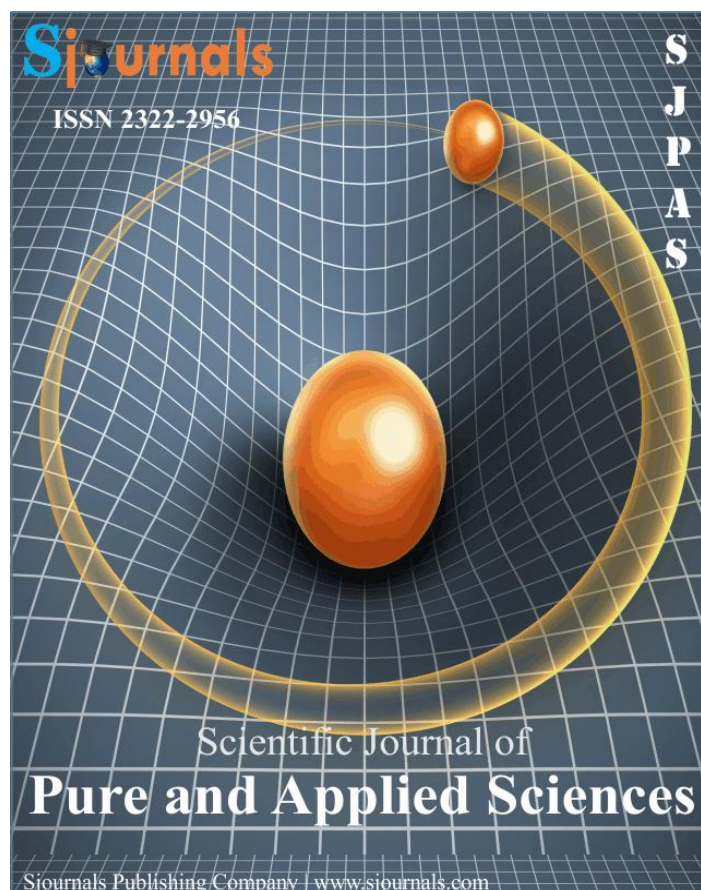


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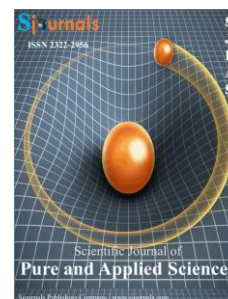
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### Review article

## Investigate urban design quality of cities entry points

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### ARTICLE INFO

### ABSTRACT

#### Article history,

Received 05 November 2016

Accepted 06 December 2016

Available online 10 December 2016

iThenticate screening 07 November 2016

English editing 04 December 2016

Quality control 08 December 2016

#### Keywords,

Entry points of cities

Environmental quality

Entrance corridors

Urban design

Entry points as one of the main components of physical and spatial structure of the city, despite the importance that have in terms of physical, functional and aesthetic with heterogeneous and incompatible land uses have turned into a detached, lacking identity and disturbed space. Historic examination of cities entrance represents changing coordinated and defined gates, towers and walls of old towns into entrance corridors with ugly buildings and old houses, repair shops, military applications, scrap car which showing an uncontrolled increase of development in today cities of the country. Adverse environmental assessment of the entry points of the city and its negative effects on residents and newcomers and the role that urban design should have in quality, visual and performance improvement of these spaces is the main objective of this research. First, the role of entrance space in traditional architecture and entrance spaces of historic cities should be considered and the relationship between performance and structure of city entrance space with the objectives of its inhabitants and the ability of this space to meet the needs of past citizens should be reviewed. Then, the entrance characteristics of several cities in hot and humid temperate climate of Iran with emphasis on aspects of tourism were reviewed and city relationship with outer space is searched. In the end according to the obtained results and some realities, criteria

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and operational conditions for designing entrance spaces will be offered.

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## 1. Introduction

In the past, the first city image which passed from the minds of the passengers was city entrance. With passing the desert or the mountains, with arriving the fields and gardens around the city gradually the feeling of being close to biological complexes is created in the person. Passenger with passing among them reaches to the gate which was considered city entrance, because was in the midst of fortification. Where traces of human manipulation in the natural environment appeared, welcome arrangements provided and city without considering its gate greeted its passengers. Today, the development of communication networks and the ease of communication between different regions have been provided to a large extent due to the development of technology, however in the case of preparing a suitable environment for the people, the concept of inputs and outputs of the cities to solve traffic issues largely faded. Entrance spaces of the ancient cities of Iran have characteristics that make them resemble each other in many ways. Location of these spaces in the city and the kind of spaces that establishes a link between them may cause differences in their spatial and physical structure. In this study, after definition entrance and its concept compare the characteristics of these spaces in the city and buildings and with determining common characteristics and using entrance performance of old building design entrance spaces of the city.

## 2. The concept of entrance

The concept of entry and exit philosophically is relevant with the relationship between inside and outside. In the Dehkhoda dictionary "Entrance" means, to enter and "Enter" literally means to reach, arrive and enter. In architecture, "Entrance" means "penetrate in vertical level". The entrance can be done through a level, that is created implicitly or in more subtle cases; a level difference may be the symbol of transition from one space to another space. Smithsonian group consider an important role for entrance space and believe that this space, both in the building and city can act as a basis for a pleasant humanitarian experience and thus make entry and exit consciously. The dichotomy between inside and outside is created through this space that it is called threshold and using tool turned into an meaningful and purposeful space and lead to sense of identity (Smithson, 1974). Sometimes enter from a space to another space is clear and simply can be done through penetrating a vertical level. In a large-scale city, often entrance from one space to another space is accompanied by gradual onset of distinction between two different spaces which often slow and requires passing through one or more intermediate spaces. In natural environments due to gradual change in the structure of the natural environment, step out of a space and going to the other space is often gradual. It should be noted that in traditional Iranian architecture often entrance from the external environment to inside takes place through passing a series of interrelated spaces, which make up total entrance spaces.

## 3. Components of entrance spaces in traditional Iranian architecture

Entrance spaces are designed based on the type of building and its function. In designing entrance spaces, the purposes and principles consistent with the building functions are considered including, privacy of residential units, entry to mosques and holy places with humility, the gradual entrance to the baths and easy access to spaces within the caravanserais or creating difficulty in it (home), showing and make visible building in the face of the city (urban and highlighted important buildings), creating relationship between big and public buildings and urban spaces and divide and change direction and solve problems. Each of the Entrance components in relation to the specific purpose was considered. These components are including: forecourt courtyard, doorway, vestibule, corridor, Iwan, sunshade. In front spaces in the buildings in terms of both functionality and visually, particularly for introspective buildings are a connector and interface space and take upon functions such as supply relationship between the inner and outer spaces (public and private) and monitor communication (control - supply security- observe the

hierarchy of privacy). Entrance spaces have additional functions such as social functions, including contacts and social and economic exchanges and activities such as resting and waiting, welcoming, holding joy and sorrow ceremonies in front of the entrance. In addition, entrance spaces were location of inscriptions and deed of endowments that also were installed in the entrance of the buildings (Soltanzadeh, 1993b). The characteristics of entrance spaces in fullest state are divided into two categories: Cognitive and functional.

Cognitive characteristics of the entrance spaces include; inviting, identifying, creating a sense of entrance, prepare for understanding a new space, perceptual and visual relationship between two spaces. Functional characteristics of the entrance spaces include; making a physical connection between two spaces, supply security and monitor communications, navigation, control, building introduction, presence in the daily activities of the city. Therefore, entrance spaces of buildings were formed in the past in order to meet the main and additional functions due to the behavioral patterns, customs and traditions and cultural and social values of the past. The gradual transformation of social and cultural values and changes in customs and behavioral patterns altered many functions of entrance spaces as well as physical and spatial structure.

Cities entrance in Iran: pre-Islamic cities in Iran, especially during the Achaemenid and Sassanid had been built on the basis of religious beliefs and worldview. These cities usually ended in fences with four gates to the four directions in the world which were a reminder of four cardinal points. In this worldview, the city was compared with the earth as center of the universe and through its gates was associated to the entire universe which divided into four parts (Habibi, 1996). In this era, the concept of philosophy in relation to the city and its gates had been created.

During the Sassanid era, market around the entrance and the gate was developed and square with different functions appeared such as government orders, impunity and punishment (Habibi, 1996). Thus, a basis for forming a space around the entrance gate, a functional specific space is provided. Such a structure at the entrance space of the city was also existed after Islam, (Habibi, 1996) that gradually over time, especially in the Safavieh era had matured.

#### 4. Old cities entrance in Iran

Entrance spaces of cities also affected by the culture and social traditions had cognitive and functional characteristic which before mentioned in describing the characteristics of entrance space. However, these characteristics in the entrances space of cities mainly is as the result of activities were carried out in that space. As the physical characteristics of entrance space is of great importance in showing the main role of it, namely physical communication; however it has not the complexity of the entrance space of a building. For this reason, factors creating cognitive and functional characteristics of cities entrance space are different in some cases with factors creating these characteristics in the building entrance space.

Cognitive characteristics of city entrance spaces in Iran old cities including:

- Inviting (due to social function and dynamics of open space in front of the city gates)
- Identifying (giving importance to the gate and its decoration and visible it)
- Create a sense of entrance (passing the gate as a boundary separating the two spaces)
- Preparation to understand the new space (open space in the front of the gate with social function)
- Making cognitive and visual relationship between the two spaces (the presence of gate and activity that occurred in the adjacent space)

Functional characteristics of city entrance spaces in Iran old cities including:

- Make physical connection between the two spaces (gate)
- Supply security and monitor communications (gate, towers defense)
- Guidance (placement main gate in a way that was linked directly to the city center and market)
- City introduction (the inscription that was written over the gate important entrances)
- The presence of entrance space in the city daily activities (open space in front of the entrance gate with social and economic performance)

Entrance of all cities did not meet all of these characteristics and considering entrance importance and the intended city as well as having part or all of these characteristics are different from each other. Compare the

characteristics of building and city entrance in the past represents the existence of similarities between them. It seems, the objectives caused the entrance of a building take shape and develop have also involved in the formation of entrance space and are the cause of difference in the physical structure of the building and city entrance, difference in the privacy of these spaces and method to respond these objectives which require, the physical structure of the building entrance space be much more complex than the city entrance.

## 5. Current cities in Iran

The rapid development of cities and uncontrolled occupation of lands beyond their borders caused significant changes in the appearance of the countryside and borders of the cities. These areas with discontinuous physical and spatial structure, scattered, without cohesion and identity with rural areas or natural fields combined with urban communities and with deformation of rural areas created an area not quite urban or rural. "These areas are generally formed around communication routes of cities and receive their vital force from it". These areas are formed entrance view of most current Iranian cities. For more information about the current statue of cities entrance spaces in Iran, samples of are selected. In selecting sample, at least one of the following criteria is considered:

- A tourism city or a city that is located in the route of high traffic roads in the country.
- Including the most important cities of the country.
- Representative one of the two mild and dry climates.

## 6. The design criteria for city entrance

Considering characteristics, entrance spaces problems in Iran, study plans, strategies, recommendations offered in this area as well as characteristics that makes efficient, dynamic, with identity Iran buildings and old cities entrance, criteria for city entrance space is organized which giving direction to the taken decisions in designing entrance space. These criteria are including:

1. Establish physical connection between the city and its surroundings and leading to the important parts of the city.
2. With visual appeal being welcoming and inviter, make favorable and suitable relationship with the traveler.
3. Introduce the city and reflect the identity and character of the city.
4. Have identity.
5. Provide passenger services.
6. Act as the entrance and gate of the city and creates a sense of entrance to the city, change and transition, prepare passengers for a new space and understanding it.
7. Be a dynamic, active, flexible space and participate in the daily activities of the city.
8. Various elements and desirable scenery be visible in the entrance space. In this part of the study, which design criteria of entrance space are organized, objectives and operational criteria could be explained according to these criteria as well as objectives which developed at the beginning of this study.

## 7. Research process

Operational criteria of entrance space design. Small aim: To improve the performance of entrance space.

### 7.1. Strategy: Create and foster a sense of transition operational criteria

- The appearance of the landscapes, gradually approaching and reaching to the city change in the entrance space.
- In designing green space, the hierarchy is observed and plant species with different physical properties is used, while changing environmental and physical characteristics in the entrance space.
- The hierarchy is observed in road lighting and different lighting intensities are used while approaching and reaching the city.

- In the changes and turning points, the visual signs are placed or landscape design of these locations varies with other locations.
- The place where passenger for the first time encounter is emphasized and strengthened.

### **7.2. Strategy: Maintain and improve the safety**

Operating conditions

- Privacies are observed (privacy of roads, power transmission lines, etc.) and unauthorized applications removed from the privacy of the road.
- Location of stopovers and service places should not be inside or adjacent to major traffic nodes.
- Using geometric lines and signs on the road take the attention of drivers to the entrance and outputs for the stopovers and service places.
- The dazzling lights are not used to illuminate the service places in the vicinity of the road.
- In some stopovers, emergency facilities should be predicted in the entrance space.
- The possibility of stopping and walking in the vicinity of the main road and crossing the line across the ground level to the resorts or stopovers should not exist.
- In case of road proximity with walking route, a barrier is used to separate them.
- Underground passages, at some point to cross the main road are created.
- Slow moving road to giving service users be created.
- The stop location for passenger cars, commercial vehicles and trucks should be separated from each other.

### **7.3. Strategy: Facilitate and strengthen services to passengers**

Operational criteria

- For quick and easy access to a variety of services between the road and travel, collections of centralized services are created in the entrance space.
- Visual permeability to the important applications arises and barriers will be removed.
- Appropriate access to the different applications to be created.
- The signs are used to be aware the location of different applications.
- Different plant species and changes in landscape used to specify the entrance locations of users.
- At stopovers, enough facilities and space for vehicles is predicted.
- Entrance and outputs of service places should be on the road and the nearest nodes.

### **7.4. Strategy: To facilitate the navigation and control and passengers guidance**

Operational criteria

- Signs that indicate road branching point in the entrance space and before reaching the branching point warn the driver.
- The signs are where which are clearly visible.
- Putting a sign in the change point or branching point of the road; so that, the driver before reaching have been aware of its location.
- Guide vision towards prominent elements of landscape and signs in order to navigate and determine.
- The position, in the entrance space will help.
- Direct and easy access from the entrance to the city's hotspots.

### **7.5. Strategy: Introduction city**

Operational criteria

- Signs that show entrance to the legal limits and service places and with the name of limit be installed in these locations.
- Signs that introduce the city's historic hotspots to be installed in in the entrance space, specific and accessible locations.



- Places are allocated in services applications to inform the public about the area, the city and its history.

#### **7.6. Strategy: Create and strengthen the leisure and relaxation opportunities and capabilities in the entrance space**

Operational criteria

- Using natural and historical elements such as rivers, mountains, open spaces and historic sites (if any), recreational and leisure spaces for residents, travelers and tourists be created.
- Supplying centers and showing local, traditional and local products in suitable places, in the entrance space, be provided.

Small aim: Improve the quality of entrance space perspective

#### **7.7. Strategy: Preserve and enhance the natural landscape in the entrance space and creating visual tension in landscape**

Operational criteria

- Area of native vegetation used in landscape design.
- The scenery of established landscapes to be complement of natural and rural landscape scenery of the region.
- Visual permeability is created to the prominent elements, natural landscapes and rural areas in the entrance space.
- Colors in contrast with background or bright colors in natural and rural areas to be used to create visual tension.
- The rough textures to provide visual tension in turning points to be used.
- Earth's natural form is preserved.

#### **7.8. Strategy: Creating solidarity and unity in landscapes**

Operational criteria

- In the case of possibility to develop green space and vegetation cover, create a network of interconnected green space will help to create unity.
- Simplicity in design and create rhythm in it with repeating use of common elements is useful to create unity.
- Signs that give information about the city be in one form and color.
- Similar users are introduced to signs with same color and form and similar symptoms.
- Visual and physical connection between the design elements and road which acts as an important factor of organization (presumed factor) works in entrance space.
- Color coordination between designs elements exist.
- The distance of specific elements from the road based on speed and angle of view to be seen is observed.

#### **7.9. Strategy: Reduce, mitigate or eliminate disturbances and environmental and visual pollutions**

Operational criteria

- Certain places are allocated to applications similar and compatible with each other.
- Not incompatible applications adjacent to each other.
- Adverse landscapes using plants and, if not possible be covered by walls or other obstacles.
- In case of landscapes visual complexity, vertical plant plates used to convert complex landscapes into understood scenes.
- The number of vertical signals and signs reduce and signs are combined in a way that reduces visual complexity.
- Maximum authorized distance from the roadside to install power transmission lines to be observed.
- Power transmission lines and High-voltage power towers covered with plants.

- If possible, power transmission lines transferred to the underground.
- As far as possible, the composition of guard rails and vegetation cover be used instead of obstacles in the middle refuge.
- The number of beams and long pillars of power which are used in large numbers, low distances in entrance spaces reduce to the minimum number and be visually desirable.
- Natural elements such as plants and water as a moderator tool or compensate for the disruption; environmental pollution such as air pollution, noise pollution as well as vision pollution to be used.

Small aim: Promote the identity of entrance space

#### **7.10. Strategy: Revealing the character and cultural and historical identity of environment and improving it**

Operational criteria

- Signs and symbolic elements, discovered and be featured.
- Spirit of the place and its creator is discovered and improve and observed.
- Regional and local architecture and cultural and historical features to be considered in the design.
- In case of uniform landscape and its similarity in different cities of a region, using symbolic elements or certain features that distinguish entrance and results in its recognition will be useful in recognition different entrances and giving identification to them.
- If, trait or a particular characteristic that express one of the character aspects of the city is attributed to the city, while introducing city will help the initial recognition of passengers.
- Design entrance space landscape to be carried out according to the historical and symbolic elements at the entrances of cities.
- Local and indigenous elements and materials used in the design.
- Cultural and historical themes and topics to be included in the plan.

#### **7.11. Strategy: Considering the character of the road, travel speed and environmental characteristics in the design**

Operational criteria

- Native and resistant vegetation used in the design.
- In the vicinity of the city, ornamental plants and resistant non-native species adapted to climate can be used in the entrance space.
- Trees and long shrubs at high speed and short shrubs and plant species at low speed to be used. If the plant height is enough t to break the skyline, only in bright shades of green colors in the vast landscapes and high speed will be seen.
- Less plant diversity at high speed to be used; however at low speeds, more variety in terms of plant species can be used.

### **8. Conclusion**

According to studies, cities entrance spaces as a joint linking the two spaces for creating link between the city and its surrounding follow some common patterns and spatial relations. The reason of weakness in the city entrance spaces in many cases is not insufficiency of these patterns in achieving appropriate spatial relations, but also is the poor design or spontaneous and unplanned formation of cities entrance space, lack of physical- spatial organization, inappropriate application appearance and... which are the main cause of weakness in cities entrance spaces performance in order to response the needs of passengers and even city dwellers as urban space. Accordingly, the findings of the study which aimed to achieve appropriate strategies in the design of the city's current entrance can be categorized in the following subjects:

- A) Identify and develop appropriate patterns of spatial relations in the entrance of the city
- B) Organize design criteria for city entrance space
- C) Defining operational criteria in environmental designing of city entrance space



The results of this study indicated that urban designing of city entrance space in this framework provided of an opportunity for improving entrance space performance and environmental quality.

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**How to cite this article:** Ahmadi, A., Zandvakili, S., Mahdavi, A., 2016. Investigate urban design quality of cities entry points. Scientific Journal of Pure and Applied Sciences, 5(12), 524-531.

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