

Evaluation of the Wayfinding Process in Kashef Al-Saltaneh Tea Museum and Tomb in Lahijan City Using the Space Syntax Method*

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Received 31 October 2017; Revised 13 October 2018; Accepted 21 November 2018; Available Online 21 September 2020

ABSTRACT

Tomb buildings were considered an important part of the past Iranians' beliefs. Various types of Iranian tomb architecture in the contemporary period include tombs (urban landmarks, monuments, and memorials), museum-garden complex, and tomb complexes. The design of the tombs is of great importance and should be worthy of the deceased dignity. Given that in the hierarchy of movement to reach the tomb, some spaces are required to prepare individuals mentally, how people find their ways in these spaces is of great importance. In the present study, the case studies are Iran's National Tea Museum and Kashef al-Saltaneh tomb in Lahijan city. The museum is the only specialized tea museum in Iran that was added to the tomb space in recent years and led to many changes in the interior design of the building. According to objective observations and information obtained from Guilan's Cultural Heritage, Tourism and Handicrafts Organization, today, the annual number of people visiting the building decreases. The present study aims to investigate the wayfinding process in the interior of Iran's National Tea Museum and Kashef al-Saltaneh tomb and also to explain the principles of spatial cognition and the components required to facilitate the wayfinding in these spaces. The present study is descriptive-inferential research carried out quantitatively and qualitatively using the space syntax method. It is obvious that the principles of hierarchy and circulation have been less considered in the wayfinding process in the Kashef al-Saltaneh Tea Museum building, and it seems that removing the (attached) wooden stairs on both sides of the entrance on the ground floor has significantly increased the movement and visual communication in the space, reduced the confusion of people, made the connecting spaces in the building more legible, and facilitated the wayfinding process. All of these lead to a better understanding of the spaces.

Keywords: Wayfinding, Space Syntax, Museum, Tomb, Kashef Al-Saltaneh.

* This article is derived from the first author's master thesis entitled "Revitalization Design of Iran's National Tea Museum and Kashef al-Saltaneh Tomb in Lahijan City Using a Social Sustainability Approach", which was defended under the supervision of the second author.

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1. INTRODUCTION

How to deal with historical works and buildings, as historical monuments, has been of great importance for many years, especially in the last century (Aali & Tajik, 2008). In public buildings, since a person moves in time and in a sequence of spaces, he/she experiences a space relative to where he/she is and where he/she wants to go (D.K. Ching, 2006). How people find their way and how to create a suitable path for movement in an unknown and complicated environment, are a challenging issue (Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 45). In the hierarchy of movement to reach the tomb, some spaces are required to prepare individuals mentally. In certain places, a person requires certain information to realize and complete the wayfinding process, and it can be said that the architecture of the museum and the tomb is responsible for providing it, in other words, in this field, the role of architecture is to guide the person who needs to find the path in the environment or to provide the way for him and the role of the architect is to design the path in the museum and tomb. Achieving optimal wayfinding strategies is one of the factors effective in increasing the legibility of space. Legibility is based on signs and geometry (Safari, Fakouri Moridani, & Syed Mahdzar, 2017, p. 456). The presence of vague paths makes visitors confused, stressed, and afraid, causing problems in the wayfinding process and thereby a feeling of dissatisfaction with the visit of the building (Peyvastehgar, Heidari, Kiaee, & Kiaee, 2017, p. 43). Since in most buildings with cultural use, the issue of wayfinding has been less considered by the designers and this reduces the performance of space and also, user satisfaction, it is necessary to address this issue and indicators related to the legibility of space. The present study aims to investigate the wayfinding process in the interior of Iran's National Tea Museum and Kashaf al-

Saltaneh tomb in Lahijan city and what is important in it is to emphasize the legibility of the components and the whole circulation system. Accordingly, in the present study, it is tried to answer the questions below:

- What is the visitors' wayfinding behavior from the entrance of the building using targeted observation?
- Is there a necessary connection (movement circulation) between the attached space of the museum and the tomb?

It seems that there is a favorable connection (movement circulation) between the interior parts and spaces of the building of Iran's National Tea Museum and Kashaf al-Saltaneh tomb.

2. RESEARCH PROCESS

The research literature is divided into two parts: (1) The environment assessment process, which includes indicators related to spatial cognition and deals with the understanding of connections between different parts of space; and (2) This part addresses indicators applied to the recognition of architectural components in the environment to improve wayfinding performance. The second part is the introduction of environment assessment tools and the indicators are examined quantitatively and qualitatively.

The first part is carried out quantitatively using Depthmap software and space syntax method and qualitative analysis is performed in the second part, in which the architectural components facilitating wayfinding in space are examined in the relevant building and finally, the obtained results are compared and concluded and some strategies are presented to improve the wayfinding process in the interior design of the building of Iran's National Tea Museum and Kashaf al-Saltaneh tomb considering the analysis of data obtained from both the software and the study environment (Fig. 1).

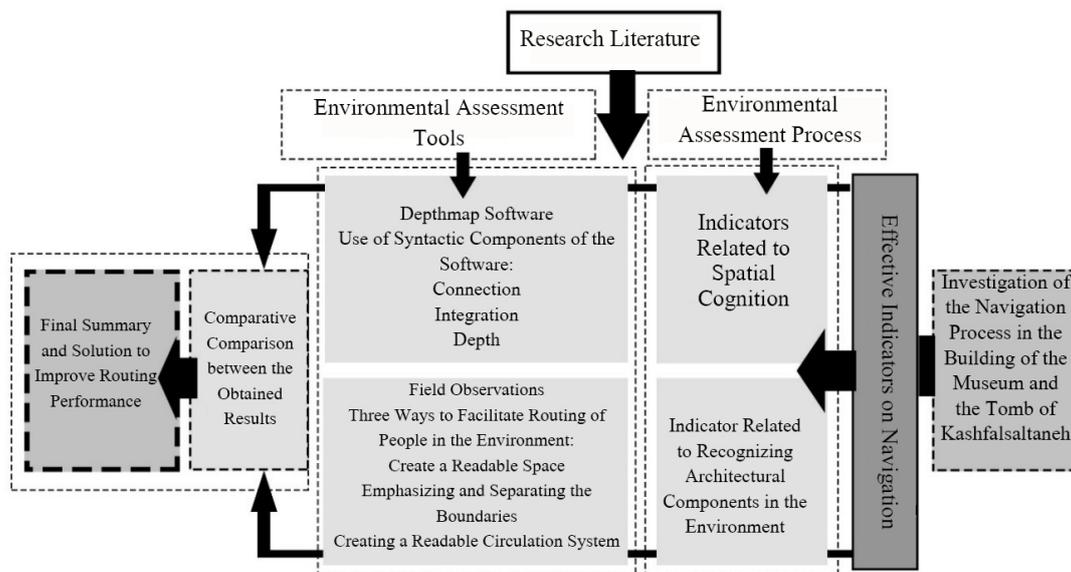


Fig. 1. Conceptual Model of the Overall Research Structure

3. LITERATURE REVIEW

One of the factors enhancing the legibility of an environment is the wayfinding process in that environment. Wayfinding is a dynamic movement and purposeful behavior from origin to destination and involves interactions between the leader and the environment. These interactions are examined as wayfinding strategies people apply to find their desired destinations.

3.1. Definition of Wayfinding

In the 1960s, the term "wayfinding" was coined by Kevin Lynch (Lynch, 1993). Wayfinding is to find the way in a built environment using the information on space and environment (Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 48). In a more complete definition, the introduction of wayfinding is a person's spatial orientation. This orientation or recognition of spatial location is a constant relationship between a person and a place or environment. This relationship requires the individual to create an overall mental image of the schematic design of the environment, which is called the "cognitive map of the environment" (Babalhavaeji & Pournaghi, 2015, p. 3). To recognize space is important for assessing the features of space configuration. The cognitive map a person has in his mind is the product of recognition of space. Given that recognition of space in general means an individual's understanding of his geographical environment and the geographical space is a large-scale space whose structure is significantly larger than each person's observations at a given moment, some signs are required to improve wayfinding performance to make the space to be easily remembered.

In spaces such a museum or gallery, users have a cognitive map in their minds. This cognitive map is composed of the features of the environment and also a source for an accurate understanding of the environment or building components, so these features are of great importance in designing the environment (Peyvastehgar, Heidari, Kiaee, & Kiaee, 2017, p. 43).

3.2. Wayfinding Design

Wayfinding design is the knowledge and art addressing the placement of the right information in the proper places and creation of a legible space to facilitate the wayfinding process in a complicated environment for people. Wayfinding refers to the users' ability to pass through the environment to find their destination (Babalhavaeji & Pournaghi, 2015, p. 15). Wayfinding consists of two components: 1. Physical environment; and 2. Users, which together facilitate the practice of wayfinding (Carpman & Grant, 1993, p. 66). Since there are some problems in wayfinding in space, some efforts have been made to assess different aspects of space to enhance the performance of wayfinding.

Some of these methods applied to assess space are

objective and examine the structure of the environment and some of them are subjective and examine an individual's mentality of space, i.e. his/her knowledge and feeling of space during wayfinding (Daneshmand, 2013). The information components of wayfinding, which include graphical, verbal, and tactile components, play a reinforcing and complementary role in facilitating wayfinding, and in an environment that is architecturally and physically confusing and complex, they are not very effective and may increase the complexity of space (Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 53). A detailed study of these components is beyond the scope of this study and only those components facilitating the wayfinding and related to the physical environment are explained.

Architecture plays a role in facilitating the wayfinding process in the environment in three ways:

- 1) Creation of legible spaces;
- 2) Separation of areas and emphasis on them;
- 3) Establishment of a legible circulation system (Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 52).

3.2.1. Creation of Legible Spaces

The legibility of space refers to the creation of space whose visual information is easily organized to create a coherent basis for the movement of people in the environment. The review of studies shows that the most important factors in creating legible spaces are spatial planning, organization of space syntax, and attention to spatial geometric ideas (Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 51).

A. Spatial Planning

There is a relationship between how different parts and spaces of a building are located relative to each other and the distances traveled across the building by users. Those spaces between which people move more are categorized as a space unit and if their adjacency is considered, users will face fewer problems in the wayfinding process. Such spatial planning increases the legibility of spaces in a building and improve the wayfinding process (Werner & Schindler, 2004, p. 461).

B. Organization of Space Syntax

Organization of space syntax refers to the configuration of spaces in different forms such as linear, radial, irregular networks, and so on. Lack of complexity in the space configuration and the creation of regular patterns plays an effective role in forming a legible environment (Arthur & Passini, 1992).

C. Attention to Geometric Ideas

Space geometry affects the legibility of space (Baskaya, Wilson, & Ozcan, 2004). The use of regular leads to the creation of more legible spaces. Also, in urban spaces, regular geometry significantly improves the wayfinding process and increases legibility (Safari, Fakouri Moridani, & Syed Mahdzar, 2017, p. 456).

3.2.2. Separation of Areas and Emphasis on Them

This refers to the creation of spaces and areas people can easily identify and distinguish them. This is important because it makes the identification of the destination easy for people when reaching it. Now, if using architecture, unique features easily understood by people are created in different spaces and parts of the building, the spaces will be separated from each other and a person will be guided in identifying his/her destination. Also, when each destination has a specific identity, clues and information used for wayfinding are more legibly understood along the path (Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 53).

3.2.3. Establishment of a Legible Circulation System

The path of movement can be thought of as an imaginary string that connects the spaces of a building or any of the external and internal spaces (Farahi, 1999). Since one moves in time and in a sequence of spaces, he/she experiences a space relative to where he/she is and where he/she wants to go (D.K. Ching, 2006).

Each building has a circulation system providing the connections between various parts and spaces of the building. The components of this system are horizontal (paths) and vertical (stairs, ramps and escalators) connecting elements. The composition of these elements in the design of the wayfinding process is important and the circulation system should be developed in such a way that its elements can be readily identified and perceived (Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 53).

The path form both affects and is influenced by the organization pattern of the spaces connected to it (Omoomi, 2008). The position of a path and its spatial organization can be enhanced with the use of patterns parallel to the path, or the position of the path can be in conflict with the spatial form and visually act as the opposite point. Paths can communicate with spaces connected to them using the following methods: being passed in front of spaces, being passed through spaces, and leading to space. The latter method is used to reach and enter symbolically and functionally important spaces. Movement spaces are an integral part of the building structure and occupy a significant amount of building volume (Farahi, 1999).

The form and scale of a movement space should in line with the various types of movement performed by people, i.e. walking, pausing, resting, and watching the landscape along the way (D.K. Ching, 2006). So far, various patterns of circulation systems have been identified and studied: shoelace, gestalt, grid, repetitive patterns, so on. In designing a legible circulation system, it is helpful to consider the issues such as

hierarchy, the combination of paths and intersections, and nodes in them, how to access the building from outside, building entrance and exit, etc. (Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 53).

4. METHOD

The present study is descriptive-inferential research carried out quantitatively and qualitatively using the space syntax method. In the present study, it is assumed that there is a favorable connection (movement circulation) between the interior parts and spaces of the building of Iran's National Tea Museum and Kashef al-Saltaneh tomb. Recognition of syntactic properties using the Depthmap software makes it easy to analyze space and find solutions for spatial recognition and increases the efficiency of the wayfinding process.

4.1. Space Syntax

The advantage of space syntax theory is that it does not leave researchers and designers with no solutions and provides them with a tool called space syntax for a better understanding of pedestrian movement (Rismanchian & Bell, 2011, p.73). This theory examines the relationships between the space syntax and the behavior of people in these spaces using resolution, connectivity, integration, depth factors, and co-axial map (Mollazadeh, Barani Pesian, & Khosrozadeh, 2012, p. 81). First, the building is divided into smaller parts according to a discrete system consisting of the longest visual-movement channels in which the audiences move and understand the structure of the environment. Then, each of these visual-movement channels is displayed with a line for advanced analysis and according to mathematical and graph analyses, the intersections of these lines are examined. The intersection of two lines indicates the communication between them and that line with more intersections with other lines communicates with more elements in the network, and as a result, it will be more accessible (Rismanchian & Bell, 2011, p. 73). This theory believes that space is the major core of social and cultural events. Since space itself is formed through social, cultural, and economic processes, it is usually considered as a ground for social and cultural activities so that its form is not usually considered and it is assumed to be invisible (Rismanchia, & Bell, 2010, p. 52).

In this section, using the Depthmap software, the connections between all spaces in the plan are analyzed and the obtained results, which include axial and visual analyses, are presented in the form of graphic parameters. Then, using the simulation method, the output of the software and objective observations are compared. The statistical population of the study includes all those who visited Iran's National Tea Museum. In summary, the steps of the present study were as follows:

- To obtain the plan map of Iran's National Tea Museum from Guilan's Cultural Heritage, Tourism and Handicrafts Organization.
- To visit all floors (ground floor and first floor) and to correct the plan map according to the latest changes made in the building.
- To redraw the plan maps of the mentioned building in AutoCAD software.
- To analyze the spatial structure of maps entered in Dxf format into Depthmap software and to extract Vga and Axial graphs (first, the building plan map was divided into smaller parts according to a discrete system consisting of the longest visual-movement channels in which the audiences move and understand the structure of the environment. These channels are displayed with a line for advanced analysis).
- To collect information about the paths traveled by audiences. To do this, the below steps were followed:
 - To prepare a path sampling design for sampling paths traveled by audiences on the ground and first floor.
 - To identify different paths traveled on the ground and first floors and to determine station points along the paths in the form of a checklist.
 - To collect data on the passage of people in different parts of the building by observing and recording (since individuals show different behaviors during the day, it is necessary to use times uniformly distributed throughout the day. To collect data, four weeks in November, December, January, and February in 2016 were considered and observations were performed during the working hours of the museum. The research plan includes data collection in five one-hour periods per day. Instead of random sampling, equal time intervals throughout the day were used).
 - In order to collect data, the researcher sat near the entrance door on the ground floor and recorded the path traveled by each user by observing. On the first floor, due to the presence of columns and walls, the researcher walked slowly at the entrance and recorded the paths traveled by the users (the data collection tool was a checklist that the researcher prepared from the building plan and the points showing the important movement of users were marked).
 - After completing the checklist, the data collected from the observations were compared with the results of the analysis performed by the software (Tables 1-3). In the space syntax method, according to its theoretical foundations, some parameters are defined, each of which specifically analyzes and examines space. In the present study, three of these parameters were selected for analyzing the studied space. The selected parameters are defined below:
 - A. Connectivity:** It is defined as the number of points and a point directly communicates with other points (Kamalipour, Memerian, Feyzie, & Farid Mosavian, 2012, p.13). It is one of the most obvious concepts of spatial analysis and means spatial connection, i.e. the more connections, the more communications with

other spaces (Rismanchian & Bell, 2011, p. 69). Those axes with greater connectivity value will be more accessible in different ways and give people more choice and are used more by them. Also, it is assumed that the physical elements in these spaces play more prominent roles in people's cognitive maps (Didieban, Pour Deyhimie, & Rismanchian, 2013).

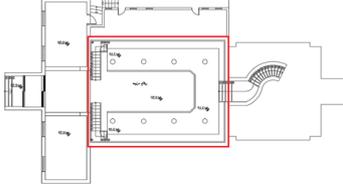
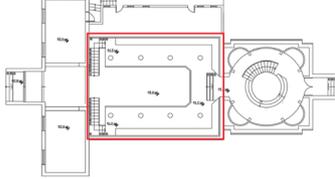
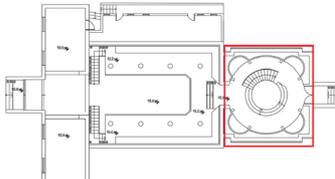
B. Integration: It is the most important factor in the space syntax method and indicates spatial coherence. The integration of a point indicates the degree to which that point communicates to the structure of the whole set or its subsets. It refers to the average number of connecting lines through which other spaces can be reached. If it is possible to reach space by traversing fewer spaces, that space has a higher degree of integration and vice versa. The higher the degree of integration in space, the greater cohesion that space has with other spaces (Rismanchian & Bell, 2010, p. 49).

C. Mean Depth: The number of steps that must be taken to pass from one point to another is the basis for the formation of depth (Bemanian, Jelvani, & Arjomandi, 2016, p.141). A point is called deep if there are several steps between it and other points. Depth is not one of the main parameters in space syntax although it is an important variable for calculating the integration of a point (Rismanchian & Bell, 2011, p. 69).

5. IRAN'S NATIONAL TEA MUSEUM AND KASHEF AL-SALTANEH TOMB

The National Tea Museum in Lahijan City is the only specialized tea museum in Iran that introduces the Iranian tea industry, from the day it was introduced to its current status, to the visitors. According to the will of Mohammad Mirza Kashef al-Saltaneh, he was buried in a simple cemetery among the tea bushes without a roof and shelter, but shortly afterward, it was decided to allocate two percent of the tea production revenue to the construction of a cemetery worthy of him (Parto, 1999). The mausoleum of "Father of Iranian Tea" was designed and built in the style of Western architecture by the deceased Ghafoor Ganjavi. Since 1956 (in the second Pahlavi period), the tomb was built in its current form with 512 square meters of building area by the "Society for the National Heritage of Iran" (Kazemi, 1993). This building is considered a respectable place because it is the tomb of Prince Haji Mohammad Mirza Kashef al-Saltaneh, who has been introduced as the "Father of Iranian tea", and consequently it requires a space worthy of him. However, in recent years, a space with the use of a museum has been added to the tomb space, and this has led to many changes in the interior of this building. Also, according to objective observations and information obtained from Guilan's Cultural Heritage, Tourism and Handicrafts Organization, today, the annual number of people visiting the building decreases (Table 1).

Table 1. Iran's National Tea Museum and Kashef Al-Saltaneh Tomb, Lahijan City

Iran's National Tea Museum Building and Kashef Al-Saltaneh Tomb		
Ground Floor Plan (Museum Space)	Museum Space (View From the Building Entrance)	Museum Space (View to the Staircases of the Tomb)
		
First Floor Plan (Museum Space)	Museum, First Floor	Museum, First Floor (View to the Tomb Entrance)
		
First Floor Plan (Tomb Space)	Tomb Space (Staircase From the Ground Floor)	Tomb Space (View From the Museum on the First Floor)
		

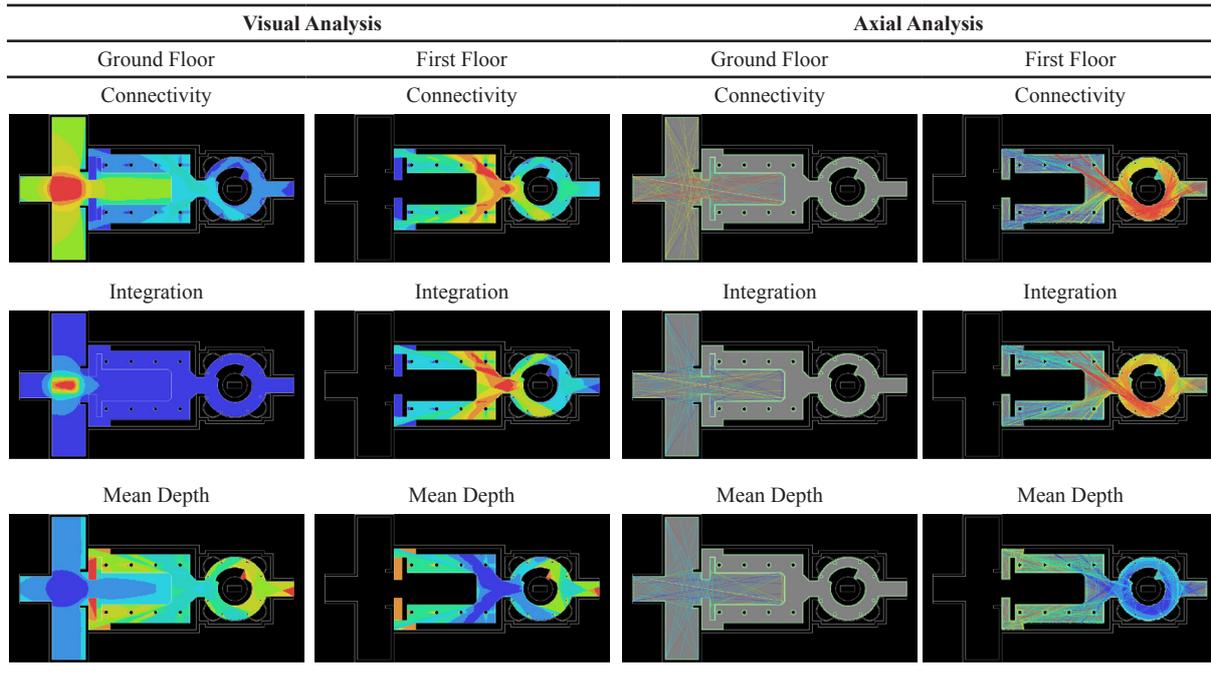
(Guilan's Cultural Heritage, Tourism and Handicrafts Organization)

6. FINDINGS

According to the graphs shown in Table 2, the colors used in the plan indicate the amount of visual and movement communication (red (warm-colors) lines: most communication and blue (cold colors) lines: least communication). In the analysis of plans, the intersection of two lines indicates the communication between them, and this communication is directly related to the degree of their intersection, i.e. the line with more intersections with other lines communicates with more elements in the network, and as a result, it will be more accessible. Findings indicate that the

main entrance to the building as well as the entrance to the tomb space on the first floor have a lot of visual and movement communication and are mostly used by people, indicating the presence of greater integration in these points than other parts of the building. However, in public spaces, the stairs have the highest amount of visual and movement communication, and in this building, the wooden staircase on the ground floor, that connects the ground floor to the space of the museum on the first floor, has less visual and movement communication and also less communicative value than the staircase on the main axis. So, it is less selected by visitors.

Table 2. Visual and Axial Analyses of the Building of Kashef Al-Saltaneh Museum (Status Quo)



In the following, considering the research hypothesis, it seems that there is a favorable connection (movement circulation) between the interior parts and spaces of the building of Iran's National Tea Museum and Kashef al-Saltaneh tomb. The results obtained from the checklist indicate that people are confused in choosing and recognizing the path leading to the spaces. Moreover, according to the results of the analysis of people following in space, it seems that people face two wooden staircases on both sides of the building after

entering the space and passing the ticket-selling kiosk and security guard room. Also, there is another staircase in the main axis of the building and some people go to the ground floor before visiting the museum. Since man normally moves in a linear path and his field of vision is limited to a cone with an angle of fifteen degrees, he uses those stairs located in a linear path. In some cases, people have to cross repetitive spaces to reach or exit each space on both floors, making the wayfinding process within the building difficult (Tables 3 & 4).

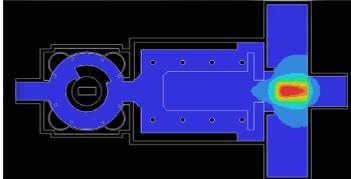
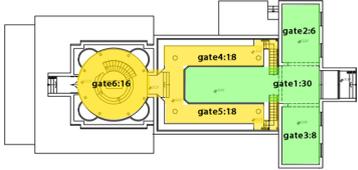
Table 3. Results Obtained From the Analysis of People Following in Space

Observations	Wayfinding Analysis	Results
		<p>According to the lines observed in the map, it can be concluded that people are confused in choosing the path and in some cases, it was observed that people did not visit parts of the building.</p>

Table 4. Field Observations of Path Selection for the Next Floor

Results	Analysis
<p>In the staircase in Path D, by placing the works in front of it, it was tried to guide people through Paths B and C.</p>	

Table 5. Comparison between Objective Observations and Outputs of the Software

Results			Analysis	Observations
Gate Numbers	Integration	Observation		
1	253.84	30		
2	24.76	6		
3	28.16	8		
4	7.54	18		
5	7.51	18		
6	6.65	16		

The degree of integration of a point is related to the extent to which people pass through that point, i.e. the higher the degree of integration of a point, the higher the potential for the movement that point has, and therefore space will be more favorable for users. The comparison between objective observations and outputs of the software indicates that the building of Iran's National Tea Museum and Kashef al-Saltaneh tomb faces some problems in terms of the wayfinding process. The presence of vague paths makes visitors confused, stressed, and afraid, causing problems in the wayfinding process and thereby a feeling of dissatisfaction with the visit of the building. The components of the circulation system are horizontal (paths) and vertical (stairs, ramps, and escalators) connecting elements. The composition of these elements in the design of the wayfinding process is important and the circulation system should be developed in such a way that its elements can be readily identified and perceived.

Although creating a legible circulation system is one of the architectural methods used for facilitating the wayfinding process in unknown spaces, it has been not significantly considered in the tomb building studied, and also, no environmental information system was observed in this building. Therefore, it is concluded that there is a limited wayfinding tool in the spaces of the museum and tomb, which is not suitable for users who want to recognize the spaces of the museum and tomb from the entrance (Table 5). According to the results of the analysis listed in the table below, it seems that removing the wooden staircases (attached staircases) on both sides of the entrance on the ground floor, which have been added to this building in recent years, significantly enhanced the visual and movement communication in this building and thereby, facilitating the wayfinding process and making the communication spaces more legible (Table 6).

Table 6. Visual and Axial Analyses of the Building of Iran's National Tea Museum (New Status)

Visual Analysis		Axial Analysis	
Ground Floor	First Floor	Ground Floor	First Floor
Connectivity	Connectivity	Connectivity	Connectivity
Integration	Integration	Integration	Integration
Mean Depth	Mean Depth	Mean Depth	Mean Depth

7. DISCUSSION AND CONCLUSION

According to Babalhavaeji and Pournaghi's study on the wayfinding behavior of the patrons of the Central Library of Tehran University using the geospatial information system, the entrances observe the highest traffic and the most interactions take place in this part of the spaces. They believed that knowing the busy paths in libraries will have many benefits for organizing spaces as well as providing the ease of accesses (Babalhavaeji & Pournaghi, 2015, p.1). Also, other studies (for, example, Mardomi, Hashem Nejad, Hassanpour Rahim Abad, & Bagheri, 2011, p. 45) on the people's wayfinding behavior in the architecture of medical buildings showed the similar results, indicating that considering the wayfinding process in these buildings, in addition to facilitating the wayfinding for people in hospitals, can improve safety, functional efficiency, and user satisfaction. Moreover, in a study entitled "Wayfinding process analysis using space syntax in the Museum of Contemporary Art" by Peyvastehtar et al. (2017), p. 43), the results indicate that in buildings with museum use, increasing the legibility, spatial cognition and creating cognitive maps along with the path encourage an individual to continue the path and make a pleasant feeling of satisfaction along the way for him. This is consistent with the present study. In summary, it should be acknowledged that the existence of circulation system components generally leads to the "organization of human behavior" in the environment and the principles of wayfinding in public buildings have been of great importance. According to the information obtained, the current tomb lacks a favorable structure and movement

hierarchy. In response to the first question, i.e. "What is the visitors' wayfinding behavior from the entrance of the building using targeted observation?" the findings indicate that after entering the building, people are confused in choosing and recognizing the path leading to the spaces, causing their dissatisfaction with the wayfinding process. This may be a reason for the reduced annual number of people visiting the museum and the tomb. According to the above, creating a legible space organizes visual and movement information, which has not been significantly considered in this building.

Moreover, the results showed that placing the works related to the museum in front of the staircase in the main axis reduces visual communication, and guiding people through the staircase at the beginning of the museum makes the wayfinding process in the museum space difficult for people. In response to the second question, i.e. "Is there a necessary connection (movement circulation) between the attached space of the museum and the tomb?", the results indicate that the principles of hierarchy and circulation are less considered in the wayfinding in the building of Kashef al-Saltaneh Tea Museum. The analyses show that removing the (attached) wooden stairs on both sides of the entrance on the ground floor has significantly increased the movement and visual communication in the space, reduced the confusion of people and made the connecting spaces in the building more legible. Moreover, the results show that in order to create proper wayfinding in the interior, to remove barriers reducing the visual perception of the environment, is one of the measures that help to better understand the space (cognitive maps).

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HOW TO CITE THIS ARTICLE

Miralami, S.F., & Safari, H. (2020). Evaluation of the Wayfinding Process in Kashef Al-Saltaneh Tea Museum and Tomb in Lahijan City Using the Space Syntax Method. *Armanshahr Architecture & Urban Development Journal*. 13(31), 157-166.

DOI: 10.22034/AAUD.2020.113267

URL: http://www.armanshahrjournal.com/article_113267.html

