

Original Research Article

# Evaluating the Influence of Space Components on Organizing the Citizens' Environmental Behavior at the City Entrance Spaces (Case Study: Quran Gate of Shiraz)

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**Abstract** | Introducing the cities, the city entrance spaces offer the first mental image of the city to the observers. The city entrance spaces are of special importance due to their different potentials inducing various activities. Therefore, finding the most important influential components affecting the users' behavioral patterns and devising a proper solution for finding the criteria affecting the city entrance space design is a prominent issue which urban designers study today. The research question of this study endeavor to contemplate the formation of behavioral patterns based on the relationship between different perceptual, physical, social and etc. aspects of city entrance spaces. In this regard, Quran Gate of Shiraz, as a leading example having different spatial and perceptual components and as an urban space with high level of various activities, is selected and its behavioral patterns are comprehensively analyzed. This study adopts a combination of quantitative and qualitative research methods with a purpose of evaluating the physical, cultural, identifying and perceptual characteristics. In this study the qualitative observation and analysis are conducted using behavioral mapping techniques, questionnaires, interviews and photo analysis. The most significant environmental components affecting the users' behavior at the city entrance spaces, according to theorists such as Lang, Barker and Canter, are categorized into three groups: the physical factors, the cultural, social, identity factors, and finally psychological and perceptual factors. The results show that the components of identity and desirable visual quality have the greatest impact on attracting users to the city entrance spaces. Moreover, the visual quality of landscapes and the surrounding views is directly related to space presence and space. The influence of this component is greater than the effect of other components such as privacy and spatial layout.

**Keywords** | City Entrance Space, Quran Gate of Shiraz, Space Components, Behavioral Patterns, Perception of the Environment.

**Introduction** | The city entrance gates, as the first space seen in a city, have a great impact on people's perception

of the city. These spaces are of special importance due to providing grounds for the presence of people and citizens, which are the indicators of vitality and activity. In addition, behavior is the most objective and obvious

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human reaction to the surrounding environment. A person reveals the mechanism of environment design by demonstrating a behavior. The way in which one acts or conducts oneself is called behavior. Human behavior is the result of a person's motivations and requirements, the environment capability, and the person's mental image of the world derived from environmental perception and his/her mental image (Lang, 2016).

The mutual interaction of the environment and the behavior, the importance of the city entrance spaces, the definition of city entrance components, and their impact on the organization of users' environmental behavior all justify the necessity of this research. In fact, this study mainly focuses on the influence of the spatial and perceptual components on people's behavior at the city entrance spaces. In this regard, this research aims to explain people's different behavioral patterns in the face of the elements of identity, spatial organization, perceptual factors and etc. Therefore, Quran Gate of Shiraz is selected as one of the leading examples offering different spatial and perceptual components in various dimensions. It is then comprehensively analyzed according to the behavioral patterns based on spatial and perceptual components.

## Research background

There have been multiple investigations into the components of urban space and their influence on the citizens' behavior, inside and outside of the country.

According to Razavivand Fard (2014), space is the whole structure perceived by city citizens in an urban system. He believes that public open spaces, as multipurpose spaces, reflect the people's culture and lifestyles and demonstrate the economic and social status of society. Having been a place of interaction over the centuries, urban spaces have been adapted to the economic, political, social and cultural issues. Having special features and being intertwined with the daily experiences of people throughout history, public open spaces also play a dominant role in shaping human societies.

Rapoport (2005) considers culture as a vital factor in shaping human behavior and activities in various spaces and dwellings. In a research entitled "Effects of Urban Spatial Configurations and Physical Structures on Pedestrians' Perception of Subjective Duration", Shakibamanesh & Ghorbanifar (2018) argues that people have different perceptions of the three-dimensional space in which they move. The author also admits that architects' focus on urban design factors in many cases can determine the pedestrians' behavioral pattern in the environment. Abusafieh, & Razem (2017) in a research entitled "Human Behavior and Environmental Sustainability: Promoting a Pro-environmental Behavior

by Harnessing the Social" conveys that the built environment should be used to support human goals and requirements, but at the same time it should be considered as a context in which the values and human behaviors are set.

Scott (2005) describes behavioral setting as the principal foundation of the environment, and believes that the physical and social elements of the environment have a direct impact on the formation of human behavior in the environment. Koffka (1935) believes that the basis of human behavior in the environment is shaped on the person's objective knowledge of the environment. This will lead to the formation of environmental behavior. Goffman (1966) in a book entitled "Behavior in Public Places: Notes on the Social Organization of Gatherings" examines and analyzes people's behavior across different age groups and gender differences in urban and public spaces. He explains that the component of social interactions is the most effective component in the collective behavior of individuals in different urban spaces. Gehl (1987) also classifies the behaviors and activities of people and users within the physical environment of public spaces into three categories: selective, necessary and social activities, respectively. Activities such as walking, sitting and resting are considered selective activities, and people tend to do these activities when the time and the space allows.

Multiple researches have been conducted evaluating the spatial components and the environmental behavior in our country. Bahrainy (2015) in his book entitled "Urban Space Analysis; in Relation to the Users' Behavioral Patterns", using quantitative and qualitative criteria examines the pedestrians' behavioral patterns on the street. According to him, culture has a great impact on determining the behavior of passers-by in urban spaces. Evaluating the threshold spaces based on spatial quality criteria at the city entrances, Johari, Pourjafar, Masnavi & Ranjbar (2013) consider legibility, acceptability, vitality and individuality as the four main criteria of evaluation. Using AHP evaluation method, these researchers have also examined the quality and the strength of the criteria from different points of view.

Shakibamanesh & Hakimi (2017) believe that individual and environmental factors, the activity type, social behaviors, orientation and movement patterns are the most significant components affecting users' behavioral patterns. Zolfigol & Karimi Moshaver (2019) have studied the perceptual mechanism of behavioral settings in urban spaces using spatial monitoring in Bu Ali Sina Square in Hamadan. They believe that behavior must change to what the body can afford, or that the body must undergo drastic changes to provide behavioral patterns, or that both must change to strike a balance. When the

body pursues a goal no longer needed, it is abandoned or used in another way to pursue a new and different purpose. Paknezhad & Latifi (2019) have evaluated the effects of environmental components on the formation of behavioral patterns in urban spaces.

They have categorized the most important factors and criteria into three groups: functional-activity, environmental-physical, and cultural-social dimensions. Having used the three aforementioned criteria, they have focused on indicators such as the activity type, functional diversity in passages and access routes, the level of flexibility, etc. to analyze Tajrish Square in Tehran. Dalake, Behzadfar, Ghale noe & Bakhtiari Nasrolahi (2017) in another study entitled "Recognition of Behavioral Patterns in Enghelab Square of Isfahan" have examined the behavioral patterns and settings in spaces near Si-o-se Pol Bridge and its surrounding area. In this study, the type of activities such as sitting, resting, talking, etc. were examined in difference age groups and genders during multiple periods of time.

Rasoulpour, Etesam & Tahmasebi (2018) have also evaluated the effect of environmental quality components on behavioral patterns in physical space of the cities, exploring Valiasr Street in Tehran as a case study. In this field research, using a descriptive-analytical approach, criteria such as physical factors, activity, social interactions and ecology have been examined. The results show that on the one hand, human needs are the result of the behavioral impact on space and environment, and on the other hand, improving the quality of the environment, both quantitatively and qualitatively, has a direct impact on behavioral patterns and territories of the urban spaces. Latifi & Sajjadzadeh (2014) also consider perception, meaning of the environment, mental image, motivations, environmental capabilities and needs as the most prominent factors in individual's behavior in the environment.

## Theoretical foundations

### • Human behavior under the influence of the environment (environmental behavior)

For decades, environmental psychologists have made efforts to contemplate the relationship between environmental settings and human behavior, and their mutual interactions and effects. The various problems that root in human behaviors are considered as a factor threatening the environment. The built environment should be vitally used as a basis for environmental design to support human goals and requirements. (Abusafieh & Razem, 2017). Being aware of the human behavior in designing built environments is an important responsibility of urban designers; since human beings have widespread and altering needs. In fact, the

most central concern of the behavioral sciences is to understand the mutual interaction between people and their environment (Mersal Mahmoud, 2018).

Behavior has a very complex mechanism. Predicting behavior in an environment is the main concern of behaviorists, so that some researchers consider behavioral sciences as the main source of environmental psychology and believe that environmental psychology is a subset of behavioral sciences (Motalebi, 2002, 55). Human behavior is always influenced by the environment. Behaviorists have confirmed the influence of environment on determining human behavior through numerous experiments and observations. According to some researchers, the physical and symbolic data received from the environment, the environment ambience, and the architectural conditions can influence human behavior.

Behaviorists believe that human behavior has a purpose and a direction. In order to describe the purposefulness of people's behavior, behavioral scientists scrutinize concepts such as motivation and needs. The needs create tension and behaviors change direction. Explaining the effect of the physical environment on human behavior, Barker admits that "a non-social ecological environment does not demand behavior". On the other hand, he endorses the semantic concept of Gestalt psychology. He believes that the outdoors spaces induce children to run. This belief explains the concept of the inviting space, that not only confirms the impact of the environment on behavior, but also introduces the combination of environment and behavior as the "behavioral setting", which is a criterion for environmental analysis (Shahcheraghi & Bandarabad, 2017, 92).

Lang believes that each individual, depending on his or her personality traits, is more or less sensitive to the physical data, architecture, and the environment ambience. In other words, the behavioral environment is part of the environmental elements to which a person is sensitive (Lang, 2016). According to Barker, the founder of ecological psychology, studies must be conducted in the real life environments and during the daily activities of the individuals in order to answer many questions regarding the impact of the environment on human behavior. Accordingly, a paradigm in the field of "environmental behavior" or "behavioral environment" is formed in behavioral sciences which has become the basis for ecological psychology formation. Backer also presents the idea of physical environment and behavior compatibility, in which the human behavior and the human body are intertwined in every moment.

The body and the behavior are two components that unify at one moment and place. Barker has identified eight important factors in the formation of synomorph

(physical behavior), which are physical forces, social forces, physiological processes, the environment appearance, learned reactions, being selected by individuals, and being selected by behavioral setting, respectively (Barker, 1968). Researchers and experts categorize the behavioral tendency under the influence of the environment into three categories: determinists, libertarianist and probabilistic, shown in Table 1.

Lewin (1944) considers behavior as a function of the living space, and the behavior as a function of the perceived environment. He introduces the concept of "living space" to express the mutual interaction resulted from the individual and environmental factors, and asserts that: "in predicting one's behavior, we must use mathematical symbols to reflect all factors in the psychological field". This is due to the fact that human needs, as organizers of human behavior, have a certain direction and intensity. He believes that the individual's internal representation of the environment is the main factor determining the movement in the living space. In other words, the individuals' belief certainly affects the individual's behavior; however, in the end, the individual's internal representation can also affect a person's perception of the environment (McAndrew, 2008, 5).

Therefore, there will be an internal link between the human behavior and the physical environment. According to Canter (1986), place is resulted from the combination of activities, ethical concepts, and physical environment. For Canter, place is not devoid of ethical concepts. People always adapt their behaviors and actions to different places, and the nature of place is an essential factor in understanding and experiencing the place. Canter's model reveals that place is a part of the natural or man-made space that offers a certain range of concept or material and results from the interaction of behavioral factors, the human-recognized concepts and the physical characteristics of the environment. Wicker (1979) believes that the environment is a sequence of intertwined and hierarchical systems; self-regulating

compatible systems which are a part of a larger system. These systems encompass various other systems within their borders, each of which shape a behavioral setting and an environmental behavior. The environmental behaviors listed in Table 2 are detailed. In the continuation of the research, environmental components affecting users' behavior were identified under three headings of psychological and perceptual factors of the environment, physical and physical factors of the environment and cultural, identity and social factors of the environment. Fig. 1 shows how these components relate to each other.

### Research method

This research adopts a combination of quantitative and qualitative research methods based on the correlation approach and the evaluation of the influence of space components on the citizens' environmental behavior at city entrance spaces. In terms of research goals, this research evaluates the physical, cultural, identity and perceptual characteristics of city entrance spaces. The case studied in this reteach is Quran Gate of Shiraz, which is built during the reign of Az-Dawla Dailami, and is located at the entrance of Isfahan-Shiraz road, adjacent to the strait of Allah Akbar, between Babakohi and Chehel Maqam mountains.

Having all the criteria presented in the theoretical foundations of the research, Quran Gate of Shiraz has a big potential to be studied to evaluate the users' behavior at the city entrance spaces. There are a number of historical buildings such as Quran Gate, the tomb of Khajoo Kermani, Gahvare-did (the viewing point) and the Peacock Square in the vicinity of this urban entrance. Also, there are various spatial layout and functions around this environment such as the tomb, fountains, green spaces, hotels, mountaineering routes, restaurants, etc. Another valuable feature of this urban entrance space is its eye-catching views and landscapes and, offering magnificent visual quality (Fig. 2).

Table 1. Behavioral tendencies under the influence of the environment. Source: Emamgholi, Ayvazian, Mohamadizade & Eslami, 2012, 34.

Behavior- environment tendency	Main feature	Primary advocates
Environmental determinist	Changes of landscape and architectural elements in an environment leads to changes of behavior, especially social behavior.	Architects and urbanists
Environmental libertarianist	The environment usually does not cause behavior, but induces behavior, and people choose and behave based on cultural criteria.	Sociologists and scientists of urban geography
Environmental probabilistic	The effect of physical environment on behavior is probable, and certain behaviors in some environments can be highly or poorly probable depending on the environment characteristics.	Environmental psychologists

Table 2. The theorists' views and criteria for formation of environmental behavior. Source: Authors.

The theorists	The theorists' views	Analyzed criteria
Lang (2016)	Behavioral environment is a part of the environment and the environmental elements to which a person is sensitive.	Physical data of the environment, symbolic data of the environment, architectural data of the environment, sensory value of the environment
Barker (1968)	The answer to many questions about the influence of the environment on human behavior results from the studies conducted in real life environments and during individuals' daily activities	Physical forces, social forces, physiological processes, environment appearance, learned reactions, individual's choice, behavioral setting, physical condition
Wicker (1979)	At one level, each system is an environment and is comprised of different parts. At another level, each system is a part of a bigger system	The relationship of different components and elements in a system. A meaningful relationship between different components
Canter (1986)	The entity of any place is a central factor in understanding and experiencing the place.	The diversity of activities, ethical concepts, the physical environment, the place identity
Lewin (1944)	Behavior is a function of the living space. Behavior is a function of perceived environment. An individual's belief of the environment affect his/her behavior in the environment.	Individual factors, environmental and physical factors, mathematical symbol, psychological factors, mental beliefs

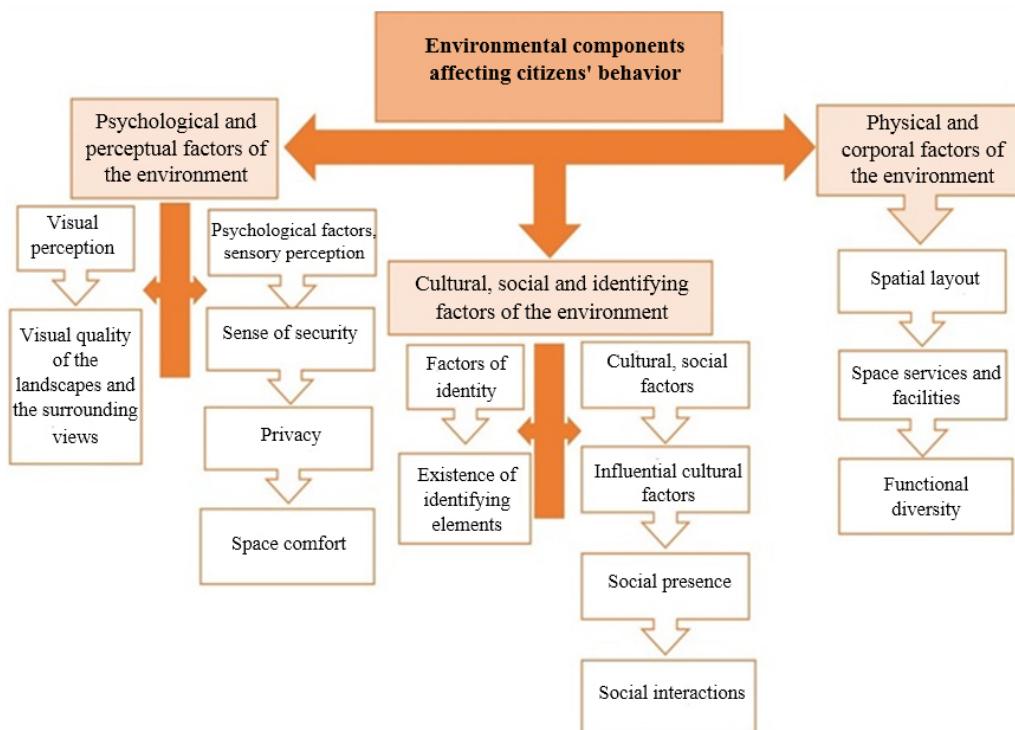


Fig. 1. Theoretical framework of research. Source: Authors.

In this research, data collection method is based on field observations and investigations in different spaces of this place during a three-month period using questionnaires and interviewing people. The questions were selected and developed during a literature review of the influential environmental components, pivoting three main categories: physical and corporal factors, cultural, identity and psychological factors, and perceptual factors. In general, using the technique

of qualitative content analysis, this study analyzes the visual-perceptual environment of Quran Gate. This entrance gate benefits from different spatial components such as the beautiful landscape, the proper combination of artificial and natural elements, and the presence of different functions, etc., that have created an eye-catching and legible urban space. Each of these factors has organized the citizens' behavior specific to the environment.



Fig. 2. Quran Gate of Shiraz. Source www.tasnimnews.com

### Research findings

This research, as aforementioned, is analyzed based on the physical, cultural, identity, psychological and perceptual components of the environment and according to analytical criteria derived from the theorists' views such as: Barker, Lang, Canter and etc. In terms of physical and corporal factors of the environment, the spatial layout, spatial services and facilities and functional diversity have been analyzed. Fig. 3 shows different spaces including Quran Gate, the fountains and the green space, mountaineering route, restaurants and the tomb of Khajoo Kermani. The name of each function indicates the facilities

and services provided at the entrance of the city. In terms of spatial layout, three general categories can be indicated: respectively, stone platforms facing the square, the arrangement of benches in along Quran Gate axis, and the spatial layout surrounding the tomb of Khajoo Kermani. The results obtained from the spatial layout, field observations and authors analysis, are presented in Table 3.

Thereafter, the elements of identity, presence and social interactions have been analyzed and studied in the category of cultural, identity and social factors of the environment. In order to identify the elements of identity, the authors interviewed with 30 architects having master's and doctoral degrees using simple classification sampling method. They identified Quran Gate, tomb of Khajoo Kermani and the Peacock Square as the most important elements of the identity respectively (Fig. 4). In order to evaluate the social presence and users' interactions, the following results were achieved during a three-month observations of the entrance space and the surrounding spaces. The numbers presented in Table 4 are in the Likert scale. The highest levels of presence and social interactions are respectively observed: 1. around Quran Gate, 2. along Quran Gate axis (in front of the tomb of Khajoo Kermani) 3. on stone platforms facing the square, and 4. around the tomb of Khajoo Kermani, (Fig. 5). In general, the authors analyzed the results of the level of presence

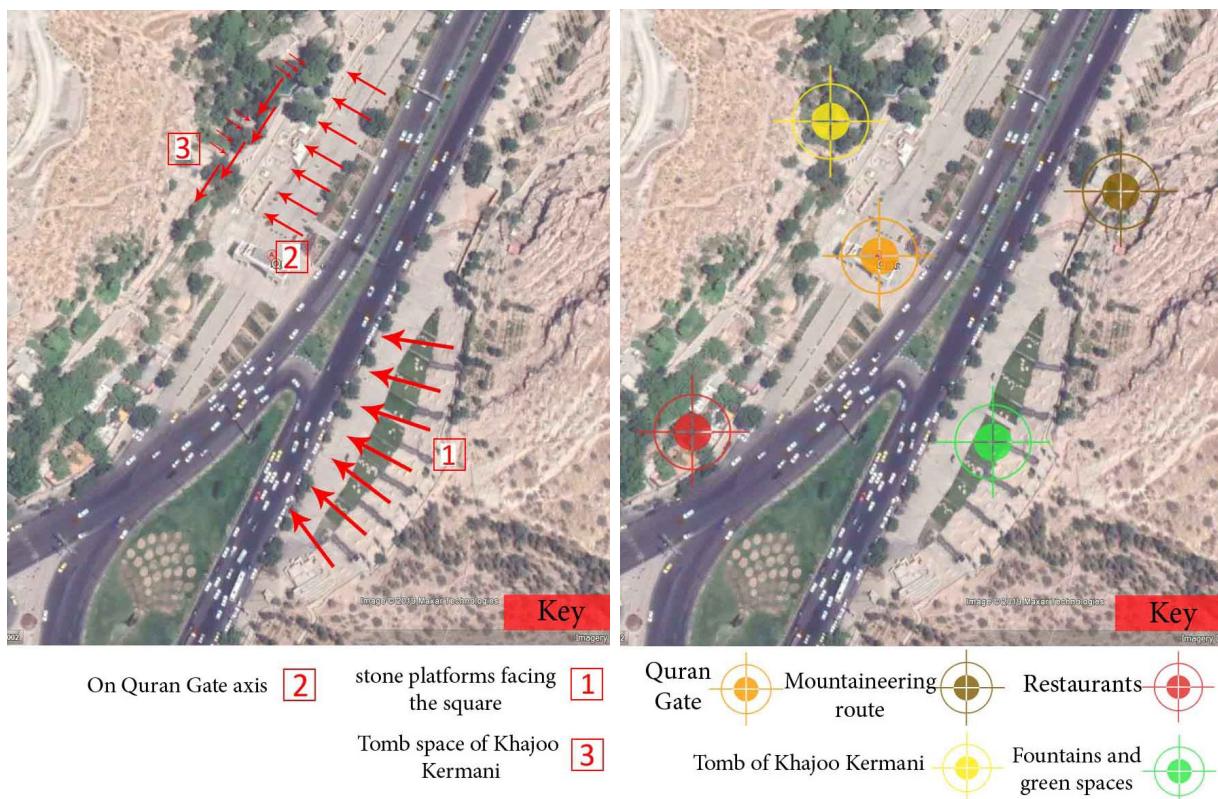


Fig. 3. Right: Spatial diversity, Left: Spatial layout. Source: www.google.com/earth

Table 3. Results achieved from the spatial layout. Source: Authors.

Type of space layout	Analytical image	The results derived from field observations and field analysis of the environment
Stone platforms facing the square		Facing the street, stone platforms are located next to the fountains. They offer an incredible view of Shiraz and the Grand Hotel.
Along Quran Gate axis		The arrangement of the benches is linear, along Quran Gate axis, opposite the tomb of Khajoo Kermani. These benches are in front of the bushes and do not face the street.
The area around the tomb of Khajoo Kermani		A longitudinal axis located between a wall covered with plants and the stone-concrete platforms. There are some benches next to the wall offering an incredible view to the city of Shiraz. People sit on benches and stone-concrete platform.

and social interactions based on field observations and the interviewees responses, as shown in Table 5.

In terms of psychological and perceptual factors, the authors used a questionnaire to measure security, space comfort and privacy. Using Cochrane formula, the authors distributed 356 questionnaires among users who visited different spaces of this environment (with 5% coefficient of error). The questionnaire was crafted in accordance with Likert scale evaluating the perceptual variables. A homogeneous statistical population was used in this study, comprising the age group of 18 to 45 years. Cronbach's coefficient alpha of 0.721 demonstrates a good level of reliability in this study. In terms of security, users scored all spaces the same; however, security was scored higher at Quran Gate Monument, as shown in Table 6. The results regarding space comfort and privacy, are shown in Fig. 6. In general, a summary of these results, based on the questionnaires and field analysis is presented in Table 7. In terms of the visual quality of landscapes and surrounding views, the users' opinions collected in questionnaires were analyzed and presented in Table 8 and Fig. 7. According to the results, the highest level of visual quality is provided on the stone platforms facing the square, around Quran Gate, along Quran Gate axis, and in the area around the tomb of Khajoo Kermani. In the following, according to the data obtained from the questionnaires, the relationship and the correlation between environmental components affecting users' behavior and users' interests was analyzed using SPSS software. A t-test was also run to assure the accuracy of the relationship between the variables. Finally, using Pearson correlation coefficient, the authors determined the degree of positive and negative correlation of each

variable to the degree of satisfaction. The results are shown in Table 9.

As shown in the Table 9, in all cases studied, the significance coefficient is less than 0.05, which indicates the significance of the relationship between the research variables. There is a positive correlation between all influential environmental components and the level of interest. In other words, the higher the quality and quantity of these components, the greater the satisfaction of users and their desire for urban entrance spaces. The highest correlation is related to the elements of identity and a favorable view and landscape, and the lowest is related to the element of water. At the end of the research, the types of activities in this urban entrance were analyzed, according to which three general categories were identified: walking, standing, and sitting, as shown in Fig. 6.

The movement patterns of individuals were recorded using motion mapping or shadow tracking technique at different time intervals and in different age groups, and the motion scheme is presented in this map. In motion mapping technique, a number of 100 visitors were determined using a simple random sampling method in a homogeneous community (people between 18 and 45 years old). Thereafter, the motion map of people in different spaces and the walking, standing and sitting places on the map were marked using the observation method. Fig. 8 shows the activity patterns of standing and sitting in the study area and shows the motion patterns. All different patterns of activity (moving, standing and sitting) in different spaces are due to the effect of the desired components on citizens' environmental behavior within the research theoretical framework.



Fig. 4. Right: Location of identity elements. Source: [www.google.com/earth/](http://www.google.com/earth/)  
Left: The image of the identity elements that marked on the right map. Photo: Mohammad Hossein Javanmardi, 2019.

Table 4. The mean of the results based on the Likert scale of the users' presence in the specified places. Source: Authors.

	On the sidewalk axis, in front of the stone platforms	Around the tomb of Khajoo Kermani	Along Quran Gate axis	Stone platforms facing the square	Around Quran Gate
The level of presence	2.7	3.3	3.9	3.5	4.1

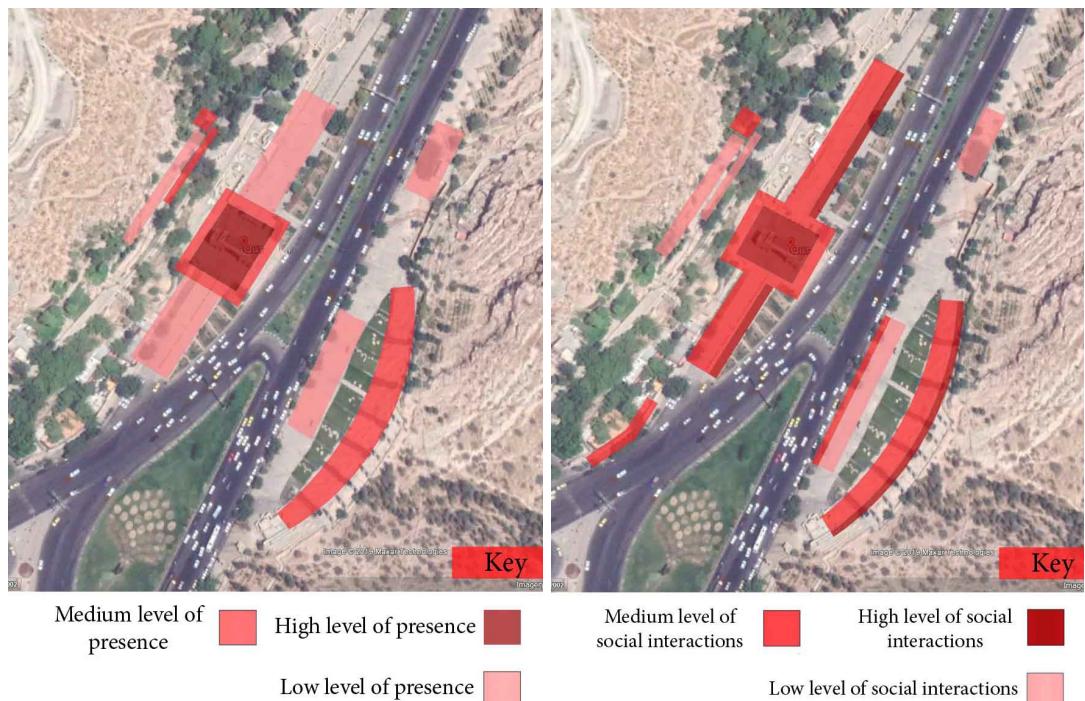


Fig. 5. Right: Social interactions, Left: Presence. Source: [www.google.com/earth/](http://www.google.com/earth/)

Table 5. Achieved results based on presence and social interactions. Source: Authors.

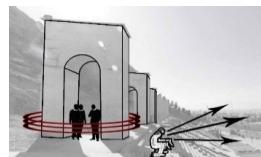
Presence and social interactions	Analytical image	Results achieved from interviews and field observations
Around Quran Gate		The level of social interactions and presence are high due to the existence of Quran Gate historical monument, Quran Gate axis and the city entrance axis that provide an incredible view of Shiraz and Jahan Nama Garden.
Along Quran Gate axis and near the bushes		The level of social interactions and presence are high due to the presence of bushes that limit the view from the street to the sidewalk, and due to the beautiful view of Khajoo Kermani tomb on the benches and the view of the front mountain, trees and waterfall.
Stone platforms facing the square, and the axis behind the platforms		The level of social interactions and presence are high due to the existence of a great landscape, the sitting platforms, and the wide width arches in a row.

Table 6. The mean of the results based on the Likert scale in terms of security, space tranquility and privacy' in the specified places. Source: Authors.

	Around the Peacock Square	Around the tomb of Khajoo Kermani	Along Quran Gate axis	Stone platforms facing the square	Around Quran Gate Monument
Level of security	3.8	3.7	3.9	4.1	4.2
Level of space tranquility	3.2	4.2	3.7	3.3	3.5
Level of privacy	2.7	4.3	3.2	2.6	2.8

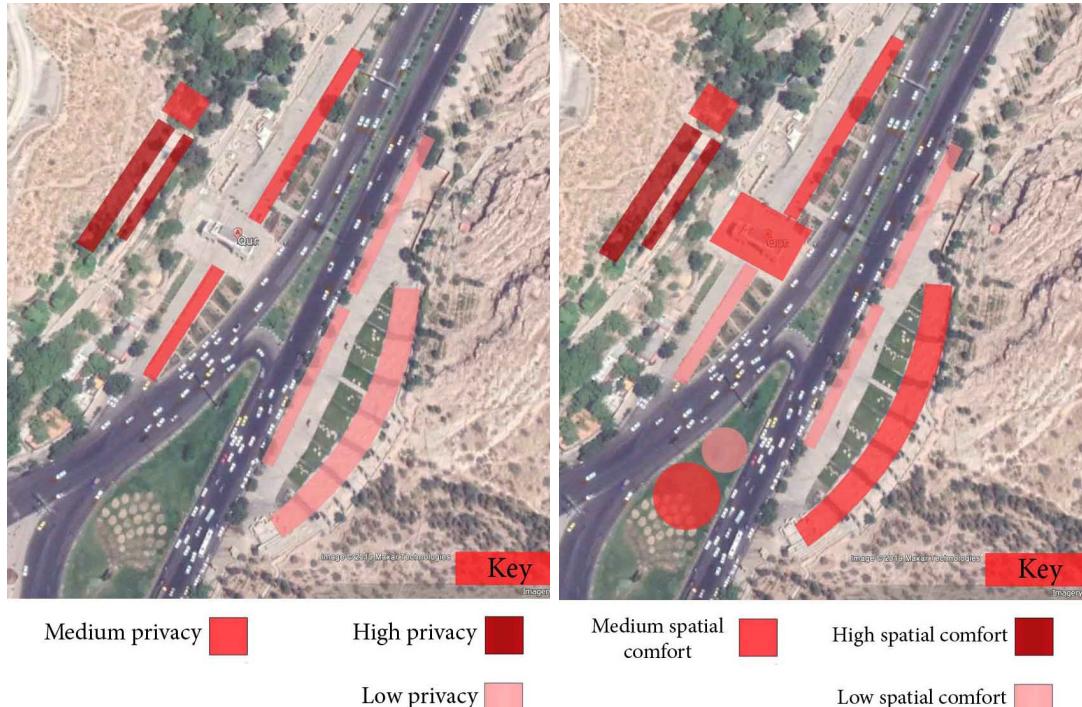


Fig. 6. Right: Space comfort, Left: Privacy. Source: www.google.com/earth/

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Table 7. Achieved results in terms of space comfort and privacy based on the users' responses and field analysis. Source: Authors.

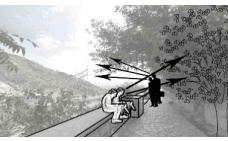
Space tranquility and privacy	Analytical image	Results achieved from the authors' questionnaire and field analysis
Stone platforms facing the square		The stone platforms facing the square offer a moderate level of space comfort and low level of privacy. A favorable urban landscape and the element of water have resulted in a relatively comfortable space. The unlimited view to the street and the sidewalk has created low level of privacy.
Along Quran Gate axis		A medium level of space comfort is provided along Quran Gate axis and in front of the bushes, since this axis is enclosed by the beautiful surrounding landscapes and the bushes near the street.
The area around the tomb of Khajoo Kermani, along the city entrance axis		This area benefits from high level of space comfort and high level of privacy due to having a panoramic view of Shiraz, the presence of concrete platforms for sitting, the presence of the benches facing the city, the vegetation and trees, and a space with an enclosed geometry.
The enclosed space of Peacock Square		The enclosed area at Peacock Square has low level of privacy but moderate level of space comfort. The wide width of the square and the incredible views to the surrounding landscapes such as Quran Gate, The Grand Hotel, and the mountains have created a medium level of space comfort.



Fig. 7. Right: Visual quality of surrounding landscapes and views. Source: [www.google.com/earth/](http://www.google.com/earth/)  
Left: The images of the marked points on the right map. Photo: Mohammad Hossein Javanmardi, 2019.

Table 8. The mean of the results based on the Likert scale in terms of the visual quality of the surrounding landscapes' in the specified places. Source: Authors.

	Along the sidewalk axis and opposite the stone platforms	Around the tomb of Khajoo Kermani	Along Quran Gate axis	Stone platforms facing the square	Around Quran Gate
Visual quality of the surrounding landscapes and views	3.7	4.1	4.2	4.4	4.3

Figure 8 consists of two side-by-side satellite images of urban areas. The left image shows a network of red lines representing pedestrian movement paths and yellow lines representing vehicular movement paths. The right image shows a distribution of human activity points: red dots representing people standing and blue dots representing people sitting. Below each map is a legend key.

Vehicular movement pattern — Pedestrian movement pattern — Standing pattern ● Sitting pattern ●

Fig. 8. Right: Behavioral pattern, Left: Motion scheme. Source: www.google.com/earth/

Table 9. Correlation and significance relationship between environmental components affecting users' behavior and users' interest in the environment. Source: Authors.

Environmental components affecting users' behavior in the city entrance spaces	Privacy	Favorable view	Element of water	Vegetation	Elements of identity	Spatial layout	Spatial diversity
Correlation coefficient	0.374	0.503	0.342	0.409	0.0527	0.485	0.447
The level of users' interest in the environment	Significance coefficient	0.015	0.00	0.03	0.02	0.001	0.005

## Conclusion

The city entrance spaces have always been known as one of the most influential urban spaces, providing an area for people's presence and manifestation of different behaviors. The results show that the design of the space surrounding Quran Gate is quite effective due to different behavioral patterns such as walking, standing and moving. One of the main and most important characteristics affecting users' behavior in this space is the physical and corporal factors of the environment, including functional diversity and spatial layout. The more the functional diversity and space facilities such as green spaces, tourist areas, restaurants and etc., the more people visit the space. Different spatial layout appropriate to the environmental requirements such as the sidewalk width, the arrangement of

the benches, the platforms design and the viewing angle to different identifying and historical elements are other factors affecting citizens' environmental behavior at Quran Gate. Users prefer to sit on benches that offer some privacy and security as well as having a good view. The element of identity displays the highest level of correlation between environmental components and people's interest with a coefficient of 0.527. This is due to the key role of the elements of identity in Quran Gate which represents the city of Shiraz at the city entrance. The components of identity play an important role in shaping the users' behavioral patterns in the environment. Many behavioral patterns such as sitting, standing, talking and discussing are observed near the elements of identity and the degree of social presence and interactions are directly related to the elements

of identity. In this space, most users prefer to spend some time watching the surrounding scenery and landscapes. Therefore, they are more inclined to spaces that offer an adequate level of security and privacy; because, these two elements are directly related to the level of space comfort. Also, in terms

of perception, the visual quality of the surrounding views and landscapes is directly related to the degree of presence and spatial comfort, and the impact of this component is greater than that of privacy. Consequently, sitting patterns are observed in some spaces such as in Quran Gate Square.

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