description of heavenly and worldly gardens and the features of the garden. Thus, it is necessary to investigate these principles in the Iranian garden and analyze them in the Iranian garden systems. In this study, the function of gardens is investigated, which is a combination of architectural and natural elements and is formed in connection with the culture and climate of the people of this land.

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The present study compares the functions of the gardens of Islamic teachings and the Iranian gardens and investigates the factors affecting the realization of Islamic teachings in the functional system of the Iranian garden. It also seeks to answer the following question: To what extent the function of the Iranian garden corresponds to the function of the garden in Islamic teachings? What factors and how do they affect the realization of Islamic teachings in the functional system of the Iranian garden? In this regard, different categories of Iranian garden functions were examined and a new classification was presented by studying the Quran and interpretations, hadiths, and religious books. Then, the components of Iranian gardens and the garden of Islamic teachings were compared and examined in 10 samples of Iranian gardens. Also, the effective factors affecting the realization of Islamic teachings in the functional system were examined. Then, the components of Iranian gardens and the garden in Islamic teachings were compared and examined in the sample of Iranian gardens. Also, the factors affecting the realization of Islamic teachings in the functional system will be examined.

Methods

The present research used a descriptive-analytical method and a comparative approach to investigate and compare the functions of the Iranian garden with those of the garden in Islamic teachings. The thematic analysis method was used in this study. The documentary-library and structured interviews were used to collect the data. The first step was to study and examine the verses of the Holy Quran and interpretations from five books of interpretation: Al-Mizan, Menhaj al-Sadeqin Filzam al-Makhalifiin, Majma al-Bayan, Nomuneh, and Noor, and reviewing the hadiths and religious books. Given the function of the garden of Islamic teachings, the components were extracted and compared with the function of the Iranian garden. In the next step, the factors affecting the realization of Islamic teachings in the functional

system were extracted, examined, and analyzed using the Delphi method. The Delphi method has a systematic process to predict and help decision-making through survey rounds, collecting information, and finally group consensus. The Delphi method is used when we need to collect and combine the opinions of experts to reach a general conclusion about a specific issue. The identification of Delphi experts is a crucial point in the Delphi method. The number of experts is usually less than 50 people and mostly 15 to 20 people (Rahmani, Vazirinejad, Ahmadinia & Rezaian, 2020). In this study, information saturation was obtained by conducting 15 interviews, and three additional interviews were also conducted to ensure the obtained information.

Research Background

Some studies have been conducted in the field of Iranian gardens and gardens in the Quran. We refer to some of these studies. Motadayen (2010) examined the causes of the emergence of historical gardens in Iran. By reviewing old and new texts, he tried to categorize the causes of the emergence of these examples. Motadayen and Motadayen (2015) examined the need to create an Iranian garden. This article shows that the spirit of sultans and rulers has always had a significant impact on the creation of gardens as the thought of that era.

Balali Oskouei, Nazarzadeh Ansaroudi and Nazarzadeh Ansaroudi (2020) examined the manifestation of the concept of water from the heaven garden of the Quran in the Iranian garden, the manifestation of the theme of water in the physical and functional system of the Iranian garden regarding the heavenly garden. Afkhami and Khosravi (2018) examined the meaning and function of the Iranian garden (with emphasis on the Achaemenid era). They found that the Iranian garden had multiple meanings and functions. The multiple functions of the Iranian garden are explained in the article. Mehrabani Golzar and Fatemi (2015) investigated the structure of pavilions in the gardens of Khorasan; A model for permanent residence. Belali Oskoui and Mahmoudi (2020) introduced an interpretive analysis of the garden in the gardens of Derghazin Matragchi. This study introduces information for the design of green space according to the climate and culture by studying the geometry of the garden. Pourjafar, Rostami, Pourjafar & Rostami (2017) introduced an objective image of the descriptive heaven of the Quran, emphasizing the verses of Al-Waqi'a Surah. They addressed the Iranian garden, which represents a spiritual history of heaven. Pourjafar, Rostami, Pourjafar & Rostami (2013) investigated the manifestation of Quran concepts in the Iranian garden with an emphasis on Insan Surah (case study: Dowlat Abad Garden, Yazd). Naghizadeh (2008) investigated the origins of the idea of creating heaven on earth and the topics that introduce the garden as an allegory of heaven. Pourjafar and Vathigh (2008) investigated the image of the garden and landscape elements in the Quran with an emphasis on Al-Rahman Surah. Examining the verses of the garden of heaven, and the image of the garden indicated that this surah relies on the principles and elements of a particular landscape and depicts a special image of the garden. In a study entitled "Iranian Garden as an Allegory of Heaven, emphasizing the values of the Iranian Garden of the Safavid Era", Ansari and Mahmoudinejad (2006) showed that gardens built in different eras have the same interpretations of heaven. This study investigated the function of the garden of Islamic teachings and compared it with the function of Iranian gardens. It also investigated the factors affecting the realization of Islamic teachings in the functional system of the Iranian garden.

Theoretical Foundations

• Classification of Persian Gardens' Functions

The various classifications of Persian Gardens include the following: Shahcheraghi (2016) classified Persian Gardens into three architectural, urban, and inbetween scales, in terms of functions and expansion; Heidar Nattaj (2014) classified Persian Gardens into summerhouse gardens, castle gardens, palace gardens, national (public) gardens, hunting gardens, and wild gardens; Etezadi (2013) suggested that the main factors

contributing to the formation of gardens were historical and cultural issues; Motadayyen (2010) also believed that gardens were mainly classified based on some religious, recreational, political and governmental factors; Nasr (2010) divided gardens into villa gardens, water gardens, gardens situated along rivers, gardens situated along flat environments, and hill gardens, in terms of geographic features; Naeima (2006) divided gardens into residential gardens, governmental gardens, residential-governmental gardens, fruit gardens and tomb gardens; Rouhani (2004) divided gardens based on ritual, luxurious, and public functions; Shahcheraghi, quoted by Moghtader (2004) used a historical classification to divide gardens based on Achaemenid, Sasanid, etc. eras; Shahcheraghi, quoted by Ansari (1999), presented a classification of gardens based on the two-way effects of gardens, the environment, and buildings, while enumerating the special elements of gardens to name pergola gardens, gardens with Tajir (mesh) walls, pavilion gardens; Afkhami and Khosrawi, quoted by Mousavi Movahhed (1998), believed that gardens were classified based on some political, governmental, religious, and recreational purposes; Varjavand (1996) classified gardens based on the plans and physical features of the locations where gardens were established, including flat and low-slope gardens,

sloped gardens, and so-called gardens with platforms (Suffa), gardens constructed in naturally featured land and ground with rivers and streams, and finally Wilber (1969) also presented a classification of gardens based on cities and areas where they were located, including Shiraz Gardens, Isfahan Gardens, Tehran Gardens, Persian Gardens in the North and South, Gardens of the Caspian Sea banks, etc (Fig. 1).

Garden Functions in Islamic Teachings

The Qur'an and hadiths have detailed the functions of worldly and heavenly gardens, describing heavenly gardens as very splendid and gorgeous gardens with lush and green trees under which streams flow and even heavenly pavilions. Islamic sources have also described enthralling palaces which serve as abodes for Muslims who shall enjoy immortal lives therein. Also, Qur'anic stories have revealed parts of the worldly blessing, including gardens, and detailed their functions. Accordingly, a new classification has been presented for garden functions based on their functions, as suggested by Islamic teachings. The first group includes Pavilion garden, palace, house and fruit (Table 1).

According to the components, palace gardens and pavilion gardens fall under the first group due to the location of magnificent and sublime pavilions and

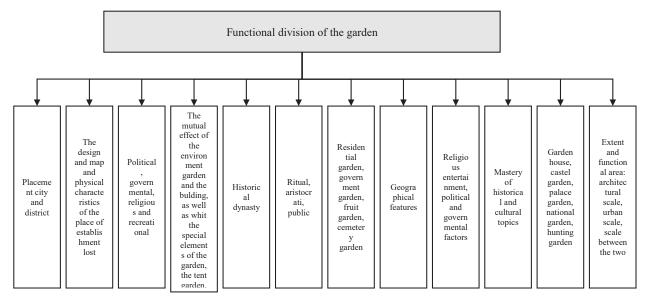


Fig. 1. Persian Gardens' Functions. Source: Authors.

Table 1. Matching Persian Gardens' Functions with Gardens in Islamic Teachings (pavilion, palace, house, fruit). Source: Authors.

Characteristics of Persian	Surah /Verse	Gardens in Islamic Teachings
Gardens		
		Pavilion Gardens
Based on the pavilion's location plan in the middle, center, and end	Ra'd/23	True Eden Gardens are in the middle of Paradise (Kashani, 2010, 251- 252).
of the garden (Shahcheraghi,	Sajde/19	Ma'va denotes a place where man dwells (Tabatabaei, 1988, 395).
2016, 49). Pavilion: Any	A.2. 6/4.2	Heavenly gardens shall receive the faithful (Tabarsi, 1973, 227).
outstanding/protruding mansion,	A'raf/43 Tobeh/72	Lofty and splendid palaces (Tabatabaei, 1988, 144). Dwellings of pearl, scarlet rubies, and green chrysolite (Tabarsi, 1973,
palace, or summerhouse above a summer room or porch, roofed by	10000//2	153)
a cupola, while being wide open (Dehkhoda, 1998).	Younes /26	Clean and peaceful houses (Makarem Shirazi, 2008, 53). Numerous numbers of pavilions are made of seamless pearls with four gates (Tabarsi, 1973, 285).
The provision of the best and the widest landscape for residents;	Ankabout/ 58	Transparent pavilions whose inside is seen from the outside and whose outside is seen from the inside (Makarem Shirazi, 2008, 348).
using Chahar-Suffa plans with square or octagonal plans (Bani-	Saf/ 12	Enjoyable and joyful houses (Tabarsi, 1973, 408).
Masoud, 2005, 6).	Shura/ 22	Gardens of Paradise are full of trees in the middle of a green and splendid land (Tabatabaei, 1988).
Main functions: Governmental, residential, integrated, ceremonial,	Eden Gardens	"Eden" refers to a house wherein none but three groups of people shall dwell (Tabarsi, 1973, 154).
etc. (Shahcheraghi, 2016, 59).		Eden refers to dwelling and life in a single place (Makarem Shirazi, 2008, 582-583).
		God provides it as the abode of people of the Paradise, where palaces of pearl, ruby, and gold are constructed (Tabarsi, 201, 154).
	Hadith	The Prophet (PBUH): The reward of building a mosque is an abode in Paradise (Tusi, 2010, 395).
		Palace Gardens
An enormous building called the	A'raf/ 43	Lofty and splendid palaces (Tabatabaei, 1988, 144).
palace In the middle of the garden and in	Tobeh/ 72	Dwellings of pearl, scarlet rubies, and green chrysolite (Tabarsi, 1973, 153).
the direction of the main axis (Shahcheraghi, 2016, 49)		Clean abodes and peaceful houses(Makarem Shirazi, 2008, 53).
Main functions: Governmental, integrated, ceremonial	Zumar / 74	Numerous palaces and houses and heavenly blessings (Tabarsi, 1973, 222).
Main functions: Governmental, ceremonial, integrated (ibid)	Hadith	Heavenly buildings are made of silver and gold bricks (Payandeh, 2004, 178).
		Reference to heavenly palaces (Ansarian, 2019). Eternal houses and sublime abodes (ibid).
		A house for the magnanimous and generous people and an abode called happiness in Paradise (Payandeh, 2004, 178). Walls made of ruby stones and pearls and walls of light (ibid).
	Kahf/ 107	Reference to centrality (Tabatabaei, 1988, 548).
	Sajdeh/ 19	Heavenly gardens for receiving the faithful (Tabarsi, 1973, 227).
	Shura / 22	Paradise gardens are full of trees in the middle of green grounds
	Shuara/ 57	(Tabatabaei, 1988). We expelled the pharaohs from their gardens rich in trees and running ware and their splendid palaces and abodes (ibid).
	Dukhan/26	The sublime position of the pharaohs' beautiful houses (ibid).
	Fajr / 7-8	Eram is another name for the A'ad Tribe, whose buildings had large and tall columns (Gharaeati, 2006, 2944).
		Mansions with extraordinary magnificence and enthralling decorations (Makarem Shirazi, 2008, 469).
		Villa Gardens
Few numbers of large urban and	Tobeh /72	Reference to gardens and abodes (Gharaeati, 2006, 886-887).
luxurious houses	Hijr / 45	Accommodated in the Paradise (Tabatabaei, 1988, 250).
1. Gardens of simple forms composed of green	Nahl / 31	The houses of the Godfearing shall be in the Eden Gardens (Tabarsi, 1973, 251).

Characteristics of Persian Gardens	Surah /Verse	Gardens in Islamic Teachings				
space on one side of the	Kahf/ 107	Ferdows gardens shall house them (Makarem Shirazi, 2008, 608).				
house (Naeima, 2006,	Shu'ara/ 85	Heavenly houses (Kashani, 2010, 113).				
28-29)	Zumar / 74	The right to choose houses (Gharaeati, 2006, 2168).				
Main functions: Residential,	Al-Rahman/ 52	Residence in gardens and palaces and next to springs (ibid).				
integrated, ceremonial (Shahcheraghi, 2016, 59)	Saf / 12 Bayyenah/ 8 Bagharah/ 35	Clean houses (Makarem Shirazi, 2008, 101). Residence in gardens (Kashani, 2010, 940). Residence in gardens (house gardens) (Ansarian, 2019, 8).				
	Nahl/ 80	Houses as a place of comfort and tranquility (ibid).				
	Ivalli/ 60	Place of rest and peacefulness (Gharaeati, 2006,1250).				
		Made of stone, bricks, and wood (Kashani, 2010, 368).				
2. The integration of houses and gardens and	Forghan/ 75	A pavilion is a building on another building (Tabarsi, 1973, 230). A room above the ground floor has a view (Gharaeati, 2006, 1385).				
using landscape for as much as possible	Ankabout / 58	Eternal housing of the faithful in beautiful houses located on highland (Tabatabaei, 1988, 216).				
(Naeima, 2006, 28-29)		And overlooks the surroundings (Gharaeati, 2006, 1864).				
		Surrounded by heavenly trees on either side (Makarem Shirazi, 2008, 348).				
	Ferdows	Transparent pavilions whose inside is seen from the outside and whos outside is seen from the inside (ibid). The believers shall dwell in paradise houses (ibid).				
	Gardens	The Prophet (PBUH): Ferdows is in the middle of Paradise, which ha				
	Dar-Al-Salam	walls and pavilions of light (Meghdadi & Mousavi-Guilani, 2016, 12 Denoting the House of God (Paradise) (Ansari & Mahmoudi-Nejad, 2007).				
		House of peace, happiness, and security (Makarem Shirazi, 2008, 329				
		The people of Paradise shall dwell in these houses (ibid).				
Located in the urban texture on	Forghan /24	Good dwelling and resting place (Tabarsi, 1973, 198).				
grounds far smaller, with their main functions including	Forghan/76	Peaceful abode and accommodation (Ansarian, 2019, 557).				
esidential features (Shahcheraghi,	Yasin /56	Heavenly houses are peaceful and tranquil (Gharaeati, 2006, 2053).				
2016, 53).	Al-Rahman /46	They are two gardens of heavenly gardens, one is inside a palace and the other is out of it. One Paradise is a personal house and the other is house of the servants (two internal and external Paradises) (Tabatabae 1988, 182).				
		Fruit Gardens				
Usefulness in terms of economic and agricultural functions	Safat/ 42	Both wet and dry fruit (Tabatabaei, 1988, 480).				
(Shahcheraghi, 2016, 56)		Colorful fruit (Makarem Shirazi, 2008, 66).				
	Safat / 43	Green and blissful positions in heavenly gardens (ibid).				
Main functions: Agriculture, cultivation, economic, and residential (Shahcheraghi, 2016,	Al-Rahman/ 68	Amongst heavenly fruit, date and pomegranates are special, with all types of fruits (Gharaeati, 2006, 2556).				
59)	Momenun/ 19	Construction and raising gardens (Tabatabaei, 1988, 28). Full of garden products, including grape trees, palms, and numerous types of fruits. Others use trees except for edible purposes (medicinal leaves, fodder, etc.). Plants are for human use and dates and grapes ar very important, with each region considered for some specific trees ar plants (Makarem Shirazi, 2008, 240).				
	Abas/ 30	Hadaegh refers to gardens with strong and large trees (Gharaeati, 2000 2895).				
		These gardens are usually fruit gardens (Makarem Shirazi, 2008, 160)				
	Ferdows	Gardens with trees, most of which are grapes (Kashani, 2010, 544).				
One or several fruit gardens along the residential garden (selling fruit	Tobeh/ 72 Ra'd/ 35	Gardens with fruit (ibid). Gardens whose fruit shall not end (Makarem Shirazi, 2008, 304-306)				
	Kahf/107	Lush and full of tree gardens (Tabatabaei, 1988, 547).				

Rest of Table 1.

Characteristics of Persian	Surah /Verse	Gardens in Islamic Teachings
Gardens		
and types of flowers and plants)	Mohammad/ 15	Gardens with types of fruits and flowers. Types of colorful heavenly
(Nasr, 2010, 45).		fruit with different tastes and fragrances (Makarem Shirazi, 2008, 459-
Sometimes, without a mansion		460).
(Shahcheraghi, 2016, 56).	Naba'/ 32	Gardens full of numerous trees and rich in grape trees and fruit
In fruit seasons, people paid		(Kashani, 2010, 756).
money to eat from the fruit	An'am/ 141	On the throne sit vine trees whose branches are overlaid on each other
gardens but could not take away		and are raised. There are gardens with various trees. Some trees are on
fruit with them (Naeima, 2006,		bases and some are without bases (Tabarsi, 1973, 298).
24).		A great view of trees with scaffolds, with trees without scaffolds, and
		shades created by the scaffolds. Tree branches make walls for trees.
		There is a large number of date trees with different tastes and fruit;
		palms and lush lands(Makarem Shirazi, 2008, 14).
	A'raf/ 19	Residence and eating heavenly fruit (Kashani, 2010, 607).
	Forghan / 10	If God desired, he could, by the time of the apostle's prophethood, open
	U	the gates of the treasure and the green and lush gardens beneath which
		streams flow as well as the palaces and splendid houses, though the so-
		called <i>test</i> would be lost (Gharaeati, 2006, 1647).
	Saba'/ 15	The Saba' tribe had two gardens in their palaces, with either side having
		a garden rich in fruit, flowers, buds, and blossoms, with different tastes
		and colors (Kashani, 2010, 551-553; Makarem Shirazi, 2008, 70;
		Tabarsi, 1973, 243).

mansions in their center while enjoying the best scenery toward the gardens; meanwhile, house/villa gardens combine garden spaces and residential spaces to also fall in this group. Consistent with elements introduced in Islamic teachings such as the abundance of fruit trees in Paradise, different products of heavenly trees, worldly blessing, fruit trees, and their benefits are among the main functions of gardens in Islamic teachings.

In the second group of investigated gardens, there are water, Takht and Tajir gardens, which are presented in the following table (Table 2).

In the Qur'an, however, Water, Flat, and Mesh Gardens are not directly referred to. In the meantime, consistent with the Qur'an and hadiths, eternal water is referred to by the constant flow of water streaming down the trees, as well as the houses and palaces of the believers, which correspond to Water Gardens, where the pavilion is located between the summerhouse and the permanent water and views the surrounding landscapes. As well, flat gardens help water move like a waterfall due to its location on a sloped ground, with the pavilion being at the highest point, overlooking the surrounding. These components, as suggested by Islamic teachings, consider flat gardens as new functions in the classification, because of reference to eternal heavenly gardens and their location in the center and view of heavenly gardens. Also, Mesh Gardens, which in Islamic teachings refer to secure gardens surrounded by walls, fall under a new garden function in the classification.

Statistical Population and Components

A study of Persian Gardens and gardens in Islamic teachings led to the elicitation of gardens' functional components. The table below also investigates the components of each of the case studies. The main characteristics of choosing the statistical population include gardens constructed in post-Islam eras (Shahcheraghi, 2016), which are considered major and historical gardens in Iran (Naeima, 2006) and are also open to public visit. The components obtained in the Palace garden and Kushk are reviewed in Table 3.

Table 4 examines the components in House/villa, Flat,Water and Fruit Gardens.

According to the above study, the Chehelsotoun and the Bolbol Gardens, as palace gardens, were magnificent gardens with green spaces, which served residential and ceremonial purposes; the Ghevam's Narenjestan Garden with an internal and external space and serving Table 2. Matching Persian Gardens' Functions with Gardens in Islamic Teachings (water, flat, mesh). Source: Authors.

Characteristics of Persian	Surah /Verse	Gardens in Islamic Teachings				
Gardens						
		Water Gardens				
A large pool covered a part or all parts of the garden, with a pavilion next to the pool (Shahcheraghi, 2016, 52).	Baghara/25 Al-Imran/ 15	Permanent water and freshness of the garden (Makarem Shirazi, 2008, 178). Under the palaces and trees of the gardens lay streams of water not moving into slits, but rather spreading on the earth and not getting scattered (Kashani, 2010, 728).				
Picturesque view of water and plants (Heidar-Netaj & Rezazadeh, 2015, 54)	Al-Imran/ 195	Water was also streaming beneath the trees and even residential abodes (Gharaeati, 2006, 357). Full of blessing (Makarem Shirazi, 2008, 287).				
Main functions:	Younes/9	Palaces laid over streams (ibid).				
Governmental, integrated and ceremonial, residential and	Ghashiye/12 A'raf/ 43	In each palace lay streaming springs (ibid). Viewing heavenly palaces (Tabarsi, 1973, 109).				
recreational (Shahcheraghi, 2016, 59)	Saba'/ 37	Pavilion chambers are located on upper floors, with greater amounts of light and better landscapes and views (Makarem Shirazi, 2008, 123).				
	Al-Rahman/ 66	The rejoicing of observing natural scenery (Gharaeati, 2006, 2555).				
	Ghashiye/ 13	The high position of heavenly thrones overlooking the splendid scenes of Paradise (ibid).				
	Zariyat/ 15	Gardens naturally have water streams; the advantage of this is that the springs erupt from the inside of the gardens and constantly water the trees (Makarem Shirazi, 2008, 330).				
Gardens with several floors, while	Haghah/ 22	Flat Gardens It is a high-level place with great ranks and mansions (Kashani, 2010, 619).				
being terraced and sloped (Shahcheraghi, 2016, 52)	Eden	The highest-ranking people of Paradise are based on their hierarchy and spiritual positions (Makarem Shirazi, 2008, 583).				
Stepped ground (Heidar Netaj & Rezazadeh, 2015, 53)	Ferdows	Located at the highest points (Naeima, 2016, 13)				
Water streaming like a fall	Tobeh/ 100	Gardens on whose foothill streams flow (Tabatabaei, 1988, 508).				
(Shahcheraghi, 2016, 52) Main functions: Governmental,	Al-Rahman/ 66	The erupting springs, the flowing streams, and the waterfall, with a variety of streams made of milk, honey, wine, and water (Gharaeati, 2006, 2555).				
residential, integrated, and ceremonial (Ibid, 59).	Waghe'a/31	Constant flowing water streaming down (Tabatabaei, 1988, 211). Streaming like a waterfall (Gharaeati, 2006, 2565).				
The pavilion is located at the highest point and has the best view	Mutaffefin/ 27	Tasnim refers to water that falls from the throne to Paradise, falling from heights (Kashani, 2010, 809).				
(Heidar Netaj & Rezazade, 53).	Ra'd/ 3	The ground slope for irrigation (Makarem Shirazi, 2008, 148).				
	Sajde/ 19	Ma'va refers to a place wherein man shall dwell (Tabatabaei, 1988, 395).				
		Heavenly gardens are for receiving the faithful (Tabarsi, 1973, 227).				
	Younes/9	Overlooking the streams front here (ibid).				
	Kahf/ 107	In the middle of Paradise and on a high pinnacle (Tabatabaei, 1988, 548).				
	Zumar/ 20	Ghuraf=Mansions on top floors (Gharaeati, 2006, 2144). Palaces over palaces to see the landscape of flowers, stream waters, and gardens and to overlook green land and water (Makarem Shirazi, 2008, 435).				
	Mutaffefin/ 23	Viewing beautiful and pleasant heavenly scenery (Tabatabaei, 1988, 391).				
		High and magnificent positions overlooking beautiful scenery (Gharaeati, 2006, 2913).				
	Baghara/ 265	Gardens are saturated at a high point by the coarse-flake rainy waters, thus blossoming twofold (Ansarian, 2019, 65).				
		Gardens located in high areas are much better and fresher than those lying on low ground where water accumulates, with their fruit also better (Tabatabaei, 1988, 148).				
		Gardens full of trees and fruits on highlands upon which the sunlight radiates fasters and keeps away blights (Kashani, 2010, 664-665).				
		Mesh Gardens				
Enclosed by walls, sometimes	Hadid/ 13	High walls and a gateway to Paradise (Kashani, 2010, 371).				
taking the form of castles; gardens	Naba'/ 32	Hadigheh denotes a garden with walls (Tabatabaei, 1988, 273).				

Rest of Table 2.

Characteristics of Persian Gardens	Surah /Verse	Gardens in Islamic Teachings				
with mesh walls (Ansari, 1999, 187)	Abas/ 30	Hadaegh refers to gardens surrounded by walls (Makarem Shirazi, 2008, 160).				
Enclosure and security (Ansari,	An'am/ 127	Security and health (Gharaeati, 2006, 627).				
1999, 187) Main functions: Governmental, residential, integrated, ceremonial, and public (Shahcheraghi, 2016,	Younes / 25	Paradise is where there is no blight (Tabatabaei, 1988, 473). Paradise is the house of well-being (Kashani, 2010, 25-26). Dar Al-Salam is the house away from any blights (Tabarsi, 1973, 283).				
59)	Ra'd/ 23	With angels entering from various gates of the heavenly palaces (ibid).				
	R'ad/ 24 Hijr/ 46	Security in the Paradise (Ansarian, 2019, 380). Health and security in the Paradise (Makarem Shirazi, 2008, 108).				
	Saba'/ 37	More peacefulness and tranquility (ibid).				
	Dukhan/ 51	Where there is security (Tabarsi, 1973, 22,324).				
	Ferdows	Walls and pavilions of light (Meghdadi & Mousavi-Guilani, 2016, 12).				

as a residential purpose falls under the villa garden; meanwhile, pavilion gardens, which are located in the central sections and enjoy the best views for residence and reception, include the Eram, Fin, Delgosha, and Afif Abad gardens, with some residential and ceremonial functions. The Yazd Dolatabad Garden and the Tabas Golsahn Garden, characterized by building features for residence and view, fall under the main and complete examples of this type of function. Because none of the studied examples mansions functioned as fruit gardens, specific areas were allotted for plantation and fruit trees. Falling in the second group of water gardens is the E'l Gil Garden, characterized by the pavilion in the center of the pond and a view of the landscapes and permanent water. Meanwhile, the Shazde Mahan Garden, which is a complete and excellent example of these types of gardens, has a pavilion at the highest point and a view of the surrounding, with some ceremonial and residential functions. Also, because all Persian Gardens are enclosed by walls, the Chehelsotoun Garden is represented as a mesh-walled garden.

The Function of Gardens Based on Worldly Affairs

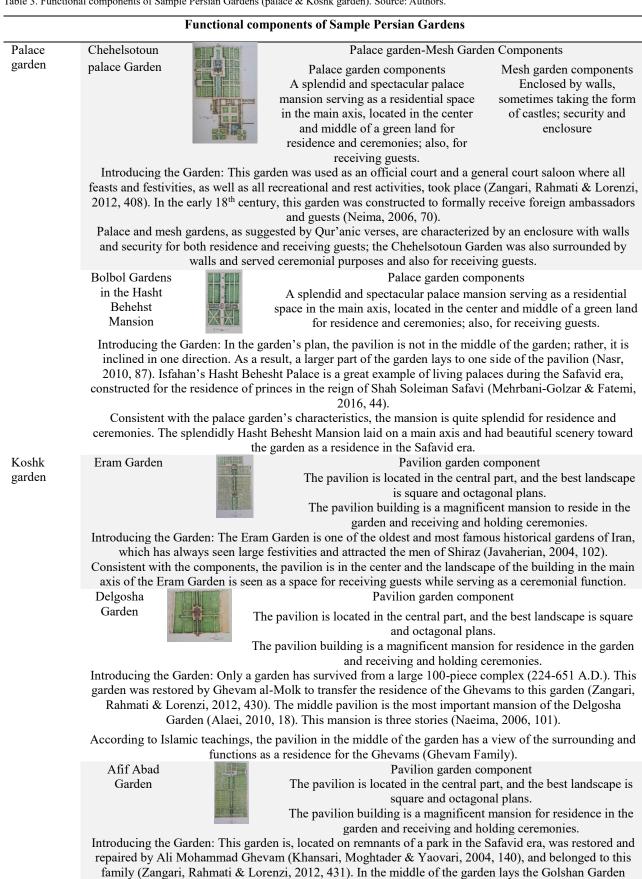
Since the function of the Iranian garden is a combination of the principles mentioned in the Quran and interpretations and worldly needs, the combination of these principles and their interaction has affected the functional system of the Iranian garden. Given what has been stated, the

function of Iranian gardens is a response to worldly needs and functions in addition to being a manifestation of heavenly gardens. The primary function of the gardens, which were mostly designed and built by kings and important people, was often for political purposes and to demonstrate the greatness and power of governments, and civil affairs. Diagram 3 shows the different functions of the gardens that are planned for the worldly. The primary functions are agriculture, horticulture, a place to keep plants and animals, and the sale of garden products. In other words, the gardens, especially in the hot and dry climate, were used to create a usable space (microclimate) in these areas. Creating a green space in the limited space of the urban context and arranging the spaces of the house are among other functions. Also, paying attention to the urban landscape is considered another function of gardens. Recreational function is also one of the common functions of gardens (Fig. 2).

Discussion and Analysis of the Results

Based on Islamic teachings, the function of the gardens was introduced and the components were examined in each of the gardens. The following table shows the factors affecting the function of the Iranian garden according to Islamic teachings. There are a group of limiting factors and a group of strengthening factors that are in line with Islamic teachings. Also, the architectural features have been mentioned in Islamic teachings and the architect has used these

Table 3. Functional components of Sample Persian Gardens (palace & Koshk garden). Source: Authors.



mansion with two stories (Naeima, 2006, 106).

According to Islamic teachings and shared components, the pavilion building in the main axis with a wide view of the garden has served as a residence.



Rest of Table 3.

Functional components of Sample Persian Gardens

Kashan's Fin Garden



Pavilion garden component The pavilion is located in the central part, and the best landscape is square and octagonal plans. The pavilion building is a magnificent mansion for residence in the garden and receiving and holding ceremonies.

Introducing the Garden: The garden is located in the upper half of the pavilion, while the lack of information about the presence of an alcove or a space similar to it indicates that the middle pavilion has served as an alcove or the garden's balcony (upper floor) (Hekmati, 2002, 87). This garden was constructed in the Safavid era, and festivities and feasts were usually held in the central mansion of this

garden (Zangari, Rahmati & Lorenzi, 2012, 417).

The pavilion was located in the upper half of the garden and had a four-side view, used for ceremonies and receiving guests.

Dolat Abad Garden



Pavilion garden component The pavilion is located in the central part, and the best landscape is

square and octagonal plans.

The pavilion building is a magnificent mansion for residence in the garden and receiving and holding ceremonies.

Introducing the Garden: Its larger rectangular environment, currently known as the Dolat Abad Garden, constitutes the internal garden, which is, in fact, the private garden and the family domicile. Its smaller rectangular space, located in the north, constitutes the external ranges of the garden. This garden, known as

Behesht Ayin, served as a place for holding government and sports ceremonies (Javaherian & Shahcheraghi, 2004, 164). Inside the garden are two pavilion (summerhouse) mansions; one is in the south of the garden, which is a winter mansion exposed to heat and sunlight, and the other is in the north, which is a summer mansion and is cooler (Zangari, Rahmati & Lorenzi, 2012, 421).

Both pavilion mansions are in a main axis and have a view of the entire garden, which integrate residential and ceremonial functions





Pavilion garden component The pavilion is located in the central part, and the best landscape is square and octagonal plans. The pavilion building is a magnificent mansion for residence in the garden and receiving and holding ceremonies.

Introducing the Garden: The Golshan Garden was the palace of the city ruler, and was also a major place in the city. Entry to this garden was made available through a summerhouse, playing an interface between the desert and the Naghsh Garden. Like Chaharbagh-style gardens, this garden is divided into four main sections. This garden is marked by two passageways, which at their intersection lays a large pond with three fountains (Zangari, Rahmati & Lorenzi, 2012, 436). The entrance to the garden is under the porch and in the direction of the building and the garden. There is a large hall on the first floor to which two constructed porches face the garden and its gateway opens wide. The garden landscape and the urban view are very fascinating from these porches. This two-way mansion that stands on its portal is the only building in this garden (Naeima, 2006, 190).

Unlike Islamic teachings that demonstrate the location of the pavilion in the central part of the main garden building is the garden's portal and is not in the internal part of the garden; the pavilion is in the main direction and the beginning of the garden. Consistent with Islamic teachings, the view overlooks the surrounding scenery and has a residential function.

Table 4. Functional components of Sample Persian Gardens (House, Flat, Water and Fruit Gardens). Source: Authors.

	Function	l components of Sample Persian Gardens						
House/villa garden	Ghevam's Narenjestan	Villa gardens components						
garden	Ivarchjestan	A combination of a house and a green space for residence						
		Residence in a garden and house overlooking the surrounding						
	11日本 11日	landscapes						
	(ITTAL SALES)	An introverted residential space and a semi-introvert space toward						
		gardens						
	Birouni (the external phase from it, was called Andaroun	the Qajar period, the Ghevam Garden and its set of complexes were called , and the Zinat al-Molk House, located on its west side and is only one alley i (the internal phase), because it housed the Ghevam's family (Naiema, 2006 is garden, there was a guesthouse, which had a separate entrance (Khansari, Moghtader & Yaovari, 2004, 136).						
	According to Islamic teaching	gs, the combination of a green space with the building constitutes internal and						
	Recording to Islamic teaching	external spaces, mainly serving as a residence.						
Flat Garden	Shazde Mahan	Flat Garden Components						
		Ĩ						
		With floors and a terrace, a hierarchy and the location of the pavilion at the highest point						
		Flooring in the garden helps water move like a waterfall, while the						
	a de t	ground slope caused water to rise and fall						
		The location of the pavilion at the highest point and view of the						
	surrounding landscapes, stream, trees, and flowers							
	Location on high ground and using rainwater and sunlight; serving as							
	a residence and for ceremonies							
		Introducing the Garden: The selection of the garden location on a sloped ground that allows for the creation of flat gardens causes this garden to be constructed in several stories. This garden which has						
		icterized by repetitive waterfalls following the ground's slope. The difference						
		rfalls to stream down with certain steps. The highest surface in front of the						
		to provide a wider view of the portal and northeastern sides, as well as fruit						
). This area is conducive for residential and recreational space and for the						
		is garden (Mehrbani-Golzar & Fatemi, 2016, 44). The owner's permanent						
		vilion is located on the upper end of the garden and has rooms for living and						
	······································	reception (Pour Jafar et al. 2017, 8).						
	According to the component	, the pavilion is located at the highest point, and light and landscape are used						
		al and ceremonial purposes; the water is seen moving like a waterfall due to						
	C	the ground slope.						
Water	E'l Goli Garden	Water Garden Flat Garden Components						
Gardens	- A Marine	Components:						
and Flat		Permanent water in a With floors and a terrace, a hierarchy and						
Gardens		garden where the pavilion the location of the pavilion at the higher						
		is in the middle of the point						
		water, and the permanent Flooring in the garden helps water mov						
	1. <u>5.7</u> .7	water flowing beneath the like a waterfall, while the ground slope						
		pavilion. The pavilion in caused water to rise and fall						
		the middle of the water The location of the pavilion at the						
		overlooks the surrounding highest point and view of the						
		landscape, plants, and surrounding landscapes, stream, trees,						
		water and has better and flowers						

Location on high ground and using rainwater and sunlight; serving as a residence and for ceremonies

purposes. residence and for ceremonies Introducing the Garden: The outstanding section of this garden is its artificial river, i.e., an octagonal building that sits in the middle of a large water pool (Naeima, 2006, 278). This mansion has a reception hall for guests (Asghari & Kalantari, 2012, 97). The south of this garden leads to scenic hills (Zangari, Rahmati & Lorenzi, 2012, 415). The surrounding trees have covered the pool like a fence; every time, you look at it from the pavilion's porch, it is as if the pool's water is suspended over a valley, situated in the rear. The reservoir water comes from five streams, with each platform involving a waterfall (Naeima, 2006, 278).

scenery, serving

residential and ceremonial

The garden has the features of a flat garden because the platform and sloped sections of the garden cause the water to move like a waterfall and the pavilion in the middle of the garden has a view of the surrounding landscapes; on the other hand, the garden enjoys water garden features as permanent water



Rest of Table 4.

Functional components of Sample Persian Gardens

-		
		and the pavilion sits in the middle of the large pool and the permanent reception and ceremonial purposes matching these components.
Fruit Gardens	Fruit Garden Components In addition to bearing fruits, garden trees have other uses such as medicinal, etc. They are also economically useful. Gardens with types of fruit trees and products, which also serve as residences	 None of the examples under study were mainly functioning as fruit gardens; however, an area of the gardens is always allotted to the plantation and fruit trees. Chehelsotoun: With fruit trees (Zangari, Rahmati & Lorenzi, 2012, 409); Bolbol: Fruit trees; Eram: Orange and other citrus trees, pomegranates, medlar, persimmons, walnuts, apricots, almonds, apples, plums, and pears (Naeima, 2006, 37); Delgosha: All types of lemons, citrus and oranges (ibid, 100); Afifabad: Fruit trees such as persimmon tree (Zangari, Rahmati & Lorenzi 2012, 432); Fin: Fig, pomegranates, berries, plums, green tomatoes, pears, apricots, a small number of date trees, all types of flowers and roses (ibid, 420); Dolatabad: Cypress and cherry trees and Damask rose bushes(ibid, 421); Golshan: Pomegranate, orange, almond, pear, and apple trees (ibid, 436). Seasonal palms rose bushes, and white petunia flowers (Naeima, 2006, 10); Ghevam's Narenjestan: Orange trees and palms (ibid, 112); Shazde Mahan: Fruit trees and flowers (ibid, 278).

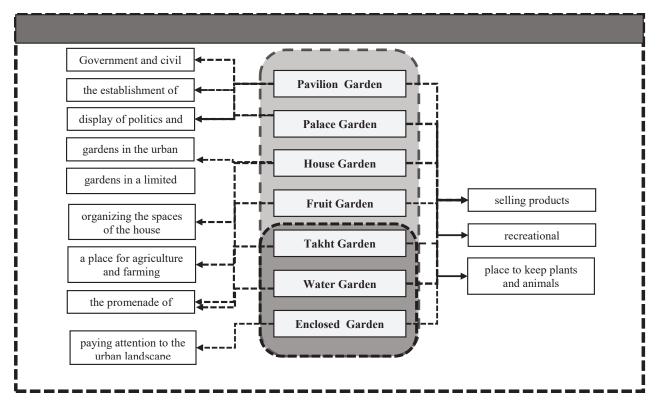


Fig. 2. The function of gardens based on worldly affairs. Source: Authors.

features with his or her taste and creativity to realize Islamic teachings. Table 5 examines the first group of garden Pavilion, Palace, house and fruit.

In Table 6, the influencing factors on the functioning

of the Iranian garden are discussed according to Islamic teachings in the gardens of the second group of Takht, water and Tajir gardens. Also, common components in all gardens are checked at the and of

Featu	ures of Islan	nic teachings	Limiting f	actors	Strengther	ning factors	Description
			Generalities	Details	Generaliti	Details	
First group	Pavilion Garden	Pavilion in the middle of the garden	•	•	es	•	The placement of the Pavilion in the main axis and the center to the end of the garden
		Having landscape	•	-	•	•	Considering the mansion on the main axis to have a good landscape of the garden
		Reception of guests (Heavenly people)	-	-	•	•	Construction of secondary and service spaces in the garden
	Palace Garden	Magnificent building and palace The centrality of Palace Garden	•	•	•	•	Construction of a grand and magnificent building in the garden Considering the proper location of the main building of the garden to have a proper .landscape to the garden
		Reception of guests (Heavenly people)	-	-	•	•	Correct placement and construction of secondary and service spaces around the .garden
	House Garden	Combination of house and green space View of the surrounding landscape		•	•		The location of the pavilion on the main axis and its connection with plants and water Considering the proper location of the building to have a proper landscape for the garden
		Two indoor and outdoor areas (two heavenly gardens)	•	•	Sociology	Culture of Privacy	The separation of the indoor and outdoor areas in the garden according to Iranian culture
	Fruit Garden	Having fruit trees	Geography	The climate of the region	•	•	planting different plants and trees specific to the region according to the climate of the region
		All kinds of pharmaceutica l products and	Geography	The climate of the region	•	•	Planting planted for medicinal and perfume purposes according to the climate of the region
		Economically beneficial	-		Sociology	Economy	Pruning fruitful and non-fruitful trees and using all kinds of garden products that are .economically beneficial
		habitable					Construction of a building in the garden

Table 5. Functional analysis of the Iranian gardens. Source: Authors.

Featur	es of Islam	ic teachings	Limiting f	factors	Strengthenir	ng factors	Description
			Generalities Details		Generalities	Details	^
Second group	Takht Garden	Matched and terraced	•	•	Geography	Garden land toll	Building a garden on sloping ground creates different levels in the garden
		The movement of water like a waterfall	-	•	Geography	Garden land toll	Using the natural slope of the land to build a waterfall
		Booths located on the upper floors	•	-	Geography	Garden land toll	Using the slope of the land and building a booth at the highest point of the garden to see the surrounding landscapes
	Water Garden	permanent water in the garden (big water pool)	Geography	The climate of the region	-	-	The pavilion is located between a large reservoir. Geography and climate have a great impact on the construction and design of such gardens. They are not possible in hot and dry climates (due to water evaporation)
		Pavilion in the middle of the water Pavilion at the center of view to the surrounding landscape	•	-	•	•	Construction of a pavilion in the middle of the reservoir and connection through the bridge Construction of the main building in the center of the garden to see the surrounding landscape
	Enclosed Garden	enclosed (walled gardens)	•	-	Sociology	Culture of Privacy	In Iranian culture, introversion is one of the principles of Iranian architecture, and it has always been the focus of architects and designers (although this culture is also rooted in Iranian religion, introversion can also be seen in pre-Islamic architecture),
		Having security	-	•	Sociology	Security	Building a wall sometimes in the form of a castle garden enclosure (climate security and comfort)
		Having	•	•	Sociology	Culture of Privacy	Construction of the exterior wall door to enter the garden or the construction of the entrance building.

Table 6. Functional analysis of the Iranian gardens. Source: an interview with the Delphi population.

Features of Islam	Features of Islamic teachings		factors	Strengthening factors	Description
					Separation of indoor and outdoor space
Common features	Referring to the palace and great buildings. Prosperous residences to welcome believers, Residential and ceremonial functions	Sociology	Political and social position		In designing the function of these gardens for residence and ceremonies, the owners of the gardens were usually the kings of that era or rulers and people from the .upper class of society
	Water flows under the trees	Geography	Climate	•••	The problem of water shortage in most gardens in Iran and the construction of aqueducts and wells to supply water to the garden
	Paying attention to the abundance of trees and plants	Geography	The climate of the region		Planting different plants and trees specific to the region according to the climate of the region

Rest of Table 6.

the table.

Given the function of the garden in Islamic teachings and its realization in the Iranian garden, a new classification was presented for the functional system of the Iranian garden. Based on the examination of the components extracted in Iranian gardens and according to their function, the factors affecting the realization of Islamic teachings in the functional system can be divided into two groups, limiting factors and strengthening factors.

Limiting factors can be examined under two groups: sociology and geography. The gardens of Islamic teachings are the residence of the believers where they are welcomed. However, based on the sociological components (political and social position of people), it is not possible to build such gardens for all sectors of society, and such gardens are mostly designed for the kings and rulers of the era. Given the Islamic teaching, the heavenly garden has trees with all kinds of fruits. However, due to the climatic limitation, the designer has used specific plants of the region and has paid attention to the selection of different types of plants and the combination of fruitful, non-fruitful, and decorative species. The garden of Islamic teachings has permanent water and water is flowing under the heavenly pavilions. Due to the problem of water shortage and the hot and dry climate of Iran, they used aqueducts and wells to solve such a problem. There are also limitations to the design of water gardens. A suitable climate should be selected for the construction of these gardens that do not cause evaporation of water.

Regarding the strengthening factors, some components helped the architect in designing the function of the gardens and were in line with

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Islamic teachings. This component is in line with Iranian culture and the separation of indoor and outdoor areas. The sociological component of the enclosure of the garden with a wall and a door is also in line with Iranian culture and the principles of introversion in Iranian architecture. The sociological component of the economy is one of the strengthening components. The component of geography (land toll) in the construction of a sloped garden and the creation of a waterfall is a strengthening factor and has helped the architect's goal to realize Islamic teachings.

Some factors were not affected by limiting factors or strengthening factors. They are features that the architect and designer have used with their taste to realize Islamic teachings. Paying attention to the placement and considering the correct location for the main building has helped to have a comprehensive view of the garden. To prevent the blocking of the landscape, they have built all the service and secondary spaces around the garden. They have tried to combine architectural space with nature. Also, they have paid attention to the path of the stream along the garden considering the appropriate place to plant plants and trees (Fig. 3).

Conclusion

Based on the Quranic verses and interpretations and hadiths in religious books, the functions of gardens in Islamic teachings include palace garden, pavilion garden, house garden, fruit garden, Takht garden, water garden, and enclosed garden. The Quran introduces the primary function of the garden as the eternal residence of Muslims, in which everything is prepared for Muslims and they are welcomed. It also refers to Janate Mavi, where people can live in heaven, and Janate Eden heaven, in the middle of heaven, where prophets and imams live. It refers to dwellings made of doors and rubies and booths made of pearls, two gardens which are the inner and outer heaven. The hadiths refer to the reward of building a mosque and a house in heaven. Also, Quranic stories refer to the prosperous and beautiful houses of the pharaohs and the magnificent buildings and blessings that God has bestowed for settlement and peace. Generally, the pavilion, the palace, and the house gardens with the function of the main building as a residence and ceremonies are among the first and most important functions of the gardens, such as Chehel Sutun Garden, Bolbol Garden, Eram Garden, Delgosha Garden, Afif Abad Garden, Fin Garden, Dowlat Abad Garden, and Golshan Garden, and Narenjestan Qavam Garden. The second group includes the gardens that are classified with distinctive elements and features, such as Shahzaded Mahan Garden and El Goli Garden as Takht garden and water gardens, and Chehel Sutun Garden as an enclosed garden. Comparing the functions of the Iranian garden and gardens with Islamic teachings, it can be concluded that the architect has chosen the best option and function by referring to Islamic teachings and designed the garden according to the features and influencing factors. Limiting factors of sociology components (political and social position of people) and geography components (climate of the region) cause limitations in the realization of Islamic teachings. In the strengthening factors, some features are in line with Islamic teachings, such as the sociological component (the culture of privacy, security, and economy) and the geography component (land toll). The architect uses some features in the design of functions to his or her taste to realize Islamic teachings in the function of the Iranian garden. They include paying attention to the correct placement and construction of spaces in the appropriate place in the garden. Among the studied factors, the components of the limiting factors have a greater impact than the strengthening components in designing and determining the function of Iranian gardens according to Islamic

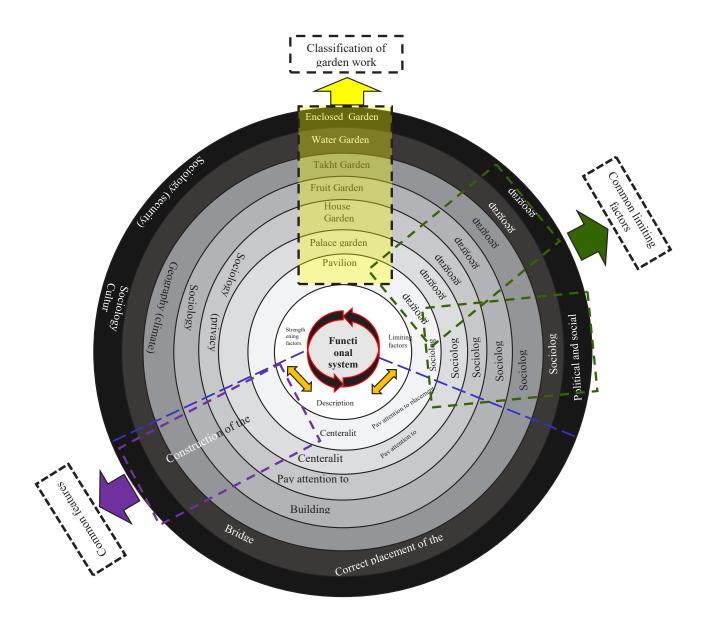


Fig. 3. Functional analysis of the Iranian gardens. Source: Authors.

teachings. Regarding the limiting factors, the sociology component has more impact than the geography component.

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