

Persian translation of this paper entitled:  
مؤلفه‌های معماری مؤثر بر شکل‌گیری رفتار جمعی در فضاهاى آیینی  
شمال ایران (مطالعه موردی: سقانه‌های شهر بابل)  
is also published in this issue of journal.

### Original Research Article

## Architectural Components Affecting the Formation of Collective Behavior in Ritual Spaces of Northern Iran (Case Study: Saqanfars of Babylon)\*

Najmeh Mehdizadeh<sup>1</sup>, Mohammad Hasan Khademzade<sup>2\*\*</sup>

1. Department of Architecture, Faculty of Art and Architecture, Kish International Campus, University of Tehran, Iran

2. School of Architecture, College of Fine Arts, University of Tehran, Iran

Received: 04/08/2025

Accepted: 20/09/2025

Available online: 22/12/2025

### Abstract

**Problem statement:** Ritual spaces, as physical and semantic contexts, play an important role in organizing the collective behavior of traditional societies. In northern Iran, Saqanfars, as a unique ritual architecture among the people of Mazandaran, are not only places for holding religious ceremonies, but also organize collective behaviors and social action patterns with their specific spatial characteristics. However, so far, the effect of the physical components of Saqanfars on the formation of collective behavior has been less studied.

**Research objective:** To identify and analyze the architectural components affecting the formation of collective behavior in Saqanfars of Babylon with a qualitative approach, in order to understand the role of indigenous ritual spaces in strengthening social interactions and collective identity.

**Research method:** This research was conducted with a qualitative approach and a case study method. Data collection was conducted through semi-structured interviews with 12 indigenous architects, custodians, and residents, participatory observation, and field recording. Qualitative data were coded and analyzed using Brown and Clark's thematic analysis method.

**Conclusion:** The findings showed that components such as open porches, wooden columns, external stairs, spatial hierarchies, and symbolic decorations of saqanfars play a decisive role in the formation of collective ritual behavior. By creating visibility and shared access, organizing movement paths, and evoking symbolic religious concepts, these elements help reproduce meaning and strengthen a sense of identity and collective belonging among participants. The results of the study can be used in the design of contemporary ritual spaces with a vernacular approach and improving the quality of collective experience.

**Keywords:** *Reza Shah's statue, Representation, Political authority, Memorial landscape, Legitimization, Pahlavi era, Urban space.*

### Introduction and Problem Statement

Ritual spaces in different cultures of the world have always played a role as platforms for the emergence

and reproduction of collective behaviors and cultural identities (AlSayyad, 2014). With a special spatial organization, these spaces enable the formation of religious rituals, collective rituals, and social interactions, and in fact, they transform physical environments into arenas of social action (Madanipour, 2017). Meanwhile, the vernacular architecture of each region, due to its deep connection with its cultural, climatic,

\* This article extracted from "Najmeh Mehdizadeh"'s doctoral dissertation entitled "The interaction of architectural design components and social interactions in the vitality of Public buildings (Case Study: Saqanfars in the City of Babol)" which has being in process under supervision of Dr. "Mohamad Hasan Khademzadeh" at Faculty of Architecture, University of Tehran, Iran.

\*\* Corresponding author: +989126009098, khademzade@ut.ac.ir

and social context, includes original and representative examples of ritual spaces, the study of which can be a guide to the design of contemporary ritual spaces (Shepley & Pasha, 2017). Northern Iran, especially Mazandaran Province, due to its rich religious and ritual culture, has a special type of ritual architecture called Saqanfar, which plays a key role in preserving Muharram rituals and shaping collective religious behaviors (Janalizadeh Choob Basti & Zal, 2020). Saqanfars are two-story wooden buildings, the upper floor of which is used to store religious offerings and symbols, and the ground floor is used as a collective space for holding Ashura rituals and social interactions of the residents (Moghbeli et al., 2013). In fact, beyond a physical function, these buildings have deep socio-cultural meanings that ensure their ritual function (Zal & Fallah, 2014). Despite the social importance of saqanfars, few studies have analyzed the relationship between the physical-spatial components of these buildings and the formation of collective ritual behaviors, and most of the existing research is limited to describing their architectural features or heritage values (Heydari & Asadi, 2022). While, according to theories of space and behavior, spatial organization, access hierarchies, transparency of walls, and the way the building is placed in the surrounding context play a fundamental role in the type and quality of collective behaviors. For example, Rapoport (2005) emphasizes that ritual spaces provide a platform for shared ritual experience and enhance social interactions by using movement hierarchies, structural rhythm, visual transparency, and permeability. On the other hand, theories of space production such as Lefebvre's (1991) and Giddens's (1984) structuralism also show that ritual spaces produce and reproduce meaning and collective identity through the combination of physical components and social mechanisms. Therefore, studying the architecture of the saqanfars as spaces that, while physically simple, have semantic and social complexities, becomes even more necessary (Heydari & Asadi, 2022). The main issue of the present study is that despite the historical and social importance of the saqanfars of Babylon, there is no precise understanding of how their physical components affect the formation of collective ritual behaviors, and this

knowledge gap can have consequences such as ignoring effective spatial components in the restoration, revival, or design of contemporary ritual patterns. Therefore, the aim of the present study is to identify and analyze the architectural components that affect the formation of collective behavior in the Saqanfars of Babylon, as one of the most prominent ritual spaces in northern Iran, in order to improve the theoretical knowledge of ritual architecture and to enable the exploitation of the spatial principles of these buildings in the design of contemporary religious spaces. To achieve this goal, the main research question is posed as follows: Which physical and spatial components of the architecture of the Saqanfars of Babylon lead to the formation of collective ritual behavior? The answer to this question can be accompanied by providing a conceptual model for the design of indigenous ritual spaces and improving the quality of collective religious behaviors in northern Iran.

## Research Background

A study of the research background in the field of ritual spaces and collective behaviors in Iranian and global vernacular architecture shows that various approaches have been taken to these issues. In general, previous studies can be classified into three main categories, including: research related to the role of ritual spaces in social interactions, studies of northern Iranian vernacular architecture, and specialized research on Saqanfars. In the context of the role of ritual spaces on collective behavior, Rapoport (2005) has emphasized the importance of spatial organization, structural rhythm, and symbolic boundaries in the formation of shared ritual experiences. He has considered ritual spaces as a platform for establishing collective identity and reproducing cultural systems. Similarly, Lefebvre (1991) in his theory of space production refers to the socio-political nature of ritual spaces and considers them as places for creating meaning and collective identity. Giddens (1984) also considers ritual spaces as a platform for reproducing social structures in his structuring theory and believes that these spaces regulate collective behaviors through their spatial patterns (Foruzanmehr & Vellinga, 2011). The second group of studies has focused on the vernacular

architecture of northern Iran. Kasmai (2013) in his book "Climate and architecture" describes the physical-climatic characteristics of Mazandaran buildings and the role of open verandas, transparent walls, and wooden materials in shaping spatial quality. Memarian & Brown (2003) also studied the relationship between spatial organization and social behaviors in the vernacular architecture of Mazandaran in a comparative study and found that the spatial hierarchy and structural rhythm of buildings play a key role in collective interactions. The third group of studies is dedicated to saqanfars as a specific type of ritual architecture in northern Iran. Studies by Janalizadeh Choob Basti & Zal (2020) have dealt with the typological classification of saqanfars and explained their architectural features. They have considered saqanfars as buildings with two main religious and social functions, with the ground floor being used for gathering and holding Muharram rituals, and the second floor for storing vows. Shirin Jani et al. (2015) have referred to the conservation challenges of these buildings in an article and have emphasized the need to preserve their physical authenticity. In their research, Mahmoudi et al. (2009) have pointed out the role of open verandas in the formation of collective ritual behaviors. Other studies have also examined the semantic and identity dimensions of saqanfars. Azizpour Shoubi et al. (2021) have also emphasized in their research the relationship between the spatial pattern of saqanfars and the representation of the cultural identity of the people. Rafiee (2012) found in his research that saqanfars, apart from their structure, include the oral culture of people who have not always been indifferent to religious and religious interactions in the context of political and religious history. Janalizadeh Choob Basti & Zal (2020) concluded in their research that Saqanfars are a place for gathering and interacting with young people during Muharram, a place for establishing social connections, renewing meetings and maintaining ties of kinship with acquaintances, friends and relatives, all of which are indicative of the religious aspect of Saqanfars and their religious and social function.

A summary of the research background shows that most of the existing research has focused on describing the architecture of Saqanfars, their typological classification

or their conservation values, and has paid less attention to analyzing the relationship between the physical-spatial components of these buildings and the formation of collective ritual behaviors. This is while recognizing such a relationship can help improve the quality of the design of contemporary ritual spaces and preserve the social function of these buildings. Thus, the innovation of the present study is in focusing on analyzing the physical-spatial components of Saqanfars with a behavioral approach and providing a theoretical framework for understanding the relationship between spatial organization and collective ritual behavior in these types of indigenous buildings; a topic that has been rarely addressed so far.

### Theoretical Foundations

The study of theoretical foundations regarding the relationship between architecture and collective behavior in ritual spaces requires examining key concepts such as ritual spaces and their function, collective behavior, and socio-physical theories of vernacular architecture. Ritual spaces, as platforms for representing collective identity and reproducing social rituals, have unique spatial characteristics. Eliade (2013) states in his theory of "sacred space" that such spaces, by separating themselves from ordinary space, create a sacred order and recreate collective identity through spatial signs. Turner (2012) also considers ritual spaces as a platform for experiencing unity and suspending social hierarchies in his theory of "communitas" that enables the emergence of collective behaviors and social cohesion. In the behavioral architecture approach, Rapoport (2005) points to the direct connection between spatial organization and the formation of social behaviors. According to him, concepts such as territory, spatial hierarchy, structural rhythm, and symbolic boundaries guide users' behavioral perceptions, and physical qualities are able to encode cultural meanings and transform them into ritual actions. On the other hand, Lefebvre (1991) in his theory of space production considers space as a product of social relations that is constructed through representations and social action; meaning that the physical characteristics of ritual spaces only make sense in their social context and collective function. In Iran, the importance of ritual

spaces has also been frequently emphasized in the studies of domestic researchers, especially in the fields of vernacular architecture and anthropology. According to Kasmai (2013), indigenous Iranian ritual spaces, including the saqanfars of Mazandaran, carry special spatial systems that simultaneously encompass physical, symbolic, and social aspects. Akbarpourkami et al. (2012) have also shown in a comparative study that the saqanfars, as a special type of wooden architecture in northern Iran, have a role beyond a mere religious structure and have provided a platform for collective participation and the representation of local religious beliefs. Field studies by domestic researchers also confirm the importance of saqanfars in organizing collective behavior. Habibi & Maghsoudi (2022) in their study of the spatial system of ritual buildings in Mazandaran concluded that the spatial hierarchy of saqanfars - from the ground floor as a public gathering area to the upper floor as a sacred space - allows for the simultaneous organization of public and private ritual behaviors. Pirmia (2017) have also shown that the open porches of these buildings, by eliminating visual boundaries, create a platform for shared experience and collective harmony and foster social cohesion. On the other hand, research by Kalantar (2020) with an architectural conservation approach shows that in addition to their religious importance, saqanfars play a key role in representing local identity as tangible and intangible cultural heritage. The same view is also seen in the works of Zarei et al. (2021): they have introduced the saqanfar as a factor for reproducing social cohesion and collective memory. The symbolic decorations of the saqanfars, including Ashura motifs, inscriptions and wooden decorations, reveal another dimension of the theoretical foundations of this research. According to Eliade (2013), these symbols have a function beyond decoration and act as cultural codes through which sacredness and religious meaning are represented. This view is also in line with the findings of domestic researchers; for example, Mahmoudi et al. (2009) have shown that the symbolism in the saqanfars strengthens local identity and recreates the connection between the individual, society and religious rituals.

From a social perspective, wooden columns and their repetitive rhythm, which have also been studied

by Dewi (2016) and Madanipour (2017) within the framework of theories of space and society, have also been considered in domestic research such as the works of Pirmia (2017). They believe that this physical order not only ensures the stability of the structure, but also symbolizes stability, solidarity, and collective unity. Therefore, the theoretical foundations of this research are based on a combination of two approaches:

1. A macro-theoretical approach that is based on the works of international scholars such as Lefebvre (1991), Rapoport (2005), Turner (1982), and Eliade (2013) and explains concepts such as the social production of space, ritual experience, and the role of the body in guiding collective behavior.
2. The indigenous approach, which, citing studies by Iranian researchers, especially in the fields of indigenous architecture, archaeology, and anthropology, such as Mahmoudi et al. (2009), Zarei et al. (2021), Shirinjani et al. (2015), Azizpour Shoubi et al. (2021), Kasmai (2013), Akbarpourkami et al. (2012), Pirmia (2017), and Kalantar (2020) emphasizes the special characteristics of the saqanfars and their role in representing the culture and religious rituals of northern Iran.

In summarizing the theoretical foundations, it can be stated that:

- Ritual spaces have specific physical characteristics such as structural rhythm, spatial hierarchy, and symbolic signs.
- These characteristics provide the context for the emergence of collective behaviors and the experience of communities.
- Saqanfars, as an example of indigenous ritual architecture in northern Iran, are a clear example of the realization of these theoretical foundations in a cultural and climatic context.

This theoretical framework will be the basis for subsequent analyses of the article and will allow for the assessment of the relationship between the physical components of Saqanfars and collective ritual behavior.

## Research Methodology

This research was conducted with a qualitative-analytical approach and a single case study strategy to identify the architectural components that affect the formation of collective behavior in the Saqanfars of Babylon.

The main focus of the research is to analyze the relationship between the structure of the Saqanfar and the occurrence of collective ritual behavior. The research population consisted of active Saqanfars in the city of Babylon, and three prominent examples (Saqanfars of Kijatakiyeh, Kabudkola and Shubakala: Respectively in Figs. 2, 1 & 3) were selected as units of analysis using a purposive sampling method.

Data collection was collected from three complementary sources:

- Documentary study: to extract theoretical concepts of collective behavior and physical patterns of ritual architecture.
- Participatory field observation: directly recording and analyzing ritual behaviors, movement routes, and gathering points of people during Muharram as the main context for the occurrence of collective behavior.
- In-depth semi-structured interviews: with 12 trustees, local architects, and residents about the spatial perception and meaning of the structure of the Saqanfars.
- The research tools included a camera, a spatial analysis checklist, a behavior recording form, and interview recordings. The data were analyzed using thematic analysis to:
  - Identify primary codes related to physical features (structural rhythm, porch and open space, spatial hierarchy, symbolism) and collective behaviors (gathering, participation, simultaneity of actions).
  - Organize the relationships between these codes into the main themes of “the body guiding collective behavior” and “space as a platform for communitas.”

To validate the results, triangulation of data sources and review of the results with three experts in ritual and vernacular architecture were used to confirm the accuracy of the extracted themes and the relationship between the body of the Saqanfar and collective behavior.

## Findings

The findings of this study are the result of content analysis of field data, interviews, and participatory observations in three prominent Saqanfars in the city of Babylon. According to Table 1 The results show that the physical-spatial characteristics of Saqanfars play a central role in the formation of collective ritual behaviors and that these



Fig. 1. Saqanfar Kabudkola. Photo: Hossein Ravanbakhsh, 2009.



Fig. 2. Saqanfar Shoob Kala. Source: www.newuploader.bezanimbiroon.ir.



Fig. 3. Saqanfar Kijatakiyeh. Source: <https://b2n.ir/j83494>.

spaces do not function only as religious structures, but also as a platform for the reproduction of meaning, collective identity, and social cohesion.

Table 2 summarizes the initial coding, frequency of mention (weight), and final themes extracted from semi-structured in-depth interviews with 12 participants (including trustees, local architects, and residents). Names have been removed and replaced with codes to comply with research ethics. According to Table 2, The highest frequency of mentions is related to the component of open verandas and wooden columns, which reinforces the theme of “the body guiding collective behavior” & symbolic decorations and ritual motifs are expressed with greater emphasis, especially in interviews P3, P5, and P7, highlighting the theme of “space as a platform for the reproduction of meaning and collective identity”.

### • Physical components affecting collective behavior

#### - Open verandas as a platform for social interaction

Field observations showed that the open verandas on the upper floors of the saqanfars are the most important

Table 1. The relationship between the physical components of the Saqanfars and collective ritual behavior. Source: Authors.

Physical component	Physical description	Related collective behavior	Analytical explanation	References
Porches and open spaces	Open wooden porches on the upper floor	Community, collective viewing, simultaneity of actions	By eliminating visual boundaries, the porch facilitates collective behaviors such as group lamentation and ritual coordination	Memarian & Brown (2003), Gehl (2013), Turner (1982), Rapoport (2005), Ahadi (2014), Mahmoudi et al. (2009)
Exterior stairs and vertical access	Exterior wooden stairs with a gentle slope	Collective movement, transitional experience	External vertical access allows for participation and a ritual experience of transition to the upper sacred space.	Rapoport (2005), Low (2017), Eliade (2013), Habibi & Maghsoudi (2022) Kasmai (2013), Memarian & Brown (2003)
Columns and Structural Rhythm	Regular, evenly spaced wooden columns	Psychological cohesion, a sense of unity	The repetitive rhythm of the columns reinforces a sense of order and collective cohesion	Kasmai (2013), Dovey (2016), Madanipour (2017), Salama (2015), Lefebvre (1991), Memarian & Brown (2003), Kalantar (2020)
Symbolic decorations (ritual inscriptions and motifs)	Religious inscriptions, milk and sugar motifs, Ashura symbols	Collective identity, reproduction of meaning	These symbolizations are reminiscent of religious myths and the reproduction of collective identity in ritual behaviors	Eliade (2013), Turner (1982), Rapoport (2016), Low (2017), Kalantar (2020), Moghbeli et al. (2013)
Spatial hierarchy (ground and upper floors)	Functional separation of floors	Separation of ritual actions, social order	The ground floor is dedicated to the general community and the upper floor is dedicated to the sacred function that organizes behaviors	Memarian & Brown (2003), Foruzanmehr & Vellinga (2011), Lefebvre (1991), Turner (1982), Kasmaei (2013)

Table 2. Weighting of research interviews. Source: Authors.

Interviewee Code	Initial Codes	Weight	Final Theme
P1	Open porch, columns, external staircase, symbolic decorations	18	The Body Guiding Collective Behavior / Space as a Context of Meaning
P2	Patio, external staircase, spatial hierarchy	12	The Body Guiding Collective Behavior
P3	Symbolic decorations, porch, rhythm of columns	14	Reproduction of Meaning and Collective Identity
P4	Columns, porch, spatial hierarchy	11	The Body Guiding Collective Behavior
P5	External staircase, porch, religious motifs	10	Space as a Context of Meaning Reproduction
P6	Open porch, columns	8	The Body Guiding Collective Behavior
P7	Symbolic decorations, spatial hierarchy	9	Reproduction of Meaning and Collective Identity
P8	Columns, porch, external staircase	13	The Body Guiding Collective Behavior
P9	Patio, religious decorations	7	Space as a Context of Meaning Reproduction
P10	Spatial hierarchy, external staircase	6	The Body Guiding Collective Behavior
P11	Columns, ritual motifs	5	Reproduction of Meaning and Collective Identity
P12	Patio, columns, spatial hierarchy	15	The Body Guiding Collective Behavior

spaces for ritual and social interaction. These verandas, which are not enclosed and are located above ground level, are important because:

- They eliminate visual boundaries
- They enable collective viewing of rituals
- They provide a sense of integrated participation

They facilitate behaviors such as collective lamentation, singing ritual poems, and making group vows. Participants in interviews stated that being in the verandas strengthens their sense of belonging and equality. This finding is consistent with Turner’s (2012) theory of “communitas,” which

considers ritual spaces as a platform for experiencing unity and equality (Table 3).

**- External stairs and the experience of ritual movement**

The external wooden stairs of the Saqanfars are another influential physical component. These stairs, which establish a vertical connection between the ground and the upper floor, extend from the outside of the building, unlike the internal stairs. The results of the content analysis of the interviews showed:

- These stairs enhance the sense of participation by eliminating the private-public boundary.
- Moving on the stairs creates a kind of “transitional

Table 3. Sample analysis of codes and themes with example interviews. Source: Authors.

Initial code	Middle theme	Final theme	Example of a participial sentence	
“The porches bring us all together, the sound spreads well, and we feel like we are one.”	The role of the porch in gathering and social interaction	The body that guides collective behavior	“When we are on the porch, our voices become one, we all sing a lament together.”	P1
“The outer staircase is like a path from the ground to the sacred place above, we have intention.”	The experience of ritual passage	The body guides collective behavior	“The stairs feel like you are going up to God, your intention is purer.”	P2
“These pillars are strong and close together, your heart is filled with gratitude when you come in.”	The rhythm of the pillars and the sense of psychological security	The body guides collective behavior	“The pillars seem to be protective, both strong and orderly.”	P3
“These designs and writings remind you of Imam Hussein, they make you cry.”	Religious Symbolism	Space as a Platform for Reproducing Meaning	“You look at the images of Saqanfar, and your heart is in Karbala.”	P5
“The lower floor is for ordinary people, the upper floor is for special vows and intentions.”	Spatial hierarchy	The body guiding collective behavior	“Everyone gathers downstairs first, then one by one they make a vow and go upstairs.”	P7
“These decorations, the inscriptions, the name of Imam Hussein, are reminders of his dignity and courage.”	Ritual Meaning	Space as a Platform for Reproducing Meaning	“When you read Hussein (AS), one’s tears flow, one’s heart trembles.”	P9

experience” from the mundane to the sacred space, which was often described by the locals as “climbing with the intention of proximity.”

This finding is consistent with Eliade’s (2013) theory on the concept of sacred space and transitional paths, which considers moving on these paths as a kind of ritual passage (Table 3).

**- Wooden columns and structural rhythm**

The wooden columns of the saqanfars, which are arranged at regular intervals on the four sides of the building, have a function beyond their structural role. The findings of the analysis showed:

- The repetitive rhythm of the columns creates a sense of order, stability, and psychological security in the participants of the rituals.
- In the interviews, people mentioned that the columns symbolize the “firmness of faith” in the local culture.

This result is consistent with the theories of Rapoport (2005) and Dovey (2016) about the influence of structural rhythm on the perception of social behavior (Table 3).

**- Symbolic decorations and the reproduction of meaning**

One of the most important findings of this research was the role of symbolic decorations of the saqanfars in collective ritual behaviors. In all three samples studied, decorations included:

- Religious inscriptions (verses and hadiths related to Imam Hussein (AS))
  - Milk and sugar motifs as symbols of sacrifice and martyrdom
  - Symbolic images of Dhul-Jinnah, the hand of knowledge, and the icons of saints
- There were, which the participants considered “reminders of religious myths” and “mental guides for ritual behavior.” Thematic analysis showed that these decorations provided meaning to the space and emotional motivation for more active participation in rituals (Table 3).

**- Spatial hierarchy and organization of behaviors**

The spatial hierarchy of the saqanfars, especially the functional separation of the ground and upper floors, was another important pattern. Field findings showed:

- Ground floor: public space for gathering and performing ta’ziyyah.
- Upper floor: votive chamber and semi-private space for individual vows and prayers.

This spatial organization creates social order and distributes ritual behaviors in accordance with the dignity of the places, deepening the experience of spiritual participation of individuals (Table 3).

**• Final themes of findings**

Thematic analysis of the data led to the extraction of two main themes as the final results of the research (Table 4).

Table 4. Content analysis of data. Source: Authors.

Main coding	Final theme	Analytical explanation
Open porch, exterior stairs, columns, spatial hierarchy	The body guides collective behavior	Through these spatial elements, the body of the Saqanfars guides movement and gathering patterns and promotes a sense of social solidarity.
Symbolic decorations, religious motifs	Space as a platform for reproducing meaning and collective identity	Religious symbols and signs found in the saqanfars convey a shared ritual meaning and cultural identity to users and guide ritual behaviors.

**• Comparative analysis with theoretical foundations**

- According to Turner’s (1982) theory of communitas, ritual spaces are the context for suspending social boundaries and experiencing unity; saqanfars achieve this with the open structure of the porches and the elimination of hierarchies in height.
- According to Rapoport’s (2005) theory of structural rhythm, columns and repetition of patterns in the body of saqanfar create a sense of unity and psychological peace.
- Eliade (2013) emphasizes the role of sacred signs in sanctifying space; saqanfar decorations represent this sanctity for ritual behaviors.

**• Summary of findings**

The research findings show that saqanfars, as a native ritual architecture of northern Iran, have a coherent spatial organization and meaningful symbolism that not only guide collective behavior but also provide identity. These spaces are considered an example of the realization of the concept of Space as Behavior in the cultural and religious context of northern Iran. Such an understanding can also influence the design pattern of contemporary ritual spaces.

**Discussion**

The city of Babylon, as a prominent example of indigenous ritual architecture of northern Iran, has special capacities in shaping and guiding collective behavior. Analysis of field data, interviews, and participatory observation confirmed that physical components such as open porches, external stairs, wooden columns, and symbolic decorations play a role beyond structural and spatial function and practically provide the platform for the manifestation of a shared ritual experience.

According to Turner’s (1982) theory of communitas, ritual spaces are places where social structures are suspended and collective unity is experienced. The findings of this study confirmed that the open verandas of the saqanfars, by eliminating rigid walls and creating shared visibility

and access, allow for public participation in religious rituals; this feature is consistent with Robert Rapoport’s (2005) analysis of the physical capacity to shape social behavior. Furthermore, the repetitive rhythm of the wooden columns located on the four sides of the building reinforces a sense of order, psychological security, and collective unity among participants; a theme that was repeatedly emphasized in the interviews and is consistent with Dovey’s (2016) findings in the area of spatial rhythm and behavioral perception. The analyses showed that the external steps of the saqanfars also function as a transitional path from the mundane to the sacred; This is a theme that is emphasized in Eliade’s (2013) theory of sacred spaces. Participants described this ritual movement as a kind of “ascent with the intention of proximity” in which the worshipful behavior is elevated to a symbolic level.

Another noteworthy result was the prominent role of symbolic decorations and religious motifs of the saqanfars, which are influential in the participants’ perception of meaning and reproduction of collective identity. Inscriptions, motifs of the turban and the hands of the saqanfar, mythological images of martyrdom and concepts of sacrifice, all serve as symbolic language, reinforcing the link between collective memory, local identity and ritual behavior. This achievement is in line with the ideas of Mahmoudi & Tavusi (2008) and Foruzanmehr & Vellinga (2011) in the field of symbolic codes in vernacular architecture.

A comparative study of the findings with the research background showed that although numerous studies have been conducted on the ritual functions of Iranian vernacular architecture, most of them have not focused enough on the direct relationship of spatial elements with collective ritual behavior patterns. Focusing on the case study of the Saqanfars, this study specifically showed how the interaction between physical space and religious semiotics organizes collective action; an issue

that is also raised in the theoretical tradition of “Space as Behavior”. Therefore, it can be said that the Saqanfars are a concrete example of an interactive architecture that, through open spatial organization, meaningful hierarchies, and mysterious decorations, has been able to establish an organic link between the body, meaning, and collective ritual behavior. This feature can be a model for designing or recreating contemporary ritual spaces in Iran; spaces that, while maintaining cultural authenticity, also respond to the behavioral and social needs of today’s society.

Finally, the results of this study showed that a qualitative approach based on content analysis is an efficient tool for a deeper understanding of the semantic layers of ritual spaces and can fill the gap in purely descriptive or quantitative research. For this reason, it is suggested that in future research, this analytical framework be used in other scales of ritual architecture as well as new types of redesign of these spaces.

## Conclusion

This study aimed to identify the architectural components that influence the formation of collective behavior in ritual spaces in northern Iran, focusing on the Saqanfars of the city of Babylon. The research findings showed that the Saqanfars, as one of the oldest ritual structures in northern Iran, have a physical and symbolic structure that directly affects the organization of the collective behavior of participants.

The key points obtained are:

- Open porches and wooden columns, by eliminating rigid boundaries and creating open territories, enable collective presence, active participation, and the experience of a sense of communitas.
  - External stairs, as a ritual path of passage from the mundane to the sacred space, intensify the spiritual experience of individuals and help identify the ceremony.
  - Symbolic decorations and religious motifs, in addition to aesthetics, play an important role in reproducing meaning and linking collective memory with ritual behavior.
  - The vertical spatial hierarchy of the Saqanfar creates a kind of semantic distinction between the classes and activities of each and helps to systematize ritual behaviors.
- In response to the research question; the Saqanfars,

by utilizing a combination of physical and symbolic elements, have been able to organize collective ritual behaviors and strengthen the sense of belonging, identity, and social solidarity.

Suggestions for future research also include:

- Expanding comparative studies to other types of ritual architecture in the north and northwest of Iran.
- Using the findings of this research in the design of contemporary ritual spaces in order to enhance the quality of collective experience and cultural identity.
- Examining the form patterns and details of the Saqanfars in recreating the local architecture of the region with an ecological approach and promoting social vitality.

Finally, this research showed that the ritual architecture of the Saqanfars, beyond the material body, is a complex semantic-behavioral system that can be used as a valuable model for the design of contemporary religious and collective spaces in Iran.

## Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## References list

- Ahadi, A. (2014). بررسی ساختار سقانفار لدار. [Studying the structure of the Ledar Saqanfar]. *Athar*, 64, 3-16. [in persian] <http://journal.richt.ir/athar/article-127-en.html>
- Akbarpourkami, M., Hashemi Zarj Abad, H., Mahmoudi, F., & Hessami, V. (2012). بررسی نمادهای ملی و مذهبی نقوش سقانفاره‌های شهرستان بابل. [Study of national and religious symbols of the Saqanfar designs of Babol City (Case study of Shiadeh and Kabudkal)]. *Permanent Secretariat of the National Conference on Archaeology of Iran*. [in Persian] <https://sid.ir/paper/856464/fa>
- AlSayyad, N. (2014). *Traditions: The “real,” the hyper, and the virtual in the built environment*. Routledge.
- Azizpour Shoubi, A., Hashempour, P., & Nezhad Ebrahimi, A. (2021). The inquiry to identify the cultural context of architecture from Nefar to Saqa-Nefar. *Journal of Research in Islamic Architecture (JRIA)*, 9(2), 39- 60. <http://dx.doi.org/10.52547/jria.9.2.39>
- Dovey, K. (2016). *Urban design thinking: A conceptual toolkit*. Bloomsbury Publishing.
- Eliade, M. (2013). *The sacred and the profane: The nature of religion* (Reprint ed.). Mariner Books.
- Foruzanmehr, A., & Vellinga, M. (2011). Vernacular architecture: questions of comfort and practicability. *Building Research & Information*, 39(3), 274- 285. <https://doi.org/10.108009613218.2011/562368>
- Gehl, J. (2013). *Cities for people*. Island Press.
- Giddens, A. (1984). *The constitution of society: Outline of the*

*theory of structuration*. Polity Press.

- Habibi, S. M., & Maghsoudi, A. (2022). *Urban restoration: Definitions, theories, experiences, charters and global resolutions, urban methods and actions 2601*. University of Tehran Press. <https://s11nk.com/MaKeO>
- Heydari, V. & Asadi, Z. (2022). تحلیل ویژگی‌های کالبدی در سقانه‌های (همراه با مستندسازی و بررسی تطبیقی سقانه‌ها در مازندران) [Analysis of physical characteristics in Saqanfars of Mazandaran (With documentation and comparative study of Qadikola Saqanfars)]. *Memarishenasi*, 5(23), 153-163. [in Persian] <http://noo.rs/QNUty> [in Persian]
- Jacobs, J. (2016). *The death and life of great American cities*. Vintage Books.
- Janalizadeh Choob Basti, H. & Zal, M. H. (2020). سقانه‌ها؛ نماد معماری اسلامی: کارکردهای دینی و اجتماعی سقانه‌ها در مازندران [A symbol of Islamic architecture: The religious and social functions of Saqanfars in Mazandaran]. *Kavoshhay-e Falsafé va Din [Journal of Religious Explorations]*, 3(6), 114-140. [in Persian] [https://jre.journals.umz.ac.ir/article\\_621\\_134.html?lang=en](https://jre.journals.umz.ac.ir/article_621_134.html?lang=en)
- Kalantar, A. A. (2020). Analytical study of the function of Mazandaran Saqanfars based on themes of decorations with an educational literature approach. *Negareh Journal*, 15(56), 71-87. <https://doi.org/10.22070/negareh.2020.3122>
- Kasmai, M. (2013). *Climate architecture*. Khak Publications.
- Lefebvre, H. (1991). *The production of space* (New Edition). Wiley-Blackwell.
- Low, S. M. (2017). *Spatializing culture: The ethnography of space and place*. Routledge.
- Madanipour, A. (2017). *Cities in time: Temporary urbanism and the future of the city*. Bloomsbury.
- Mahmoudi, F., & Tavousi, M. (2008). Figurative motifs content in "Mazandaran Saqqa-talars": Comparative study in Shiyade and Kordkola Saqqa-talar's motifs. *Honar-ha-ye Ziba*, 36(0), 67-76. <https://www.magiran.com/p579031>
- Mahmoudi, F., Tavousi, M., & Farhangi, A. A. (2009). تجلی هویت ملی در هنر ایران با رویکردی به مضامین نقش‌مایه‌های تزئینی سقانه‌ها در مازندران [The expression of national identity in Iranian art with an approach to the themes of the decorative motifs of Saqanfars in Mazandaran]. *National Studies*, 37(10), 75-97. [https://www.rjnsq.ir/article\\_99659.html](https://www.rjnsq.ir/article_99659.html) [in Persian]
- Memarian, G., & Brown, F. E. (2003). Climate, culture, and religion: Aspects of the traditional courtyard house in Iran. *Journal of Architectural and Planning Research*, 20(3), 181-198. <https://sid.ir/paper/621866/en>
- Moghbeli, A. & Rostami, M., & Babajan Tabaraneshli, F. (2013). مضمون‌های اساطیری و نمادهای آیینی در نگاره‌های سقف سقانه‌های بابل (مطالعه موردی: [Mythological themes and ritual symbols in the paintings of the Saqanfars of Babylon (Case study: Saqanfars of Kijatakiyeh, Shiadeh, Kabudkola, Kebriyakola, Chamazkola)]. *1st National Congress of Art Tabaristan (past and present)*, Babolsar. [in Persian] <https://civilica.com/doc/387742/>
- Pirmia, M. K. (2017). *آشنایی با معماری اسلامی ایران* [Introduction to Islamic Architecture of Iran] (Gh. H. Memarian, ed.). Gholam Hossein Memarian. [in Persian]
- Rafiee, Z. (2012). Transformation process of «Nefar» in vernacular architecture of Mazandaran. *Bagh-e Nazar*, 8(19), e720. [https://www.bagh-sj.com/article\\_720.html?lang=en](https://www.bagh-sj.com/article_720.html?lang=en)
- Rapoport, A. (2005). *Culture, architecture and design* (2nd ed.). Locke Science Publishing Company.
- Salama, A. M. (2015). *Spatial design education: New directions for pedagogy in architecture and beyond*. Ashgate Publishing. <https://doi.org/10.43249781315610276/>
- Shepley, M. M., & Pasha, S. (2017). *Design for mental and behavioral health*. Routledge. <https://doi.org/10.43249781315646916/>
- Shirin Jani, S & Samadifard, Z & Sharifian, S A. (2015). بازشناسی مفهوم و عملکرد ایوان در معماری ایرانی با تأکید بر تأثیرگذاری در ساختار معماری [Recognizing the concept and function of the veranda in Iranian architecture with emphasis on its impact on the architectural structure]. *International Conference on Research in Science and Technology*. [in Persian] <https://civilica.com/doc/446798>
- Turner, V. (1982). *From ritual to theatre: The human seriousness of play*. Performing Arts Journal Publications.
- Turner, V. (2012). *The ritual process: Structure and anti-structure*. Routledge. [https://books.google.com/books/about/The\\_Ritual\\_Process.html?id=IBRuiOX8VEEC](https://books.google.com/books/about/The_Ritual_Process.html?id=IBRuiOX8VEEC)
- Zal, M. H., & Fallah, M. (2014). Ritual architecture structure and function in Mazandaran: Saghanefars of Fereidunkenar, Mazandaran. *Quarterly Journal of Socio-Cultural Development Studies*, 3(3), 79-99. <http://journals.sabz.ac.ir/scds/article-154-en.html>
- Zarei, A., Akbarpour Kami, M., & Paydarfard, A. (2021). Study and analysis of motifs of Saqanfars in the east of Mazandaran (Shia Deh, Ladar and Shahzadeh Reza). *Journal of Islamic Archaeology Studies*, 1. <https://doi.org/10.22080/jiar.2020.3097>

#### COPYRIGHTS

Copyright for this article is retained by the author(s), with publication rights granted to the Bagh-e Nazar Journal. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>).



#### HOW TO CITE THIS ARTICLE

Mehdizadeh, N., & Khademzade, M. H. (2026). Architectural components affecting the formation of collective behavior in ritual apaces of Northern Iran (Case Study: Saqanfars of Babylon). *Bagh-e Nazar*, 22(151), 27-36.

DOI: [10.22034/bagh.2025.538765.5868](https://doi.org/10.22034/bagh.2025.538765.5868)

URL: [https://www.bagh-sj.com/article\\_231358.html?lang=en](https://www.bagh-sj.com/article_231358.html?lang=en)

