

# A Comparative Study on Residential Architecture in the Qajar era (Case Study: Mansions in Tehran)

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**ABSTRACT:** In exploring the evolution of Iranian architecture from prototypes to the present day, Qajar architecture is a vital part of Iranian architecture history. The importance of this era's architecture is that large changes in conceptual and physical context occurred slowly in Iranian architecture during this time. These changes, especially from the Nasserian period (the second Qajar era), have intensified and with the influence of Western architecture, Iranian architecture is gradually moving away from its traditional, rooted forms, manifestations and concepts, and blending European architectural patterns with Iranian models and styles to the extent that architecture progresses. Moreover, these changes in Residential buildings (especially mansions) appeared. Therefore, in this study, a comparison between the architecture of the residential buildings of the three periods of Qajar dynasties has been carried out to compare the changes of each period. The results showed that Qajar architecture has been influenced by western and European architecture from beginning to end.

**Keywords:** *Qajar architecture, Mansions, Iranian architecture.*

## INTRODUCTION

During the reign of the Qajar kings, the land of Iran undergone unprecedented and decisive experiences in transformation and the direction of the people, living in this land in the future was largely affected by the events of this era. These inner and outer transformations were powerful as they transformed the various aspects of life. Looking at the architecture of this era, one can see the presence of traditional Iranian Architectural Styles alongside imported and imitated European Styles. A quick look at the first houses of the Qajar era and comparing them with those built in the late years of this government shows that during these 130years many elements of these houses have changed. These changes are quite evident in the remnants of the mansions of that time, and in some instances, ordinary peoples' homes are less visible. In the first Qajar houses, many similarities to the architecture of the previous period can be seen.

The main purpose of this study is to investigate the evolution and changes of Iranian Residential Architecture during

the Qajar period. The question is, when did the changes in Iranian Residential Architecture begin? Can the Qajar period be considered the source of changes in Iranian homes with Western intervention and influence?

In this study, before examining the samples and their changes, the divisions of the Qajar era and common architectural style in each period are introduced. Then, indicators such as materials, introspection or extraversion, decorations, form and proportions, Entrance, etc., are identified for easier study of changes. Finally, all the mentioned components were studied separately in the selected case samples in each period.

## MATERIALS AND METHODS

In this study, a comparative has been carried out, between the changes of the residential building's architecture in different periods of the Qajar period.

The steps to make this comparison are as follows:

**Step 1: Examine the different Qajar periods and common features of each period;**

At this step, the Qajar periods have been identified under Dr.

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Ghobadian's classification, and the general characteristics of each period have been studied in the relevant documents and books.

**Step 2: Define Indicators;**

In the second step of research, indicators and features of architecture are introduced as evaluation and comparison criteria for comparison of buildings.

**Step 3: Select Case Study;**

At this step, two samples of important buildings and mansions of each period were selected in Tehran. These samples are selected to best reflect the trends over time and to compare the sample characteristics of each period with another.

**Step 4: Analysis of Indicators and Conclusion;**

At this step, according to the Indicators of the studied buildings, the general characteristics of each period were determined and compared with other periods to determine the differences and similarities of the architecture of each period.

**Theoretical Foundations of Research**

**Qajar architecture**

The Qajar dynasty made a rule Iran, for a total of 146 years from 1158 to 1304 AD.

During this time there were many developments in various fields. Traditional Iranian society was influenced by modernity during this period and many social, political, cultural and artistic norms were changed. The subject of architecture was not out of this change, and the body of traditional Iranian architecture and its theoretical principles and practices were

confronted with new conditions (Ghobadian, 2013, 21).

**Classification of the Qajar Period for Comparative Study**

By examining the buildings of the Qajar era, there are three types of architecture.

Isfahan style, Tehrani style (a combination of Isfahan style and neoclassical style) and style that are completely influenced by European neoclassical architecture.

In the present study, three periods have been introduced about how these styles were used in the Qajar era: (Fig. 1)

The First Period: Since the election of Tehran as the capital of the country, it was begun by Agham Mohammad Khan Qajar in 1164 AD and continued until 1228 AD (the year of the construction of Dar al-Fonun School).

Second Period: Began with the construction of Dar al-Fenun in 1228 AD and continued for up to 31 years until the entrance construction of Sepahsalar garden in 1259.

Third Period: It began in 1259 and continued until the end of the Qajar era (Ghobadian, 2013, 24).

**Introducing indicators**

Table 1 presents the components and indicators of the architecture that have been evaluated and compared in the study.

In this table, factors and indicators, such as materials, plans, spaces, etc., are presented in separate categories for a more accurate assessment of changes, this leads to compare changes in the studied buildings.

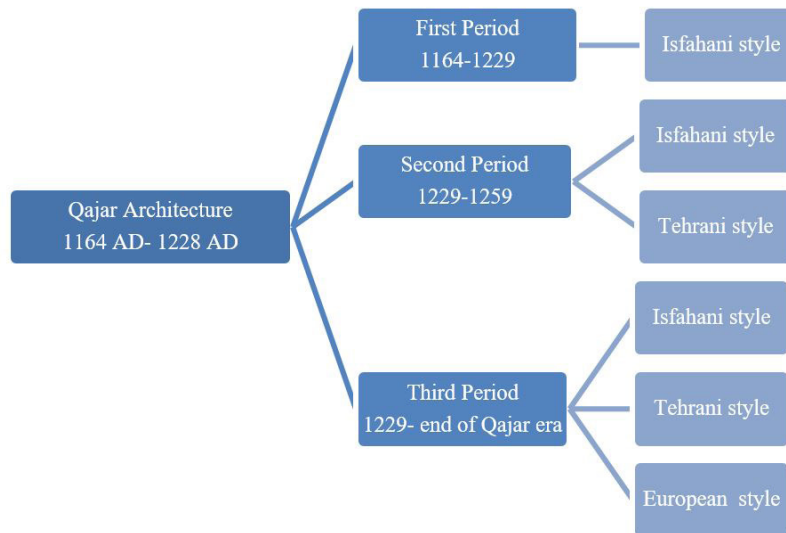


Fig. 1: Historical classification of the Qajar era and general architectural style of each period (Source: Ghobadian, 2013, 24)

Table1: Selection of Indicators for Investigation in Qajar Buildings

Indicators, Component, description and question		divisions	
1	Materials; What materials were used in the buildings under study?	clay	
		brick	
		stone	
		wood	
		steel	
2	Plans: Is the sample plan form considered introverted or extroverted? Does it have the components of extraversion and introversion at the same time (semi-introverted and semi-extroverted in terms of introversion or extroversion)?	Introversion <sup>1</sup> (Traditional <sup>2</sup> )	
		Semi-introverted	
		Semi-extroverted	
3	Spaces: Iran's traditional buildings consist of three spaces: open, semi-open and closed. Which of these spaces can be seen in the buildings under consideration?	open	
		semi-open	
		close	
4	Entrance In traditional Iranian architecture, the entrance was an important and complex space that separated the interior and exterior space and restricted the view from the outside into the building, but it gradually declined in importance during the Qajar period. What is the Entrance type of the buildings under study?	Complete indoor space separator (traditional)	
		.simple space for boundaries	
		.The opening on the wall	
5	Architectural Decorations; Which of these decorations has been used the most in the architecture of any period building?	Direct and realistic visualization (traditional (Zandieh) and neoclassical)	
		Geometric Decorations (Traditional)	
		Use the symbol	
		Use color	
		plaster	
6	Forms; Traditional geometrical forms include the use of twig arches and elements of Iranian architecture such as: dome, windrow, and so on. What were the forms used in the architecture of the three Qajar periods?	mirrors	
		Tiles (Traditional)	
		Traditional geometric forms	
7	Stairs; In the past, staircase architecture was mostly used as a functional element and within walls and walls, but in the Qajar architecture, we saw an exterior staircase as an element to define the front entrance. Is there any functional or hidden aspect to the architecture of the study of the staircase or is it exteriorized and used in the exterior?	Internal (Traditional)	Functional (enclosed) Free from wall enclosure
		Entrance Definition	Functional (enclosed) and semi-concealed Free from wall enclosure and with protective and decorative fences
8	Openings; Traditional architecture, there was no tendency to create opening to the passageway or outer space, and the openings were generally open in the central courtyard. In contemporary architecture, we see large openings to connect the interior and exterior. What was the look of the openings in the architecture of the buildings understudy? Has it been widespread or has it played a role in its past climate performance?	Large outdoor opening	In upper floors In the lower floors
			Small outdoor opening

## RESULT AND DISCUSSION

### Investigation of the First Period of Qajar's Buildings

#### Qavam al-Dowleh mansion

The historical house of Qavam al-Dowleh dates back to the years 1211 and the time of Muhammad Shah Qajar (Zand, 2001).

This building has two floors. The first floor (ground floor) comprises two large halls called Mirror and Tablecloth, two corridors and six small rooms (Madhoushian Nejad et al., 2017) (Fig.2).

The entrance is through the outer and inner courtyard and two staircases. The second floor consists of 2 corridors and 6 rooms. One corridor and 3 rooms on the west side and one corridor and 3 rooms on the east side. The basement of the building is beneath the Hall of Mirrors and can only be accessed from the inner courtyard (Madhoushian Nejad et al., 2017). (Fig.3)

One of the features of Qavam al-Dawlah's house is the regularity and symmetry created by the brick and wood on the facade of the building. The 7 doors in this building are among

the most important factors in its beauty (Madhoushian Nejad et al., 2017).

#### Badgir Mansion

The Badgir mansion is one of the buildings of Fath Ali Shah's period and was built on the south-east side of Golestan Palace. As it is known from historical documents, the Badgir Mansion was built in the history between 1320 AH and 1324 AH by Haj Mirza Jafar Khan Tabrizi and Abdullah Khan Memarbashi. (Fig. 4)

Fath-Ali Shah, however, gives it to his son Zal al-Sultan Alishah, and then to his son Saif al-Dowleh. After a period of turmoil between the British and Iranian governments, they take over the garden and the complex from Seif al-Dowleh because he was affiliated with the British government. (Ghobadian, 2013)

According to pictures and reviews of the two mansions introduced during the first Qajar period, In Table 2, the mentioned indices are examined separately for the first two buildings of the Qajar period.



Fig. 2: Ground floor plan and facade of Qavam al-Dowleh house in Tehran (Zand, 2001).



Fig.3: Street View of Qavam al-Dowleh House



Fig. 4: Badgir Mansion (Ghobadian, 2013)

Table 2: Characteristics of two buildings in the first Qajar period

Building	Characteristics							
	Façade materials	plan	Spaces	Main entrance	Decorations	Form	Stairs	Opening
<b>Qavam al-Dowleh mansion</b>	-Brick -Wood -Glass	Semi-extro-verted	- open & closed spaces - It has no semi-open space.	Simple space for boundaries	-Mirrors -Realistic decorations -Plaster -wooden decorations	-Santorini (neoclassical) -Windward (traditional) -Sternum (traditional) -Crescent arc (neoclassical)	-Two external staircase (walled and half hidden.) -Internal staircase	large opening in both floors
<b>Badgir Mansion</b>	-Brick -Wood -Glass -tile	Extraversion	- open & closed spaces - Semi-open space is limited.	Simple space for boundaries	-Plaster -Realistic painting -Haftarang Mosaic -Mirrors -Tiling	-Santorini (neoclassical) -Windward (traditional) -Sternum (traditional) -Crescent arc (neoclassical)	-Two functional external staircases (wall-locked and semi-concealed) -Internal staircase	Large and numerous openings-mostly at the lower floors

### Investigation of the Second Period of Qajar's Buildings

#### Shams Al-Amara

The Shams Al-Amara building is made up of combinations of styles. This building is the most prominent in Golestan palace. It was built by Dost Ali Khan in the time of Nasser al-Din Shah (Alipour, 2011). In Fig. 5 the image of the building is shown to evaluate its features.

#### Masoudieh Mansion

Masoudieh's garden and the mansion were built in 1256 by the order of Masoudmirza, the ruler of Isfahan, on an area of 4,000 square meters. (Fig. 6)

It consists of the outer and interior parts. The name of the mansion is derived from the name of Masoudmirza and is known as Masoudieh. The building comprises a collection of courtyards, the Sardar Mansion, the Mushir al-Dawlah Mansion, the aqueduct, the pond, and the Sayyid Javadi Mansion. Plastering, tiling, calligraphy, and murals by the Iranian artists show unique works. Other additions to the building include seven inscriptions. These inscriptions prove that the building is valuable (IRNA, 2018).

According to pictures and reviews of the two mansions introduced during the first Qajar period, In Table 3, the mentioned indices are examined separately for the two buildings of the Second Qajar period.



Fig.5: Shams al-Amara (Karimi, 2014)



Fig. 6: Masoudieh Mansion (Source: IRNA, 2018)

Table 3: Characteristics of two buildings in the second Qajar period

Building	Characteristics							
	Façade materials	plan	Spaces	Main entrance	Decorations	Form	Stairs	Opening
<b>Shams al-Amara</b>	-Brick -Wood -Glass -stone -steel	Extraversion	-open and closed space  -There is no semi-open space.	Simple space for boundaries	-Realistic painting -Mirrors -Animal and plant motifs -Plaster -Woodcarving	-Santorini (neoclassical) -Clock Use (West Element) -Crescent arc (neoclassical) -Viewpoint	-Two functional exterior staircases - wall enclosure.  -Internal staircase	large opening in both floors
<b>Masoudieh Mansion</b>	-Brick -Wood -Glass	Semi-extro-verted	-open and closed spaces  semi-open is very limited.	Simple space for boundaries	-Plaster -Plant motifs -Mirrors -Tiling -Calligraphy	-Santorini (neoclassical) -Crescent arc (neoclassical)	-Two functional exterior staircases - wall enclosure  -Internal staircase	large opening in both floors

### Investigation of the Third Period of Qajar’s Buildings

#### Ein al-Dowleh Mansion

Ein al-Dowleh Mansion is one of the monuments of Tehran. The building dates from the late Qajar and early Pahlavi periods.

Its architecture is in the style of Qajar era architecture (Municipality of District 4, 2016). (Fig. 7)

This garden and mansion was the residence of the minister of the three Qajar historical periods, Ein al-Dowleh.

The site contained a ceremonial mansion, a large swimming pool, and many gardens around it. At present, the Barg Gallery is in the mansion of Ein al-Dawlah (District Municipality 4, 2016).

#### Azizieh Mansion (Maliak)

The date of construction of this mansion can be traced from his own memories of Aziz al-Sultan (Mallijak).

In his memoir dated 1313 AH. He writes: "It's been four and a half hours. Aghabshir Khan entered the city. Two days earlier he had gone to Imamzadeh Davood. He arrived last night. He said the city was too hot. He told of a new mansion built in Azizieh. The arch has been knocked out of the basements and they are now build rooms on the basements". (Afrasiabi, 1989, 255).

Maliak Mansion is a great example of postal card architecture. Architecture made from photographs of palaces (World Economic Journal, 2007) (Fig. 8).

The building plan is extroverted and almost symmetrically

designed. The north rooms of the building are not alike on the basement floor. On the ground floor, the north rooms are not similar, which may have been out of symmetry in the reconstruction of these rooms (Ghobadian, 2004, 212). The building has a basement and a ground floor, and a half-floor above the ground floor. In the basement, the walls are made of brick and covered with a brick vault. Other features of the

building are plaster decorations, wooden doors, and windows, carved railings in front of the main entrance. (World Economic Journal, 2007).

According to pictures and reviews of the two mansions introduced during the first Qajar period, In Table 4, the mentioned indices are examined separately for the two buildings of the third Qajar period.



Fig. 7: Ein al-Dowleh Mansion (Municipality of District 4, 2016)



Fig.8: Azizieh or Malijek Mansion. (A) The plan of Malijek Palace. (Source: Saadati Khamseh, 2016) (B) The facade of Malijek Mansion. (Source: Zakarzadeh, 2008).

Table 4: Characteristics of two buildings in the third Qajar period

Building	Characteristics							
	Façade materials	plan	Spaces	Main entrance	Decorations	Form	Stairs	Opening
<b>Ein al-Dowleh Mansion</b>	-Brick plated -Wood -Glass	Extraversion	it has three spaces: open - semi open and closed	The opening on the wall.	-Mirrors -Plaster - Plant motifs -Use color	-Crescent arc (neoclassical) -Santorini (neoclassical)	-Exterior staircase as entrance and release from wall  -Internal staircase	large and numerous opening in both floors
<b>Azizieh mansion</b>	-Brick -Wood -Glass	Extraversion	it has three spaces: open - semi open and closed	The opening on the wall.	-Plaster - tiling	-Crescent arc (neoclassical) -pergola (Western)	-Exterior staircase as entrance and release from wall  -Internal staircase	large and numerous opening in both floors

### Discussion

Based on the case studies and the determined indices that were introduced at the beginning of the study, we can observe the changes of the buildings in three periods, in Table 5.

According to Table 1, it can be concluded that the European and neoclassical elements had a great influence on the Qajar period and the mansions.

Table 5: Summing up the indicators and comparing them in three Qajar periods

Indicators	Divisions	First period	Second period	Third period
1	Clay			
	Brick	++	++	++
	Stone		+	
	Wood	++	++	++
	Steel		+	
	Glass	++	++	++
2	Introvert (Traditional)			
	Semi-introverted			
	Semi-extroverted	+		
3	Extraversion	+	++	++
	Open	++	++	++
	semi-open	+		++
4	Close	++	++	++
	Complete indoor space separator (traditional)			
	Simple space for boundaries.	++	++	
5	The opening on the wall.			++
	Direct and realistic visualization (traditional (Zandieh) and neoclassical)	++	++	++
	Geometric Decorations (Traditional)			
	Use the symbol			
	Use color	+	++	+
6	Plaster	++	++	++
	Mirrors	++	++	++
	Tiles (Traditional)	+	+	+
7	Traditional geometric forms	++	+	
	European and neoclassical forms	++	++	++
8	Internal (Traditional)	++	++	++
	Functional (enclosed)			
	Free from wall enclosure			
9	Entrance Definition	++	++	
	Functional (enclosed) and semi-concealed			
10	Free from wall enclosure and with protective and decorative fences			++
	Large outdoor opening			
	In upper floors	+	++	++
11	In the lower floors	+		
	Small outdoor opening			

+ Available in one of the buildings.

++ Available in both buildings.



## CONCLUSION

In the concluding section of the study, it can be stated that the dominant materials in all three Qajar periods were: brick, glass and wood. Glass and wood materials were used in the construction of large windows and doors and.

The dominant element in the facade was brick, which was generally used in mansions because of the good financial status of the residents. For this reason, high-quality bricks were used in these buildings.

In the second period, the use of stone is also observed in a building such as Shams al-Amara, which in the other two periods has been restricted to columns and ponds. Despite the abundance of stone resources, prior to the Qajar period, the stone was rarely used in architecture, and thus the use of stone in buildings can be influenced by Western architecture.

In terms of planning in the first period, the buildings are semi-introverted and introverted, but in the second and third periods, the mansions plan is completely extrapolated. This reflects the development of mansion plans, especially from the Nasserite era, which paved the way for the Extravagant Residential Homes of ordinary people in the early Pahlavi era.

In the study of open, semi-open, and closed spaces in the architecture of Qajar three periods -as indicated in the concluding section- in the second period the semi-open spaces (such as porches) are less visible. In fact, these spaces, which were intermediaries for connecting closed and open spaces, are less common in the first and second periods, but the use of these spaces in the third and late Qajar periods is evident.

In the study of building entrances, the change of them is evident from the beginning of the Qajar period. This indicates a loss of privacy and a tendency to remove boundaries with outer space. In the first and second periods of Qajar, there were still boundaries for the one-time display of living spaces. But in the third period, this boundary has disappeared and the entrances are transformed into openings for entry into the building.

In the study of building decorations: mirrors and plastering exist in all three Qajar periods, which are the dominant decorative arts.

Plastering has also been used in the facades of buildings in all three periods. Traditional art, such as tiling, is more limited in the facades of the three periods.

What is important about the decoration of the buildings under study is the presence of realistic human, animals and plants decorations in the form of painting and plastering. These ornaments are influenced by the features of neoclassical and painting of the Zandiyeh period of Iran.

Changes in forms also show the influence of the West in the three Qajar periods. In the first period, traditional and neoclassical forms were found to be equally present in buildings. The second period has reduced the use of traditional forms. In the third and late Qajar period European and neoclassical forms are evident.

The two elements of stepping and popping have also evolved

over the past three periods. The staircase in the past architecture has a functional aspect and is hidden among the walls in the internal spaces. In the first and second Qajar architecture, the staircase, in addition to creating a vertical connection to the interior, appears in exterior spaces as defining the entrance space of the building. However, it is still protected by the walls and is partially hidden. In the third period, the stairs were separated from the sidewalls and appeared independently in the outer space.

Street-side openings, which are the factors of extroversion, are less common in the first period. But in the second and third periods of Qajar, the multiplicity of windows in the upper floors of the street-wall Indicates a tendency to breach privacy.

## ACKNOWLEDGMENT

1. Dr. Gholamhossein Memarian in his book "Introduction to Iranian Residential Architecture, Introvert Typology" introduces the characteristics of an introvert home as follows: Lack of direct visual connection of interiors with exterior urban spaces; Its various spaces are organized by elements such as indoor courtyards. So openings open to these elements (Memarian, 2008a).

2. Traditional means the features of Iranian architecture that existed before Qajar architecture. Its observation in the architecture of the buildings under study indicates the continuity of this feature from the past.

3. Dr. Gholamhossein Memarian in his book "Introduction to Iranian Residential Architecture, Extraverted Typology" describes the architectural features of an extravagant home as follows: Having a direct visual connection to the outdoors; Not having a central courtyard, Spread at height, and spatial organization over another space such as the corridor (Memarian, 2008b). The meaning of Extraversion in this study can be understood from Dr. Gholamhossein Memarian's definition.

## REFERENCES

- Afrasiabi, B.. (1989). *The King of Zul Qarn and the Memories of Malijak*. Tehran: Sokhan Publications.
- Alipour, N. (2011). Read more about the palaces of the ancient palaces. *Negra Scientific Research Journal*. 6 (18). 21-5.
- Armaghan, M.; Soltanzadeh, H.; Behbahani Irani, H. (2013). Architecture and culture in the Qajar dynasty in Tehran. *Iranian Anthropological Research*. 3 (1). 29-50.
- Ghobadian, V. (2004). *Architecture in the Nasserian : Tradition and Modernity in Contemporary Architecture of Tehran*. Tehran: Pashtun.
- Ghobadian, V. (2013). *Stylistics and Theoretical Foundations in Contemporary Iranian Architecture*. Tehran: elme memor.
- IRNA. (2018). *Masoudieh Mansion; Reminder of Iranian Constitutionalism*. Published on March 10, 1979. Accessed from: [www.irna.ir/news/83224444/](http://www.irna.ir/news/83224444/)
- Karimi, F. (2014). Two owls of the Shams al-Amara mansion that were changing the monarchy. *Mehr news agency*. Published on November 19, 2013. Retrieved from: [mehrnews.com/news/2417728](http://mehrnews.com/news/2417728)
- Madhoushian Nejad, M.; Haddadian, M. A.; Razani, M. (2017).

- Comparative Study of Wallpaper in the King's Lodge of Hariri house of Tabriz and Qavam al-Dowleh mansion in Tehran. *The Art of Islamic Quarterly*. 2 (1). 51-36
- Memarian, Gh. (2008 b). *Introduction to Iranian residential architecture, extravagant typology*. Fifth Edition. Tehran: Simaye Danesh Publications.
- Memarian, Gh.. (2008 a). *Introduction to Iranian residential architecture, introverted typology*. Fifth Edition. Tehran: Simaye Danesh Publications.
- Municipality of Tehran District 4. (2016). *Barg Gallery (Ein al-Dowleh Mansion)*. Retrieved from: <http://region4.tehran.ir/default.aspx?tabid=666&ArticleId=26631>
- Saadati Khamseh, M. (2016). A Critical Assessment of Western Architecture Tendency in Qajar Palaces. *Urban Management Quarterly*. 46 (1). 179-198.
- World Economic Journal, (2007). *Postcard architecture of Maliak Palace*. Retrieved from <https://www.donya-e-eqtasad.com/fa/tiny/news-711179>
- Zakar Zadeh, A. H. (2008). Mellijak Mansion. *Payame Baharestan*. 1 (1 & 2). 386-396.
- Zand, M. (2001). *The landlord and or the ruler's home*. Tehran: Cultural Heritage and Solidarity Organization. Unpublished report.

