

## Original Research Article

## A Typological Study of Architectural Ornaments in the Columned Iwans of Qajar Houses in Tabriz

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Received: 15/04/2025

Accepted: 18/08/2025

Available online: 22/12/2025

## Abstract

**Problem statement:** The Qajar houses of Tabriz are among the most valuable heritage structures, constituting a significant part of the city's historical context. These historical houses possess distinctive architectural features that set them apart from similar structures in other regions of Iran. A key spatial element of the houses under study is the Iwan, yet no independent study has so far been conducted on their structures and ornamental features. Accordingly, the main issue of the present study is the typology of architectural ornaments in the iwans of Qajar houses in Tabriz.

**Research objective:** The primary aims of this study are to examine the architectural characteristics, classify the diverse types of Iwan ornaments, and identify the artistic and cultural trends influencing their formation.

**Research method:** The research method is descriptive-analytical, with data collected through both library-based and field studies. Initially, all iwans of the houses under investigation were photographed, drawn, and precisely described. Subsequently, all relevant historical documents concerning Qajar houses in Tabriz, along with field observations, were collected and analyzed to produce cohesive results.

**Conclusion:** The results indicate that the studied Iwans feature arched vaults, wooden columns with elaborately decorated plaster capitals, polygonal stone bases, and pediments adorned with diverse plasterwork. The main ornamental techniques used are brickwork on facades and plaster decorations, imbued with a Qajar spirit through influences from Western art, ancient Persian art, and local craftsmanship. The plaster capitals exhibit Corinthian techniques with vegetal motifs such as acanthus leaves, resembling Western examples, while the vegetal motifs on pediments display multi-lobed palmettes and vine leaves inspired by Sassanian art. The polygonal column bases show similarities to common types used in the Azerbaijani region, particularly in wooden columned mosques of the Qajar period. Additionally, the combination of plaster negin (inlay) with mirror pieces and the creation of skewed square knots in medallion (toranj) designs embellish the ceilings and interior facades of the iwans. Twenty-three brickwork patterns, including cascading (khofte-rāsteh), floral (gol-andāz), dentil (dandān-mūshi), basket-weave (hasiri), and puz-guy types, stand out as remarkable decorative features of the houses studied.

**Keywords:** *Iwan, Architectural ornaments, Qajar houses of Tabriz, Iwan pediment, Iwan column.*

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## Introduction and Problem Statement

Iwans are among the most significant spatial components of many Iranian buildings, both before and after the advent of Islam, consistently serving as transitional elements linking open spaces to enclosed rooms. Although the precise origin of the iwan remains uncertain, historical and archaeological evidence in Iran can be traced back at least to the excavations at Hasanlu (Layer IV) in the first millennium BCE (Dyson, 1989). This evidence shows a more refined form during subsequent periods—particularly the Parthian period—when iwans became prominent in numerous governmental and non-governmental buildings. Following the introduction of Islam to regions inheriting the cultural legacies of ancient Iran and Rome, the use of iwans—especially in mosques—continued in the same traditional style. Notable early Islamic examples include architectural remains from the Dar al-Imara of Kufa and the congregational mosques of Fahraj, Damghan, and Neyriz (Rezaeinia, 2017; Godard, 1936/1979, 321). In Islamic architecture, the iwan became widely used as a semi-open space connecting to open areas in mosques, madrasas, bazaars, and houses, often combined with various roofing systems, including domes (Pirnia, 1991, 148). In the medieval Islamic period—especially under the Seljuks—the application of iwans saw even greater prominence and continuity. Landmark examples include the Ribat-i Sharaf caravanserai, with its two courtyards each framed by four iwans (Daneshdoost, 1981, 32), and the Jameh Mosque of Isfahan, which served as a model for later four-iwan buildings (Jabal Ameli, 2013, 36). Noteworthy examples from the Khwarazmian period include the two-iwan mosques of Farumad, Zozan, and Gonabad (Godard, 1936/1979, 256). Timurid-period highlights include the Haroonia building of Tus (Koohestani & Zarei, 2018, 78), the tomb of Abu Bakr Taybadi (Azar Khordad et al., 2018), and the Sheikh Ahmad Jami complex with its tall iwans (Zarei & Laleh, 2016, 184). During the Safavid period, iwans were extensively incorporated into royal and monumental buildings, such as Chehel

Sotoun, Ali Qapu, and the Imam and Sheikh Lotfollah mosques of Isfahan (Etminan et al., 2024, 33-37). In the subsequent Qajar period, the architectural significance of iwans remained evident.

Tabriz, due to its proximity to the Ottoman and Russian imperial borders and its strategic location along the East–West trade route, experienced significant urban growth compared to many other Iranian cities. Aristocratic houses stand as surviving witnesses of this prosperity and development. Architecturally, these Qajar houses featured rectangular courtyards, large columned and uncolumned iwans of varying dimensions, often aligned along the courtyard’s main axis, serving as the link between the courtyard and the reception hall (talār). They were generally elevated above ground level, overlooking the courtyard. The studied iwans are typically adorned with elaborate plasterwork on pediments and column capitals, abundant brickwork on façades, and a combination of plaster and mirrorwork on soffits. Although Western influence is evident in the triangular pediments and the naturalistic plaster reliefs on Iwan facades, the era’s strong artistic and literary revival of pre-Islamic cultural motifs also played a significant role in shaping the columned Iwan form and its decorative program—a trend visible not only in Tabriz but also in Tehran and other major Qajar cities. Accordingly, the main research questions of the present study are:

1. What are the defining features of the columned iwans of Qajar houses in Tabriz? How many distinct types of architectural ornamentation are applied in these iwans, and what factors contributed to their development? Due to limitations such as the refusal of some organizations and house owners to allow inspection and photography of all existing houses, the absence of iwans in certain residences, and the destruction of many others, the study is based on 13 selected examples from Tabriz’s historical urban context. While previous studies under the broader title of “Qajar Houses of Tabriz,” or individual architectural monographs on houses within the historical urban context, have been conducted, this investigation is the first to specifically examine the

architectural characteristics of iwans and to classify the diverse typologies of their ornamental schemes.

## Research Background

Scattered research has been conducted on the Qajar houses of Tabriz and on the function of the iwan in traditional houses. For example, Abdollah Mahmoudi (2005), in his article “Revisiting the Importance of the Iwan in Traditional Houses (with Special Reference to Bam),” discusses the iwan as a semi-open space from a functional perspective, while also exploring its semantic and symbolic roots. Mohammad Ali Kaynejad and Mohammad Reza Shirazi (2010), in their book “Old Houses of Tabriz,” date the city’s residential architecture to three historical phases—Zand, Qajar, and Pahlavi periods—and examine their physical and architectural characteristics. Leila Zaker Ameli and Abdollah Jabal Ameli (2013), in their study “The Evolution of the Iwan in Traditional Houses of the Yazd–Ardakan Plain from the Mozaffarid to the Qajar Periods,” compared the geometric, spatial, and structural features of iwans from 12 Mozaffarid houses and 30 Safavid houses. Their results show that the iwan, as a semi-open courtyard-facing space, has been a consistent feature at least since the medieval Islamic period. Hossein Esmaili Sangari and Behrooz Omrani (2014), in “History and Architecture of Old Houses of Tabriz,” investigate design and construction characteristics of residences, emphasizing the traditional architectural style suitable for cold and mountainous climates. Zahra Roshandel et al., (2017) in “The Evolution of the Iwan in Houses of Nehbandan from the Qajar to the Pahlavi Period,” identify the iwan as the most important spatial element—typically on the northern or southern side—of historic Nehbandan houses, often built with pointed or oval arches and covered by barrel vaults and transverse arches, in both single- and multiple-iwan configurations. Baqer Pourjavad Asl and Hamed Beyti (Pourjavadasl & Beyti, 2022), in “Approaches to Applying the Facade of Historic Houses to Modern Building Facades (Case Study: Historical Houses of Tabriz),” conduct facade typology analyses of historic

Tabriz houses and introduce applicable architectural components for contemporary design. Atefeh Karbasi (2023), in “Typology of Iwans in Historic Houses of Najafabad,” identifies seven historical iwan types and examines their spatial role and functional significance over time. Azita Balali Oskui and Pari Asghari (2024) in “Typology of Iwans in Traditional Houses of Tabriz during the Qajar Period; Case Study: Traditional Houses of Tabriz in the Qajar period,” classify iwans into three basic types: recessed, central, and projecting. They argue that relationships with the West, changes in national governance, and evolving social beliefs influenced the architectural patterns of Qajar houses and their iwans. Soheila Abdizadeh et al. (2024) in “Evaluation of the Effects of Porch in Traditional Houses of Tabriz on the amount of Daylight Factor Changes (Case study: Behnam, Ghadaki, Ganjeizadeh houses),” use simulation software to assess the daylight performance of iwans in different orientations and seasons. Their findings indicate that iwans reduce summer daylight penetration by 30–60%, compared to a 1–30% reduction in winter. Naemeh Dabirinejad and Mahnaz Mahmoudi Zarandi (2024), in “Morphology of open and semi-open spaces in vernacular houses of the hot and humid climate with a focus on the central courtyard and iwan (Case study: Houses of Bandar Kang),” analyze typological variations of courtyards (rectangular and square) and the positioning of iwans on different orientations of the building. As the above literature shows, most studies have focused either on the Qajar houses of Tabriz or on the role of the iwan in traditional houses of a single city or region. However, no research to date has specifically examined the diverse ornamental typologies of columned iwans in the historical Qajar-period context of Tabriz.

## Research Literature

An iwan is defined as an elevated sitting platform relative to its surroundings, typically constructed in the central exterior portion of a building’s facade and visually more prominent than other parts of the structure. In other words, an iwan is a rectangular

space of varying dimensions, enclosed on three sides and open on the fourth. Functionally, the iwan serves as an intermediary between open and enclosed spaces, functioning as the formal introduction and “frontispiece” of a building’s facade. It is also the space where the most elaborate decorations and inscriptions of the structure are often executed (Rezaeinia & Laleh, 2014). In terms of function, iwans

have historically been one of the defining features of domestic life in Iranian architecture, providing a space for family gatherings. They vary in form, dimensions, use, accessibility, and their compositional relationship with other spaces. Scholarly disagreement regarding the iwan is primarily tied to its time and place of origin. Table 1 presents the leading theories on the

Table 1. Theories Regarding the Origin of the Iwan and Their Characteristics. Source: Rezaeinia & Laleh (2014), with additions by the present authors.

Geographical area	Theorists	Theory/Indicator Characteristics	Case study	Reference
Greece	Bell, G	Considers the Bêt-Hilani style as the origin of the iwan	Tilmen Höyük	(Bell, 1914, 55-121)
	Wachtsmuth, F	Based on Bell’s theory, it regards the plans of Achaemenid palaces as influenced by the Bêt-Hilani style.	Apadana Hall	(2008, 406)
	Porada, E	Considers Greek buildings as models for the columnar entrances around the Pasargadae complex	Temple of Artemis, Ephesus	Ettinghausen, 1987/2000, 76
	Young, C. A.	Considers the Iron Age Bêt-Hilani style a model for the columned iwans of Hasanlu	Nushijan and Godin Tappeh halls	Young, 2012, 103
	Papadopoulo, A	Traces the origin of the iwan to Hellenistic and Greco-Roman architecture	Sasanian buildings in Damghan and Kish were directly influenced by the basilica halls of Hellenistic palaces	Papadopoulo, 1981/1989, 61
Mesopotamia	Wachtsmuth, F.	Identifies Mesopotamia and native Mesopotamian houses as the origin of the iwan	Hittite palaces, Nebuchadnezzar’s palace	Wachtsmuth, 1929
	Keall, E. J	Believes the Iwan originated in Mesopotamia as a result of the development of indigenous Mesopotamian architecture	Nippur	Keall,1974
Iran	Herzfeld, E	Attributes the origin of the iwan to Iran, identifying the barrelvaulted iwans of Kuhe Khwaja as its source	Kuhe Khwaja	Hertzfeld, 1941/2002, 211
	Reuther, O.	Considers the East and Iran the origin of the iwan, basing this on the widespread use of iwans in Parthian buildings in Iraq	Eastern Parthian provinces, Parthian buildings in Iraq, and the nomadic lifestyle	Reuther, 1939, 566
	Godard, A	Suggests the Iwan spread from Khorasan to Mesopotamia	Houses in the Ghazni region, Afghanistan	Godard, 1979, 310
	Debevoise, N. C	Identifies the northeastern Iranian province of Parthava as the origin of the iwan, noting the “Iranian derivation of the term “iwan	Province of Parthava	Debevoise,1941, 58-61
	Colledge, M. A. R	Associates the emergence of the iwan with the Parthian period, considering it a Parthian innovation	Fouriwan houses in ancient Nisa	Colledge,1977, 63-64
	Dyson & Ghirshman	Believe the iwan came from Western Asia and evolved in Iran	Level IV of the Hasanlu building	Ghirshman, 1992/1993, 222 Dyson, 1989
	Gullini, G.	Attributes the origin of the iwan to Iran, tracing its antecedents to iwanbearing Parthian and Achaemenid structures	Kuhe Khwaja	Gullini, 1964, 326-333
	Huff, D.	Considers the iwan a prominent feature of Parthian architecture and locates its origin in Parthian buildings in Iraq,	without specifying the earliest time or place of construction	Huff, 2005, 374-77
Stronach, D., & Roaf, M.	Seek early examples of the iwan form in the southern and western areas of Nushijan.	Nushijan site	Stronach & Roaf, 2007, 191-193	

genesis of the iwan in three main geographical-cultural contexts: Iran, Mesopotamia, and Greece. From a morphological perspective, iwans can be classified into three types (Fig.1). The first type features a flat roof with timber beam covering, a form whose historical origins trace back to the first millennium BCE at the Hasanlu archaeological site (Dyson, 1989). The second type consists of iwans with curved coverings and vaulted roofs, which became widespread during the Parthian period (Debevoise, 1941, 58–61; Colledge, 1977, 47). Negahban (1993, 82–83) attributes the vaulted iwan to the Elamite period (late second millennium BCE). Based on his excavations at Haft Tappeh in Khuzestan, he describes a long iwan situated in front of the temple of Tepti-ahar, opening directly onto the temple courtyard. Although vaulted iwans of the barrel vault type became common from the

mid-Parthian period onward, the use of columns was not entirely abandoned and continued well into the post-islamic period. Columned iwans in Iranian architecture persisted in both residential houses and palaces well into the modern era, with some of the finest examples seen in the palaces of the Safavid period (Pirnia, 1991, 54). Most iwans constructed during the Islamic period up to the end of the Qajar period were of the curved, vaulted type—either load-bearing or non-load-bearing. The principal factors behind the emergence of these two morphological categories of iwans were changes in construction materials and advances in building techniques. The third type consists of columned iwans with a single row of columns positioned in front of their arch, commonly known as *tārma* or *tārme*. Structurally, these iwans represent a combination of two iwans in a “T” configuration, where a transverse columned space

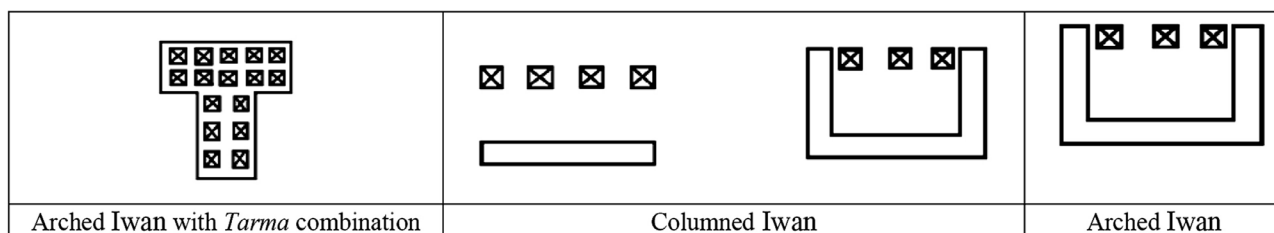


Fig.1. Diagram of Iwan Types. Source: Authors.

Table 2. Types of Iwans, Their Functions, and Relationships to Surrounding Spaces. Source: Authors.

No	Iwan	usage	Orientation and placement	Architectural relationships
1	Columned Iwan	A rectangular spatial unit that opens at the rear into an adjoining chamber or hall, typically covered with a timberbeam roof and supported by columns, and oriented to provide an extensive, unobstructed view of the space directly in front of it.	They are most frequently aligned with the building’s façade or placed along its longitudinal axis. Columned iwans, in terms of their general form, can be classified into two types: the first type is open on three sides; the second type is enclosed on three sides and open solely at the front.	Connecting outdoor and indoor spaces
2	Arched Iwan	A monumental entrance hall, typically featuring several adjacent doorways. In this arrangement, the central bay is wider than the flanking bays.	Vaulted iwans were constructed along the longitudinal axis of the building, opening transversely onto an open space. Their roofing consists of a barrelvault structure resting on the side walls of the iwan. In terms of form, vaulted iwans are enclosed on three sides and open on one side, while being highly suitable for ventilation and effectively shielding the interior from direct sunlight.	entrance
3	Arched Iwan with Tarma combination	A T-shaped iwan in which the longitudinal and transverse sections are separated by an east–westoriented corridor. This style of iwan has been employed predominantly in sacred sites, including Najaf, the Shrine of Ḥadrat Ma’sūma, and Karbala.	A composition of two iwans arranged to form the shape of the letter T, in which a columned transverse space is positioned opposite a longitudinal vaulted space.	Hall or Public Spaces

is placed in front of a longitudinal vaulted space. According to Reuther (1939, 487–489), this style is a synthesis of a flat-roofed wooden portico and a vaulted iwan—a form exemplified in Sasanian houses at Al Ma'arid in Ctesiphon and the manor house of Hajiabad (Azarnoush, 1994, 70–71) (Table 2).

### Theoretical Foundations

In the study of architectural phenomena, the term type denotes a general concept that organizes similar elements across different buildings. In other words, the inherent characteristics of specific phenomena, together with the commonalities among them, form a distinct type (Norberg Schulz, 2002, 69). This typological essence is modified according to temporal and spatial conditions, manifesting as a unique work. Thus, each architectural type relates both to a broader category (in this case, the house) and to smaller physical components (such as the iwan) and even to the decorative elements associated with them. From an architectural perspective, typology is understood through morphology. According to Karbasi (2023), the Italian school in this field, by integrating geographical concepts with architectural spaces and social issues, offers an innovative approach to architectural phenomena. In this school, the elements and components developed in one period differ from those of another, and these differences serve as the main criterion for determining types. In Islamic architecture, the iwan is one such type which, in the hands of the Muslim artisan, has been adorned with the richest and most refined decorations—featuring naturalistic or abstract vegetal and animal motifs, eslimi designs, and inscriptions. In decorating iwans, the artisan, by employing ornamental forms within the framework acceptable to society and attentive to geographical considerations, has not only generated new concepts but also extracted the maximum artistic and enduring potential from the raw material itself.

#### •The iwan and its components in qajar houses of tabriz

In the houses studied, the iwan was one of the most important elements shaping the arrangement of other

components of the home. The overall image of Qajar houses in Tabriz includes a semi-open, columned space—known as an iwan or columned portico—designed to block direct summer sunlight and winter cold, thus suiting the climatic conditions of Tabriz (Pourjavadasl & Beyti, 2022). In these buildings—especially in the residences of the wealthy—the frontispiece and columns of the iwans played a more prominent role than other elements and were richly decorated with plasterwork featuring vegetal and eslimi patterns, brickwork, and mirrorwork. The architectural layout of these houses adhered to a traditional Iranian model, incorporating all the key elements: zemestān neshin (winter quarters), tābestān neshin (summer quarters), hayāt e andaruni (inner courtyard), hayāt e biruni (outer courtyard), and hashti (entrance vestibule). Some houses—such as the Sorkhei, Mojtahedi, Alavi, Rahimi, Nikdel, Amir Nezam (Qajar Museum), and Sharbat Oghli houses—were two-storeyed, with two courtyards and basements. Others—such as the Ganjezadeh House—were built with three storeys. It is likely that some residences, such as the Sadaghiani House, were originally constructed in earlier periods, possibly the Safavid period, and later restored and expanded during the Qajar period (Nejadebrahimi et al., 2022). Early and mid-Qajar houses were often built slightly below street level to supply water to the howzkhaneh (pool room) and cistern, to house the kitchen, and to use the earth's thermal properties for cooling and heating. From the late Qajar period into the Pahlavi period, with changes in residential patterns, houses began to be constructed closer to street level. Typically, brick was used in the walls of upper floors, ground floors, and basements, while rubble stone bonded with sārūj mortar was used for the foundations.

The iwans in the houses examined are most frequently located on the southern facade, though in some cases on the northern or eastern sides, and may comprise one or two iwans in both the inner (andaruni) and outer (biruni) courtyards, as in the Qadaki House. These iwans range from two to sixteen columns in a row, with semi-circular arches

terminating in either ornamented plastered pediments or plain ones (Fig. 2). Their facades are rectangular in shape, as in the Rahimi, Mashrute, Sadaghiani, Alavi, Sharbat Oghli, and Sorkhei houses, or trapezoidal, as in the Behnam and Qadaki houses. In terms of spatial placement, some iwans lie in the axis of the main building or along its entire courtyard facing elevation, at the same level as the courtyard, such as in the Behnam, Qadaki, Mashrute, Sharbat Oghli, and Ganjezadeh houses. Others are raised several steps above the courtyard along the main facade, as in the Amir Nezam House (Safari Asl, 2022). The roof form has played a significant role in determining the arrangement of decorative elements. Roofs are generally flat or of a pediment (triangular) type, as in the Amir Nezam, Alavi, and Sorkhei houses, incorporating semi-circular arches. In other words, these iwans were constructed with pediments (either flat or triangular) and columns featuring plaster capitals and stone bases. The use of pediments, particularly triangular ones, is a distinctive feature of Qajar facades in aristocratic houses and mansions, absent in Iranian architecture before the Qajar period (Soltanzadeh, 1996, 163) and attributable to Western influence. Such forms were employed not only in aristocratic residences but also in commercial, educational, residential, administrative, and political buildings. The function of the iwans under study was not merely to mediate between indoor and outdoor spaces; they also reflected the social standing, wealth, and displayed the power of the owner through the execution of elaborate architectural ornamentation. According to Mahmoudi (2005), the presence of iwans on both the north and south sides of the house indicates their climatic and thermal roles: the south-facing iwan was used more frequently in winter, while the north-facing one served primarily in spring and summer as a space for sitting, sleeping, and daily activities—particularly for women. The iwans in these houses do not follow standard dimensions, ranging in length from approximately 10 to 20 meters, in width from 2 to 9 meters, and in height from about 3 to 6 meters to the apex of the

arch. Heights appear to have been slightly greater in the mid- to late Qajar period than in the early Qajar period. These proportions indicate relatively low height compared with substantial length and width, with sequential columned arches placed adjacent to one another and adorned with elaborate architectural decoration. Among the key structural and ornamental elements of the iwans are the columns, which in the Qajar period were used extensively across a full range of building types—from royal to public, and even in ordinary residences. These columns vary considerably in form, size, proportions, and ornamentation, showing only limited continuity with earlier examples. The number of columns in the iwans studied ranges from 2, 3, 4, 6, 10, 14, to 16, occasionally terminating in two half columns embedded into the wall (Fig. 2). The spacing between columns is relatively standardized, at roughly 2 to 3 meters. At the shaft level, Safavid artistic influence is evident; however, the circular forms of the plain shafts and the capitals derive from Western models. Comparative analysis with examples outside Tabriz shows that the fluted stone shafts of the Safavid and Zand periods, as well as the polygonal wooden shafts common in the Safavid period, were not employed, at least not in the plain, undecorated column forms of the iwans studied.

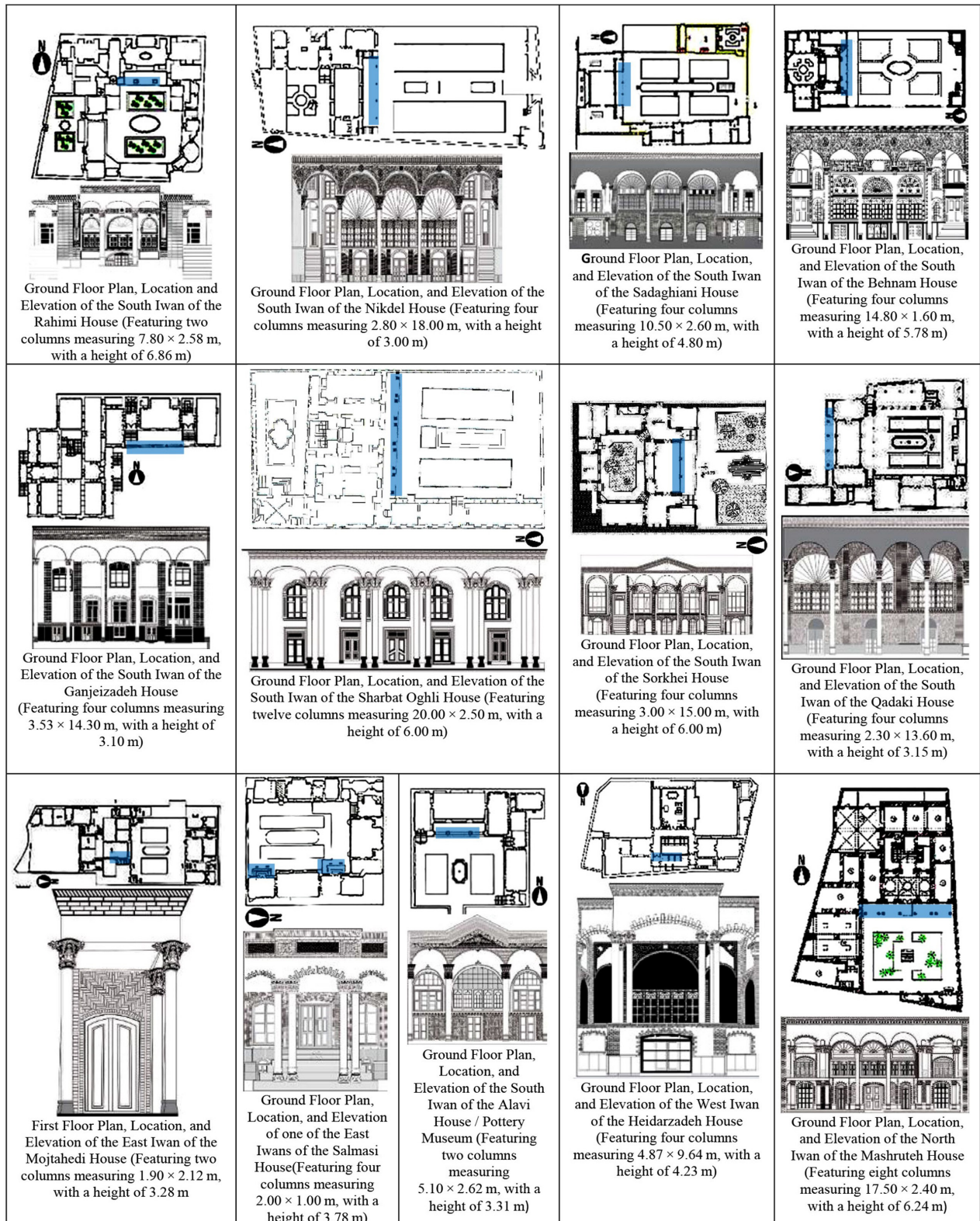
#### • Typology of iwan ornamentation

The iwans of the houses examined display a diverse range of plasterwork (on pediments and capitals), mirrorwork combined with plaster (on facades and ceilings of iwans), and various types of brickwork (on the iwan facade). Each of these forms is further divided into sub types:

##### - Plasterwork

Plaster carving—executed in varying depths and relief—was one of the most prominent ornamental techniques in the Qajar period, not only for geometric, vegetal, eslimi, animal, and bird motifs but also for its wide application in facade embellishment. In this period, plasterwork was extensively used on exterior facades, above window spandrels, gateways, columns, half columns, iwans, balconies, ceilings, fireplaces, and cornices (Maki Nejad, 2020, 131).

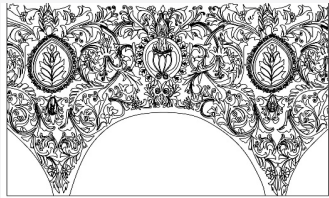





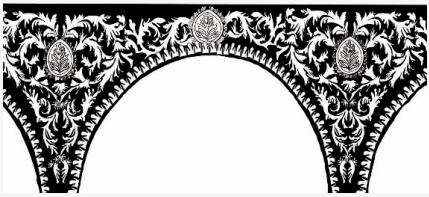




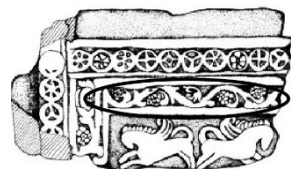
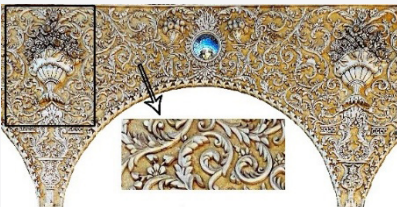





Fig. 2. Locations and Facades of the Iwans in the Qajar Houses Studied. Source: Authors.











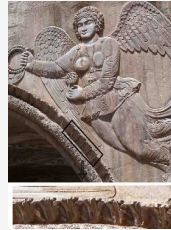
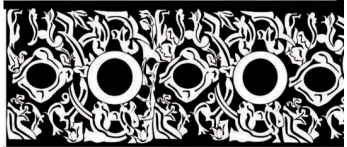





In the houses studied, plasterwork constitutes the principal and most abundant decorative medium. Examples are documented in [Table 3](#) (plasterwork on iwan pediments) and [Table 4](#) (plasterwork on

column capitals). The defining characteristics of plaster motifs in the iwans examined are systematic repetition, symmetry, and regular rhythmic patterns, which—while innovative—remain faithful to earlier

Table 3. Vegetal and eslimi plaster ornamentation of iwan pediments and their comparison with ancient Iranian and western examples. Source: Authors.

Floral and Arabesque Stucco Work on the Pediments of the Studied Houses	Comparable Examples in the Qajarperiod, Iran, or in the West	Details Comparable to the Sassanian Period
		
<p>Pediment of the Iwan of the Behnam House</p>	<p>Stucco Decoration of the Arched Façade of the Borujerdiha House, Kashan, MidQajar Period. Source: Authors</p>	<p>Sassanian Stucco with Multi-Petal Floral Motif, Hisar, Damghan. Source: Schmidt, 1939, Pl. CLXI</p>
		
<p>Pediment of the Iwan of the Alavi House / Pottery Museum</p>	<p>Carved Ornamentation of the Church of SaintÉtienne, France, Early Gothic (11th Century), Restored in the 19th Century. Source: Adam, 1996, 67</p>	<p>Stucco Frieze with Palmette Ornamentation, Ctesiphon. Source: Kröger, 2017, 77</p>
		
<p>Pediment of the Iwan of the Nikdel House</p>	<p>Qajarperiod Stucco Decoration of the Pashakola Tekyeh, Amol. Source: Bathaei et al., 2022</p>	<p>Stucco Decoration with Acanthus Leaf Motif in the Sassanian Palace of Kish, Iraq. Source: Reuther, 1939, 527</p>
		
<p>Stucco Design with Mirrorwork above the Orosi Windows of the Heidarzade Iwan</p>	<p>Stucco Decoration of the Borujerdiha House, Kashan, MidQajar Period. Source: Authors</p>	<p>Sassanian Stucco in the Kangir Building, Ivane Ilam. Source: Khosravi, 2020</p>
		
<p>Pediment of the Iwan of the Qadaki House</p>	<p>Stucco Decoration of the Qajarperiod ShotorGaloo Mansion, Mahan, Kerman. Source: KhezriMoqaddam &amp; Imanizadeh, 2017</p>	<p>Sassanian Stucco, Bishapur. Source: Ghirshman, 1956, 163.</p>
		
<p>Stucco Decoration of the Pediment of the Qadaki House</p>	<p>Stucco Decoration of the Pediment of the Iwan of the Tabatabaei House with Vine, Animal, and Bird Motifs. Source: Authors.</p>	<p>Stucco on the Round Columns of the TappeMil, Varamin. Source: Kröger, 2017, 96</p>

Rest of Table 3.

Floral and Arabesque Stucco Work on the Pediments of the Studied Houses	Comparable Examples in the Qajarperiod, Iran, or in the West	Details Comparable to the Sassanian Period
		
<p>Stucco Decoration of the Pediment of the Qadaki House</p>	<p>Stucco Decoration of the AlSharif Mansion, Bushehr, MidQajar Period. Source: MaygoliNejad, 2019, 106</p>	<p>Stucco Decoration with a Multi-Petal Floral Motif, Hajjiabad, Fars. Source: Azarnoush, 1994, 95</p>
		
<p>Stucco Decoration of the Pediment Façade of the Salmasi House / Museum of Measurement</p>	<p>Stucco Decoration of the Ghazi Mansion, Bushehr. Source: Gholamzadeh, 2013, 157</p>	<p>Stucco Decoration with Rose Motif, Taqe Kisra Palace (Ctesiphon). Source: Kröger, 2017, 104</p>
		
<p>Stucco Border of the Iwan Arch of the Heidarzadeh House</p>	<p>Stucco Decoration of the Entrance Vault of the Northern Iwan of the ZinatalMolouk House, Shiraz. Source: Mojri, 2016, 266</p>	<p>Floral Carving on the Border of the Great Arch of Taqe Bostan. Source: Authors</p>
		
<p>Stucco Design above the Orsi Windows of the Rahimi House and above the Pediment of the Qajar Museum / AmirNezam Garousi House.</p>	<p>Haj Ali Arbab House, Amol. Source: Bathaei et al., 2022</p>	<p>Sassanian Stucco, Bishapur City. Source: Ghirshman, 1956, 167.</p>
		
<p>Stucco Decoration of the Pediment of the Iwan of the Heidarzadeh House.</p>	<p>Shapur High School (Shahid Kazazi), Kermanshah, Late Qajar Period. Source: Authors.</p>	<p>Stucco Frieze with Palm Leaf Ornament, Sassanian Ctesiphon. Source: Kroger, 2017, 77.</p>

traditions. In effect, these motifs exhibit a realistic style influenced by Western art, replacing the formerly more abstract mode of design. This realism, fostered by the spread of stamps, photographs, and postcards, greatly influenced the range of motifs in the Qajar period—as if the artisan’s model in painting or plaster carving were a photograph taken with a camera (Bemanian et al., 2011). Notably, bouquet motifs filled with red roses and irises, as well as natural landscapes, were directly adapted from newly imported European postcards (Ferrier, 1995, 291). On the other hand, given the rise of neo-archaism beginning under Fath Ali Shah and peaking under Naser al Din Shah, designs such as the lotus flower and vine leaf also reflected the revival of ancient Persian art during this period.

#### - Plaster Ornamentation of the Pediment

The variety of plaster ornamentation applied to the pediments of Qajar iwans is such that, in some cases, the creativity and taste of local artisans overshadowed Western models, imparting an Iranian Islamic character. Analysis of the iwans studied shows that undecorated flat pediments became more common in the mid and late Qajar period than in the early period. Conversely, in column capitals, the trend was reversed—showing greater volume and variety of plaster ornamentation in the late Qajar examples than in earlier ones. The plasterwork of iwan pediments includes vegetal and eslimi motifs (Table 3). Vegetal motifs, rendered in bold relief with frequent repetition, encompass both patterns influenced by ancient Iran—particularly Sasanian models—and Western-inspired naturalism, executed with fine detail. In addition, the examples studied compare closely with much of the plaster decoration in other historic buildings throughout Iran. Eslimi motifs also appear either in isolation or in combination with vegetal designs in the pediment ornamentation (Table 3).

#### - Column capitals

The most significant decorative feature in the columns examined is their capitals. These capitals are adorned with prominent vegetal reliefs, including acanthus leaves or bell-shaped motifs rendered in a naturalistic

style, whose origins trace back to the classical capitals of ancient Greek and Roman art. Based on the present study, eighteen capital patterns are identified, largely derived from vegetal Corinthian or quasi Corinthian designs inspired by the Roman period, the Renaissance of the 12th–13th centuries, and the Baroque style of the 16th–18th centuries—constituting their principal distinguishing characteristic (Table 4). The diversity of capitals in the comparable specimens indicates their widespread use across a variety of building types—residential, royal, administrative, religious, and aristocratic houses—both within Iran and abroad.































#### - Column bases

According to the present study, twelve column base patterns have been identified, primarily square in plan and, in some cases, hexagonal, executed with flat or two-dimensional detailing (Table 5). In the houses examined, four types of column bases were employed, most commonly with a square base, differing mainly in their method of connection to the column shaft. Compared with the capitals, column bases were a more vernacular and widely recognized element. Given their frequent use in north west Iran—particularly in such examples as the Jameh Mosque of Zavosht in Bonab, the Qazi Mosque in Maragheh, and Meydan Mosque in Bonab—it appears that they had been employed in the architecture of columned spaces or buildings with columned iwans since at least the Safavid period. Beyond their wide prevalence in the region’s buildings, the column bases studied most closely resemble those of aristocratic houses in Tehran, such as the Mostofi ol Mamalek House, the emarat e badgir in Golestan Palace, the Ettehadie House, Masoudieh Mansion, and the Motamen ol Atteba House (Table 5). Notable comparable examples are also found in the column bases of Qajar period mosques and houses in other cities, such as the Seyyed Mosque and Javaheri House in Isfahan, and the Ariana Mansion in Kashan.














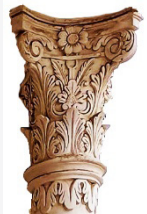










#### - Mirrorwork

Based on existing evidence, the use of mirrors in architectural ornamentation appears to have become common during the Safavid period and is

Table 4. Types of Column Capitals in the Iwans Studied and Comparable Examples. Source: Authors.

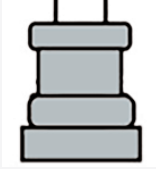

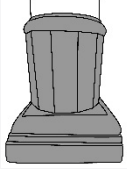

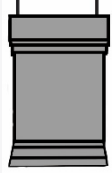

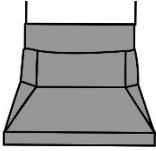

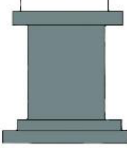

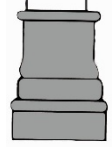

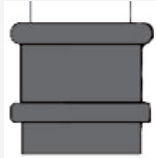



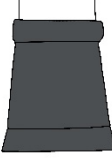



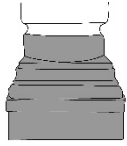

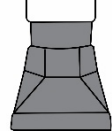

No.	Studied Capitals	Contemporary Comparable Example from the Qajar Period in Iran	Comparable Example in the West	No.	Studied Capitals	Contemporary Comparable Example from the Qajar Period in Iran	Comparable Example in the West
1	 Behnam House	 Arbab Hormoz House, Tehran (Late Qajar Period)	 Sainte-Chapelle, France (13th Century CE)	2	 Mojtahedi House	 Habibollah Mohandesi House, Shiraz (Late Qajar Period)	 Temple of the Sibyl, Tivoli, Rome (1st Century BCE)
3	 Ganjezadeh House	 Nasir al-Dowleh House, Tehran (Mid-Qajar Period)	 Notre-Dame Cathedral, Paris, France (12th Century CE)	4	 Sharbat Oghli House	 Mostowfi al-Mamalek House, Tehran (Late Qajar Period)	 Chelsea House and Church, London (Mid-19th Century CE)
5	 Ganjezadeh Hou	 Eyn al-Dowleh Mansion, Tehran (Late Qajar Period)	 Ferrara Cathedral, Emilia, Northern Italy (12th Century CE)	6	 Behnam House	 Shokouh al-Saltaneh House, Tehran (Mid-Qajar Period)	 Saint-Germain-des-Prés Church, Paris, France (12th Century CE)
7	 Heidarzadeh House	 Tohidi House, Shiraz	 Church of the Holy Apostles, Athens, Greece (Second Half of the 15th Century CE)	8	 Heidarzade House	 Capital from a Historic House, Yazd (Mid-Qajar Period)	 Remains of Column Capitals from Ancient Roman Structures, Ephesus, Izmir
9	 Sorkhei House	 Zinat al-Molk House, Shiraz (Mid-Qajar Period)	 Deerfield Estate Museum, Miami (Mid-19th Century CE)	10	 Rahimi House	 Ahmad Taqa House, Isfahan (Mid-Qajar Period)	 Patrician House, Helmstedt, Brunswick, Germany (16th Century CE)

Rest of Table 4.

No.	Studied Capitals	Contemporary Comparable Example from the Qajar Period in Iran	Comparable Example in the West	No.	Studied Capitals	Contemporary Comparable Example from the Qajar Period in Iran	Comparable Example in the West
11	 Sadaghiani House	 Moqaddam House and Museum, Tehran (Late Qajar Period)	 Maison Carrée, Nîmes, France (1st Century BCE)	12	 Sanjesh Museum / Salmasi House	 Bāghe Mellī Gateway, Tehran (Late Qajar Period)	 Cathedral of the City of Autun, France (13th Century CE)
13	 Nikdel House	 Nasir al-Dowleh House, Tehran (Mid-Qajar Period)	 Temple of Apollo, Circo (Circus Maximus), Rome — Reconstruction of the 1st Century BCE	14	 Mashroute House	 Residential House in Ferdowsi District, Tehran (Late Qajar Period)	 Church of San Cipriano, Valladolid, Spain (10th Century CE)
15	 Mashroute House	 Amin al-Sultan Mansion, Tehran (Late Qajar Period)	 St. Peter's Basilica, Vatican City, Rome (16th Century CE)	16	 Qadaki House	 AdinehBeyk House, Isfahan (MidQajar Period)	 Church of San Leonardo, Apulia, Italy (Early 18th Century CE)
17	 Amir Neẓām House / Qajar Museum, Tabriz	 Entrance Portal of Vank Cathedral, Isfahan (Mid17th Century CE)	 San Pietro in Montorio, Rome (Early 16th Century CE)	18	 Qadaki House	 Haj SamadKhan Mosque, Rasht	 Church of Chiusi, Tuscany, Italy — 13thCentury Reconstruction

believed to have been introduced to Iran from Italy (Maki Nejad, 2020, 188). It is likely that during the transport of imported mirrors, some pieces were broken, leading to their reuse in the form of the art

of mirrorwork—first employed during the reign of Shah Tahmasp in his Divankhaneh (audience hall) in Qazvin (Riazi, 1996, 11; Kiani, 1997, 239). With the transfer of the capital to Isfahan, mirrorwork

No.	Column base	Comparable example	No.	Column base	Comparable example	No.	Column base	Comparable example
1		 Mostowfi al-Mamalek House, Tehran, Late Qajar Period	2		 Emarat e badgir, Golestan Palace, Early Qajar Period	3		 Ettehadieh House, Tehran, Late Qajar Period
4		 Jameh Mosque of Zavosht Bonab, Early Qajar Period	5		 Masoudieh Mansion, MidQajar period	6		 MotamenolAtteba House, Tehran, MidQajar Period
7		 Ariana Mansion, Kashan, Late Qajar Period	8		 Mostowfi al-Mamalek House, Late Qajar Period	9		 Javaheri House, Isfahan, Late Qajar Period
10		 Qazi Mosque, Maragheh	11		 Seyyed Mosque, Isfahan, MidQajar Period	12		 Behnam House Meydan Mosque of Bonab, Early Qajar Period

became even more widespread in building decoration, and during the Zand period, it was used in the Divankhaneh of Karim Khan in Shiraz. Thereafter, the art of mirrorwork reached its zenith during the Qajar period, particularly under Naser al Din Shah, becoming one of the primary decorative forms of the period. From the mid-13th century AH, and especially into the early 14th century AH, mirrorwork—often in combination with plaster—gained full popularity with the importation of mirrors from Belgium and France during Naser al Din Shah’s reign. Its notable

applications in this era include Shams ol Emareh, the Golestan Palace, the shrine of Hazrat Abdol Azim in Rey, and the Dar al Siyadah of the Astan Quds Razavi complex (Aliabadi & Jamalian, 2012). In other words, from the mid-14th century AH onward, the use of mirrorwork expanded beyond religious architecture to secular spaces such as mansions, hotels, theaters, and private houses. Although pure mirrorwork in architectural decoration predates the Qajar period, its combination with plaster offered a novel ornamental element in the decoration of aristocratic residences









and royal buildings, reaching its height during the Qajar period. In this hybrid art, cut pieces of mirror are placed onto a plaster background or alongside plaster motifs.

In the Qajar period, adhesives such as boiled flour paste (sarishm), gum Arabic, date syrup, and grape syrup were used to affix mirrors to plaster surfaces. Consequently, the primary form of deterioration observed is moisture infiltration through joints, leading to detachment of mirrors from their plaster substrates (Mokhtarani, 1997, 154). In the houses studied, the combination of mirror and plaster is less frequent than other ornamental forms and is generally applied to the ceilings of iwan corridors. Three distinct designs are recorded, varying in relief from low to high: 1. Shamsheh (sunburst) in mirror plaster technique with an

oblique square knot (gereh ye morabba ye ghanās) at the center. 2. Combination of mirror and plasterwork on the lachaki (spandrels) terminating at the ceiling. 3. Shamsheh in mirror plaster technique with low relief (see Table 6, plasterwork of the Sorkhei and Amir Nezam houses). The most common technique in Qajar mirror designs is geometric knotwork, with the mirror plaster “jewel set” design (negīni) incorporating an oblique square knot being the most well-known. The execution of this knot shows slight differences in detail among the examples studied—for example, the jewel-set plaster knotwork with oblique square design in the iwan of the Amir Nezam House shows greater relief than the lachaki design of the Sorkhei iwan or the Shamsheh ceiling of the Amir Nezam iwan (Table 6).

In the execution of the mirror plaster Shamsheh framing

Table 6. Combination of Mirrorwork and Plaster Decoration in the Iwan Ceilings of the Sorkheh i and Amir Nezam Gorusi Houses, with Comparable Examples. Source: Authors.

No.	Combining Mirrors and Plaster in the Study Houses	Comparable Example	No.	Combining Mirrors and Plaster in the Study Houses	Comparable Example
1	 Ceiling of the Sorkhei Iwan — Shamsa Pattern with MirrorPlasterwork (ĀynehGach) and ObliqueSquare Geometric Knot at the Center	 Plasterwork and Mirror Inlay on the Ceiling of an iwan in the Tabātabā'i House, Kashan. Source: Authors.	2	 Combination of Mirror Inlay and Plasterwork in the Spandrels (Lechekis) Leading to the Ceiling of the Sorkhei Iwan	 Integration of Mirrorwork and Plaster Decoration in the Tabātabā'i House, Kashan, and Rahimābād Garden, Birjand. Source: Karampour, 2019, 103.
3	 Qajar Museum (Amir Nezām Groosi) — Shamsheh Pattern in GemSet MirrorPlasterwork (ĀynehGache Negini) with ObliqueSquare Geometric Knot	 Combination of Mirror Inlay and Plasterwork Known as GemSet MirrorPlasterwork on the Ceiling of the Narenjestan-e Qavam House, Shiraz. Source: Authors.	4	 Shamsheh Pattern in LowRelief MirrorPlasterwork (ĀynehGach) — Qajar Museum	 SheikhalEslām House, Isfahan. Source: Zahoorian, 2010, 150.

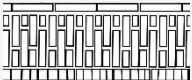

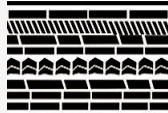





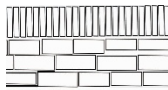

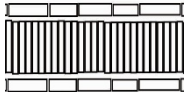

motifs of the studied iwans, a distinctly Iranian character is evident, with minimal traces of Western influence. Comparable examples of such mirror-plaster combinations can be observed in the Sar Qabr Agha Mausoleum in Tehran, dating to the reign of Naser al Din Shah (Aqayi Meybodi et al., 2023), as well as in the Rahimābād, Shokatābād, and Akbarieh gardens of Birjand (Karampour, 2019, 120–124), the Mirror Hall of the Golestan Palace in Tehran (Zohourian, 2010, 175–177), the Sheikh al Islam House in Isfahan (ibid., 150), the Narenjestan e Qavam House in Shiraz, and the Tabatabaei House in Kashan.

**- Brickwork**

Brick ornamentation in the Qajar period was widely employed in the decoration of diverse building types—from residential houses to mosques and royal palaces.

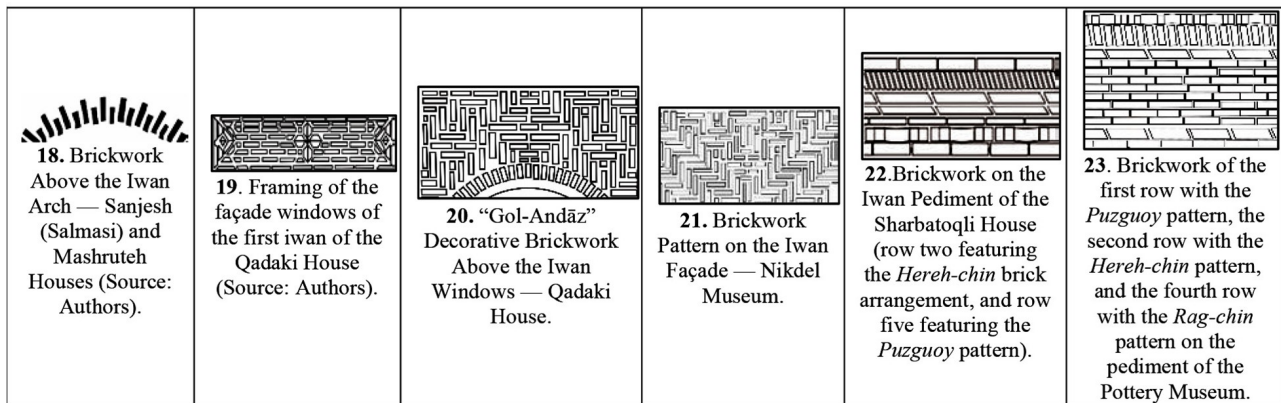
The extensive variety of brick patterns is attributable to the increasing importance given to exterior façades. In the houses studied, brick served both as the primary structural material of the iwans and as a decorative medium for their façades and framing. Among the ornamental forms recorded, brickwork exhibits the greatest diversity and repetition, appearing in 23 identified patterns across 7 main types: Hare chin, dandāne mūshi, Pozgūy, khoftē rāste (herringbone), gol andāz, simple bond rag chin, and khoftē rāste markazi (see Table 7 & Fig. 3). The Hare chin pattern, positioned at the upper iwan frieze, occurs most frequently and is comparable to that found on the façades of Qajar mosques in Tabriz, as well as in timber columned mosques of Bonab, Maragheh, and Azarshahr, and in Qajar houses in Tehran. The khoftē rāste pattern is

Table 7. Common Brickwork Patterns in the Iwan Facades of the Houses Studied and Comparable Examples in Qajar Architecture. Source: Authors.

Brickwork design on the iwan	Comparable example	Brickwork design on the iwan	Comparable example	Brickwork design on the iwan	Comparable example
 <p>1. Brickwork in “HerreChin” Bond Pattern in the pediment of the iwans of the Sadaghiani, Qadaki, and Mashrote Houses.</p>	 <p>Façade of the Imperial Bank of Persia, Tehran; Hāj Yusef Qazvini Mosque and Shohada Mosque, Tabriz; ChahārSu building, Azarshahr (Source: Authors) Jāme’ Mosque of Meydane Zavosht, Esmā’il Beyg, Zargaran, and Kabud Mosque, Bonab. Source: Authors; façade of a lateQajar residential house, Sa’ diye Jonubi Street, Tehran. Source: AbedianJelodar &amp; Sheikhi, 2022.</p>	 <p>2. Brickwork on the Ganjeizadeh House — “HerreChin”</p>	 <p>Ārbābe Ĥamāmyān House, Būkān. Source: Salimi &amp; Solhjoo, 2019</p>	 <p>3. Brickwork in “Khoftē Rāste” Bond Pattern, The façades of the iwans of Mojtahedi, Qadaki, Sadaghiani, and Heidarzadeh Houses</p>	 <p>Applied on the Pol-e Sangi Mosque, Tabriz (Late Qajar); the Jāme’ Mosques of Zavosht village and Zargaran, Bonab; ChahārSu building, Azarshahr; Zārīr Mosque, Maragheh, Source: Authors; Farhang House and Akbarieh Mansion, Birjand Source: Karampour, 2019, 98, 101); Qajar mansions of YengiKand and Qormish, Būkān Source: Salimi &amp; Shikhi Mollashahi, 2023</p>
 <p>4. Brickwork on the Frieze of the Behnam House — “HerreChin and ragchin”</p>	 <p>MidQajar period brickwork on the façade of the Imperial Bank of Persia building, Tehran (Source: Authors).</p>	 <p>5. Brickwork on the Frieze of the Western Iwan — Sadaghiani, Sanjesh, and Heidarzadeh Houses — “HerreChin and ragchin”</p>	 <p>MidQajar period brickwork on the façade of the Imperial Bank of Persia building, Tehran. (Source: Authors).</p>	 <p>6. Frieze Brickwork of the Nikdel House — “HerreChin”</p>	 <p>Roofline brickwork of the Qajarperiod, Shakeri House, Qom. (Source: Momeni et al., 2015)</p>

Rest of Table 7.

Brickwork design on the iwan	Comparable example	Brickwork design on the iwan	Comparable example	Brickwork design on the iwan	Comparable example
 <p>7. Brickwork on the Frieze of the First Iwan — Qadaki House — “HerreChin and ragchin”</p>	 <p>MidQajar period brickwork on the façade of the Imperial Bank of Persia, Tehran. (Source: Authors)</p>	 <p>8. Brickwork on the Frieze of the Sorkhei House Iwan — “HerreChin and ragchin”</p>	 <p>Mirzā Šādeq Dinvari Mosque, Tabriz, MidQajar period. Source: Authors</p>	 <p>9. Brickwork on the Frieze of the Qajar Museum and Mojtabehi House — “HerreChin and ragchin”</p>	 <p>Shohada Mosque, Tabriz, Late Qajar; Jāme‘ Mosques of AjabShir and Gogān, Azarshahr (Source: Authors)</p>
 <p>10. Brickwork Above the Windows of the Iwans — Ganjeizadeh, Mashrote House, Qajar Museum, Heidarzadeh, and Rahimi Houses</p>	 <p>Façade of a LateQajar residential house in the ‘Oudlajān district of Tehran (AbedianJelodar &amp; Sheikhi, 2022).</p>	 <p>11. Brickwork on the Frieze of the FirstRow Iwan — Rahimi House — “HerreChin”</p>	 <p>MidQajar period brickwork on the façade of the Imperial Bank of Persia, Tehran. Source: Authors.</p>	 <p>12. “KhoftēRaste” Bond Brickwork (Alternating StretcherHeader) Above the Windows of the Sorkhei House Iwan</p>	 <p>Interior elevation of the Āyatollāh Khosrowshāhi Mosque, Tabriz, Early Qajar period (Source: Authors).</p>
 <p>13. “GolAndāz” Decorative Brickwork on the Iwan Façade — Nikdel Museum and Qadaki House</p>	 <p>Mofid Āqā Mosque, Tabriz, Late Qajar period Source: Authors</p>	 <p>14. Hasiri Brickwork on the Iwan Façade ‘Alavi House</p>	 <p>Qajarperiod Qormish Mansion, Būkān Source: Salimi &amp; Shikhi Mollashahi, 2023.</p>	 <p>15. “KhoftēRaste” or Chevron Bond Brickwork on the Iwan Façade — Ganjeizadeh, Sanjesh, Nikdel, and Sadaghiani Houses.</p>	 <p>Shakeri House, Qom Source: Momeni et al., 2015; Hāj Yousef Qazvini Mosque, Tabriz; Mollā Rostam Mosque, Maragheh; Esma‘ilBeyg and Zargaran Mosques, Bonab. Source: Authors; Akbarieh Mansion, Birjand Source: Karampour, 2019, 101.</p>
 <p>16. “GolAndāz” Decorative Brickwork on the Iwan Façade — Behnam, Nikdel, Qadaki, and Mashrote Houses</p>	 <p>Mirzā Šādeq Dinvari Mosque, Tabriz, MidQajar period; Zarīr Mosque and Sheikh Mo‘ez alDīn Mosque, Maragheh Source: Authors; Borsian Jāme‘ Mosque. Source: Shekofteh et al., 2015.</p>	 <p>17. Composite “GolAndāz” Decorative Brickwork on the Iwan Façade ‘Alavi House</p>	 <p>Façade of a Late Qajarperiod house, VahdatEslāmi Street, Tehran. Source: AbedianJelodar &amp; Sheikhi, 2022; Exterior elevation of Sheikh Tāj alDīn Mosque, Maragheh (Source: Authors).</p>		



another common design, with parallels in the timber columned mosques of the region and in aristocratic houses beyond Tabriz, such as the Farhang and Akbarieh houses of Birjand (Karampour, 2019, 98, 101) and Qajar mansions in Bukan (Salimi & Shikhi Mollashahi, 2023). Patterns such as the herringbone (*hasiri*) and floral (*gol andāz*) designs possess long historical pedigrees and were widely used in the Qajar period. Comparable examples appear on the minaret of the Jameh Mosque of Barsiyan (Shekofteh et al., 2015), dating to the Seljuk period; in the Qajar mosques of Tabriz, as well as the timber columned mosques of Bonab and Maragheh; and in houses of other cities, including the Shakeri House in Qom (Momeni et al., 2015) and in numerous Qajar buildings in Tehran.

## Discussion

In Iranian-Islamic architecture, the iwan has always been closely related to environmental and cultural conditions, functioning as an enduring archetype whose form has been subtly adapted to suit the needs of different climatic regions. During the Qajar period, the iwan acquired a more public and versatile function, no longer confined to palaces, mosques, or madrasas, but extending to domestic architecture as well. The examination of the structure and form of iwans in thirteen Qajar houses in Tabriz reveals that they generally continue the precedent forms with minor modifications. Typically rectangular and enclosed on three sides, they have either flat beam or vaulted roofs, commanding a broad view of the courtyard and linking it physically and visually to

the principal interior spaces. These iwans are often oriented toward exterior views, flanked by dual staircases, and characterized by their elongated rectangular proportions. Compared to earlier periods, their dimensions and height are reduced. Some are located flush with the courtyard level, others a few steps above it, and some on upper floors opening to reception rooms. Structurally and ornamentally, columns are a defining feature—not an invention of the Qajar period, but inherited from pre-Islamic and Islamic architecture, with two column forms first common in Safavid and Zand examples, expanding in number and variety especially from mid Qajar times onwards (Safi Samgh Abadi, 2009, 133). Even modest houses of the period often incorporated them. The studied iwans are mainly rectangular with multiple arched bays and frontal columns, falling into two main types: *setāvand* iwans (open on three sides) and *sutoon āvand* iwans (closed on three sides, open only at the front). Their form depends on the surrounding enclosing walls, which define the iwan's spatial character. Typically located on the southern side of the reception hall (*tanbi*) on the main building axis, the orientation served both summer cooling and winter protection. Access generally moved from the courtyard to a passage or staircase and then to the reception space, on either the ground or upper floor. In summer, these iwans often served as shaded sitting areas for household members. An important contemporary consideration is the extensive restoration work undertaken in recent decades on their structural and ornamental elements. Interviews

conducted by the authors with plaster decorators of iwan friezes confirmed that design motifs were redrawn based on surviving, authentic Qajar models, with deliberate care to preserve original stylistic integrity. While deeply rooted in Iranian traditions, the structural and decorative vocabulary of these iwans also reveals Western influence—especially in projecting entrances with pediments (santuri), Corinthian capitals, and elaborate frieze plasterwork. Qajar examples display greater naturalistic density in motifs compared to earlier periods, often borrowing from Western sources. Compared to their historical antecedents, Qajar plasterwork shows meticulous detail, high variety, and sculptural relief that approaches three-dimensional modelling—departing from the Safavid use of gilding, colored plaster, and illumination, and often integrated with mirrorwork.

A comparative review (Table 3) shows the significant influence of ancient Iranian art, particularly Sasanian vegetal motifs, on Qajar plaster decoration—reflecting Qajar rulers' enthusiasm, notably that of Fath Ali Shah, for reviving ancient Persian glory through cultural policy (Zarei & Heidari Babakamal, 2016). Principles of symmetry, order, balance, and delicacy are clearly visible. Key divergences are found in the greater naturalism of Sasanian motifs compared to their Qajar counterparts, the increased density and eslimi integration in the latter, and differences in symbolic meaning—Sasanian vegetal motifs being strongly tied to religious beliefs, in contrast to the more secular decorative use in the studied houses. For instance, the lotus motif seen in the Salmasi House relates to numerous examples in Taq e Bostan and Ctesiphon reliefs of the Sasanian period (where the lotus under Mithra's feet in Ardashir's investiture scene symbolized farreh and imperial legitimacy (Hinz, 2006, 265). Other symbolic Sasanian motifs included palm leaves as emblems of fertility, wealth, and blessing (Ettinghausen, 1981/ 2000, 239) and grape vine leaves and fruit as symbols of life and abundance (Warner, 2007/2004, 589). The three-lobed palmette, known from major Sasanian sites such as Ctesiphon, Hesar, Kish, Bishapur, Tappe Mil in Varamin, Haji

Abad, and the Kangir i Iwan in Ilam, closely parallels motifs in the studied iwans (see Table 3). By contrast, the acanthus leaf motif—associated with life after death (Gromort, 1996/2001, 90) and introduced from Ancient Greece—reflects more of a Western import, with its frequent use in Greek Corinthian capitals.

Brickwork, alongside other ornamentation such as around pier edges and window arches, forms a major decorative component. According to Table 7 and Fig. 3, 23 brick patterns in the studied iwan façades were identified. Some derive from earlier prototypes (at least Seljuk), others from Qajar period conventions, and some are original, locally created designs. Improvisational execution without fixed repetition in certain examples indicates a high level of local artistic innovation. The study of ornamental architecture in the Qajar houses of Tabriz reveals several notable innovations:

1. Framing the windows of iwans with decorative brick bands.
2. Application of diverse brick patterns in iwan façades.
3. Use of traditional Iranian brickwork and plaster motifs in façade design.
4. Strict symmetry in plaster and brick designs.
5. Integration of mirrorwork and plaster in geometric knot work patterns, particularly in mid to late Qajar iwans.
6. Dense, all-over decorative coverage without focus on a single dominant motif.

## Conclusion

The variety of ornamental elements in the Qajar houses of Tabriz reflects the elevated social and cultural standing of their owners and served as a means of projecting such status in ways aligned with religious and cultural values. While at first glance Qajar ornamentation appears heavily influenced by the West, its essential Iranian characteristics—combined with local craftsmanship—remain fully discernible in columned iwans, plasterwork, mirror plaster integration, and brick patterns. Among the decorative forms examined, plasterwork emerges as the most

important and distinctive adornment of Qajar façades in Tabriz. A key feature is its democratization: now not limited to aristocratic settings, but also present in the homes of ordinary citizens. The frequent use of the plaster negīni technique with oblique square knots in toranj ceiling patterns is another noteworthy innovation. Further findings indicate a strong prevalence of naturalistic vegetal motifs, vase designs with flowers or fruit, highly relieved frieze plasterwork, Corinthian capitals with acanthus leaves, and Western-influenced pediments—alongside palmettes and grape vine motifs inherited from ancient Persian art. Such features are inseparably connected both to the revival of Iran's ancient cultural heritage and to the mid-Qajar economic and cultural expansion of Tabriz, including its growing trade links with Europe.

## Conflict of Interest

No conflict of interest has been declared by the authors.

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**HOW TO CITE THIS ARTICLE**

Heidari Babakamal, Y., Saki, S., Nejad Ebrahimi, A & Nemati Babaylo. (2026). A Typological Study of Architectural Ornaments in the Columned Iwans of Qajar Houses in Tabriz. *Bagh-e Nazar*, 22(151), 5-26.

DOI: [10.22034/bagh.2025.516434.5795](https://doi.org/10.22034/bagh.2025.516434.5795)

URL: [https://www.bagh-sj.com/article\\_230851.html?lang=en](https://www.bagh-sj.com/article_230851.html?lang=en)

