PAYKAREH
Volume 14 Issue 40 Summer 2025 Pages 37-57

Original Research Article

New Findings in Explaining the Artistic Features of Wood Carving in the Timurid Style

Alireza Sheikhi[1]

1. Associate Professor of Handicrafts, Faculty of Applied Arts, Iran University of Art, Tehran, Iran.
Email: a.sheikhi@art.ac.ir

Received: 27 April 2024 Revised: 19 March 2025 Accepted: 8 April 2025

Abstract

Introduction: Following the turmoil of the late 8th century A.H., Iran experienced relative peace due to the efforts of Shahrukh Mirza and his successors. Since the Timurids' efforts were focused on the prosperity and flourishing of the country, they tried to elevate all aspects, including practical and theoretical arts. In this context, architectural and decorative arts, including wood carving, followed a path where prominent features can be observed. This study aims to elucidate the Timurid wood carving art in Transoxiana, Khorasan, Tabaristan, and the central Iranian desert. Therefore, it seeks to answer the following question: «What are the characteristics of wood carving art in the 9th and early 10th centuries A.H. in the Timurid Iran?»

Research Method: The present study is fundamental in its objective and has a descriptive, analytical, and historical nature in terms of its methodology. The study population consists of wooden artifacts from the 9th and early 10th centuries A.H. in Iran. The sampling method included all accessible remaining works from the 9th century in Iran, comprising twenty doors, twelve grave boxes, and three pulpits (Minbar), totaling thirty-five historical artifacts, which were mainly collected through fieldwork. The analysis of the works is based on the formal and technical characteristics of the woodcarving from that historical period.

Findings: The forms of Toranj, Sineh-Baz, and geometric girih, fish scale motifs, three-part two-lobed flowers, sunflowers and windmills, sprawling plant branches, the combination of arabesque and khatai in the inscription and plant garland, coniferous heart flowers, and tulips on the margins of Timurid wooden works are among the prominent motifs. Additionally, emphasis on the numbers six, eight, ten, twelve, and sixteen was observed in various sections, all of which were executed using the concave method of paving.

Conclusion: The Timurid wood carving can be considered the golden point of Iranian wood carving in terms of design and the method of crafting and polishing wooden works.

Keywords

The 9th Century A.H., Timurid Territory, Wood Carving, Timurid Carving Style

How to cite this article: Sheikhi, AR. (2025). New Findings in Explaining the Artistic Features of Wood Carving in the Timurid Style. *Paykareh*, 14(40), 37-57.
DOI: https://doi.org/10.22055/pyk.2025.19999

©2025 by the Authours.This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0 license)
https://creativecommons.org/licenses/by-nc/4.0

Introduction and Problem Definition

After two major invasions in the 7th and 8th centuries A.H., Iran experienced relative peace in the 9th century A.H. This period of relative peace was mainly due to the mindset of the rulers of that time in Iran. Political and religious tolerance and forbearance provided a refuge for local rulers, allowing settlements to once again turn towards prosperity. In this context, many buildings were constructed, which, of course, cannot be overlooked for their political purposes. Architectural and decorative elements, including wooden arts, were also not exempt from this narrative. What remains are primarily wooden doors, chests, and tables, which, despite the wood's susceptibility to decay, have survived to a commendable extent due to their use in sacred places. Since the government also viewed these works in line with its political goals and consolidation, it was natural for libraries to influence the type of construction and finishing of wooden artifacts through the channels of the royal workshops. These works have spread across a wide area from Transoxiana to Khorasan, Tabaristan, and the borders of the central Iranian desert. Recognizing the characteristics of 9th-century wood carving in Iran is considered a significant turning point in this art form, which involves documenting, analyzing, and tracing the wood carving works of Iran. Understanding the visual character of Timurid wood carving in comparison to other historical periods, considering the method of concave carving, is essential for the research. The present study aims to investigate the characteristics of wood carving art in the geographical region of Iran during the Timurid era and to seek answers to the following question: «What are the characteristics of wood carving art in the 9th and early 10th centuries A.H. in the Timurid Iran?»

Research Method

The research is fundamental and presents a unique style and manner of wood carving from the 9th and early 10th centuries A.H. This study has a descriptive, analytical, and historical nature. The motifs specific to this period were identified and categorized based on the author's experience, and they were analyzed accordingly. The method of data collection is primarily library-based, with a focus on fieldwork, which involves photographing historical wooden artifacts and utilizing researchers' archives. The research community includes wooden artifacts from Transoxiana, Khorasan, Tabaristan, and Isfahan. The sampling method was purposive, involving twenty doors, twelve grave boxes, and three pulpits (Minbar). Therefore, all accessible works in Iran were photographed up close, and the remaining works in Transoxiana were extracted from the internet and serve as the basis for study (Table 1).

Table 1. The research population under study in the collection of remaining works from the Timurid period includes 20 doors, 12 grave boxes, and 3 pulpits. Source: Author.

Type	Place & Date
Door	The Jame Mosque of Azghad, 834 A.H. The Jame Mosque of Gorgan, 870 A.H. Imamzadeh Taher Kiyakola in Babol, 9th century The tomb of Amir Samarkand, 808 A.H. The doors of the Musalla complex are preserved in the Great Khorasan Museum from the 3rd decade of the 9th century. Imamzadeh Ismail, Isfahan, 875 A.H. The shrine of Abu Bakr Taybadi, 9th century The inner doors of the main dome and the storage of the Sheikh Ahmad Jami complex in Torbat-e Jam, 9th century. Imamzadeh Abbas, Sari, year 857 AH. The Museum of Ahar, 9th century

Type	Place & Date
Grave Box	Imamzadeh Hossein, Sari, 890 A.H. Door in the warehouse of Imamzadeh Abbas, Sari, 9th century Imamzadeh Ibrahim Babolsar, 841 A.H. Imamzadeh Qasem Babol, 890 A.H. The shrine of Seyyed Vaqhef, Natanz, 825 A.H. Imamzadeh Noor, Gorgan, 865 A.H. Imamzadeh Saleh, Marzroud, Sari, 846 A.H. Imamzadeh Yahya, Sari, 849 A.H. Imamzadeh Mirfendreski, Aliabad Katul, preserved in the Golestan Museum, 874 A.H. Imamzadeh Sultan Mohammad Tahrir, Amol, 9th century Dervish Fakhruddin, Babol, 833 A.H. Baba Rukn al-Din, the village of Khosroyeh, Farooj, 897 A.H. Imamzadeh Saleh, Marzroud, Sari, 846 A.H. Imamzadeh Sefidchah, Behshahr, 850 A.H. Imamzadeh Ibrahim, Babolsar, 841 A.H. Imamzadeh Zain al-Abidin, Sari, 905 A.H. Imamzadeh Ibrahim, Amol, 925 A.H. Shahzadeh Hossein, Sari, 847 A.H. Seyyed Abu Ja'far Thayeri, Chaboksar, 855 A.H. Sheikh Bidawazi in the Mofakham Museum of Bojnord, 9th century A.H. Harooniyeh in the Museum of Ruins, Mashhad, 834 A.H. Taj al-Mulk in the Museum of the Rhode Island School of Design, USA, 9th century
Pulpit	The Jameh Mosque of Khaf, 908 Goharshad Mosque, Mashhad, 9th century The Jameh Mosque of Gorgan, 870s

Research Background

There are limited resources specifically regarding the style and technique of Timurid wood carving, as well as the execution of its motifs. Since the approach of the present research is visual, references that examine the political and cultural aspects of the Timurid era have been omitted. In their article entitled «Comparative Study of the Quality of Construction and Decoration of Wooden Mihrabs in the Islamic World», «Madhushiyan Nezhad and Askari Alamuti» (2025) have conducted a formal examination of wooden mihrabs from the 4th to the 10th century A.H. In his doctoral dissertation etitled «Stylistics of 9th Century A.H. Wooden Artifacts in Mazandaran (Case Study: Funerary Buildings)», «Madhushiyan Nezhad» (2020) discusses the recognition of form and design in wooden artifacts of the mentioned period in Mazandaran. « Aube» (2017), in the article entitled «Style and Method in the Heritage of Fakhr al-Din Najjar and His Son Ali in Mazandaran» traces the style and manner of the master Najjar families and wood carving in Mazandaran. In his master's thesis entitled «The Construction of the Quran Stand Based on the Wood Carving of the Timurid Period», «Karimian» (2012) has examined the role and technique of some Timurid works from Mazandaran and Isfahan. In his doctoral dissertation entitled «Examining Power Relations in the Era of Shahrukh Timurid and Their Reflection in Khorasan Woodwork», «Sheikhi» (2016) has focused on the intellectual and visual exploration of 9th-century Khorasan works. «Kalantar» (2009) focused on the content of inscriptions in his master's thesis entitled «Reflection of Shia Beliefs in Religious Buildings of Mazandaran and Until the End of the Qajar Period». In the master's thesis entitled «Study of Contemporary Woodcarving Style in Prominent Regions of Iran (Isfahan, Golpayegan, Abadeh Shiraz, and Sanandaj)», «Sheikhi» (2008) focused on the technical characteristics of historical periods in Iran, and also in the article entitled «Historical and Comparative Assessment of Technical

Features and Carving of Wooden Doors in the Museum of Great Khorasan», he attributed them to the 9th century A.H. In his doctoral dissertation entitled «Aesthetic Values of Safavid-Style Wood Carving», «Kiyanmehr» (2004) examines the political, social, and visual characteristics of wood carving during the Safavid period and briefly touches upon the preceding era as well. «Pakyari» (2003) and «Shoja Nouri» (1998), in their master's theses entitled «The Evolution of Wood Carving in Isfahan from the 4th to the 12th Century A.H.» and «A Study of Wood Carving in Iran up to the Safavid Period» have examined the historical aspects of this art in the Islamic era. However, despite the mentioned studies, there has been little systematic research on enumerating the visual characteristics of the Timurid style and identifying its components, which is significant from this perspective.

Flourishing of Art During the Timurid Period

Timur and his successors' distinct perspective on guilds and religious figures led to the preservation of many religious edifices, which were repeatedly restored and revitalized, as documented in historical records. They had a close relationship with skilled craftsmen and artists, always supporting them and benefiting from their talents in their governance. «Ibn al-Arabi», who was present during Timur's invasion of Damascus, stated: «He gathered all those skilled in professions such as weaving, sewing, carpentry, stone carving, veterinary medicine, tent making, painting, bow making, falconry, and similar crafts, and sent them with his troops to Samarkand» (Ibn al-Arabi, 1977, 165). Timur, as a patron, emphasized the grandeur of the works and played a fundamental and significant role in organizing the principles of this style (Wilber & Golombek, 1995, 256). It can be said that the most important contribution and assistance of the Timurids in the realm of architecture was in the decoration of buildings. Calligraphy, particularly with a focus on the Quran, was regarded as a virtue, and its various forms had a direct connection to the worldview and perspective of the Sufis. From the customs and traditions of painting and calligraphy at the end of the 8th century A.H., the gilding of manuscripts with naturalistic designs, accompanied by elegance and attention to detail, was prevalent. «This style has been used for decorating tombstones, ornamental wall frames, columns, and door arms in the works of Transoxiana and Samarkand» (Scerrato & Grube, 1997, 68). It should also be noted that the goal of architecture enthusiasts was not merely to create beauty, but to achieve a kind of grandeur and magnificence that reflected the power of the dynasty. «Scale and luxury were two major arts to display the grandeur and exalted status of the patron» (Wilber & Golombek, 1995, 277). The choice of plant decoration was motivated by the display of paradise, which is a central idea in Islam. In the 15th century C.E./9th century A.H., an interest in a domesticated tree of life emerged. A tree that has emerged from a pot or decorative planting. This type of Tree of Life had gained widespread popularity, especially in Central Iran and in Turan during the 16th century (Wilber & Golombek, 1995, 279-280). In support of this claim, «Gonzales» mentions the presence of various masters in decorating the Aghsaray building (Clavijo, 1958, 214) or the lavish feasts of Timur, which were noted for their silk tents and canopies, golden and silver thrones, and craftsmen from different lands at work (Hafez Abru, 2001, 1027-1028). Shahrukh, with his gentle and balanced nature, was a generous builder who marked the golden age of the Timurid era in terms of perfection and knowledge; so much so that his era is referred to as the period of the revival of science and art. Various sources have spoken of Shahrukh's balanced temperament and kingship. Indeed, the presence of cultured and artistic princes such as «Baysunghur Mirza» and «Ulugh Beg», as well as the court of Ibrahim Mirza and others, was undeniably influential in this progress. In summary, the religious buildings and places favored by the

Timurid rulers were sanctuaries whose restoration and decoration were hoped to attract the public's affection and to benefit from the blessings of those sacred sites. The construction, renovation, numerous repairs, and decorations placed on the buildings' surfaces indicate authority, mastery, and expertise in various arts, which were knowingly and consciously entrusted to capable and knowledgeable individuals. The harmony and balance, and in some places the emphasis on special sections, indicate the artistry and mastery of the governors over the custodians of the matter. They, who were devoted to governance and religion, have rightly and appropriately tested and nurtured the matter.

Wooden Artifacts in the Timurid Period

Although a considerable number of wooden artifacts from the pre-Timurid periods have not survived compared to other architectural decorations, they nonetheless indicate a significant transformation and the pinnacle of Iranian woodcarving art. An art form that emerged with an Iranian identity on chests and doors from the 9th century A.H. An important point worth mentioning in this regard. Orientalists have made egregious errors in the field of wood carving art and its examination and classification, and due to their ignorance of the hidden aspects of Iranian identity and culture, they have gone astray. For example, «Pope» believes: «Since wood is not abundant in the land of Iran, this art did not flourish and develop much, and none of the Iranian box makers are comparable to the carpenters of 18th century Italy and England» (Pope, 2011, 112). In travelogues, little attention has been paid to wooden artifacts in the forms of chests, doors, and pulpits, which have been mentioned sporadically, with only brief descriptions limited to the names of the woodcarver, supporter, and motifs. The remaining works in the shrine of Qasim ibn Abbas in the Shah-i-Zinda complex of Samarkand date back to 808 A.H., the doors of the Amir Tomb in Samarkand, or the door of the Louis Mosque in Turkestan from the late 8th century A.H. (Mousavi Bojnourdi, 2014, 757) and other examples in Khorasan (Sheikhi, 2016), as well as the products of the Natanz region and its sphere of influence in Abiyaneh, Kashan, Qom, Isfahan, and the holy shrines of northern Iran, especially Mazandaran, and even Azerbaijan and Hamadan, indicate an art that holds special significance and narrates a unique sanctity. The local tradition of carving significant works in Central Asia continued until the Timurid period. Works such as large doors, mihrabs, pulpits, enclosures, and commemorative coffins indicate this. The carvings are deeply and precisely detailed (Scerrato & Grube, 1997, 60). These works are primarily associated with sacred places, accompanied by admirable delicacy. «Visiting the tombs of saints brought blessings to their pilgrims and instilled a sense of humility in them». These, which are referred to as mausoleums, shrines, and sometimes tombs, are collectively known as «Baqe al-Khayr», meaning the place of good deeds (Wilber & Gombak, 1995, 86). Therefore, the first part that the pilgrim comes into contact with is the entrance or threshold of the structure, which includes a wooden door and the shrines. Although it is not intended to delve into the content of the motifs in this context, it is worth noting that these places and their motifs, in terms of form, number, and placement, reflect the growing interest in the tombs of the Sayyids and the increasing influence of Shia religious productions. The concept of the promised paradise, which has long been in the imagination of Iranians and has been viewed by poets from various angles, is described as «a silent unit and a calm sanctuary, a place where flowers, water, and trees can be described with affection, and ultimately an example of royal grandeur» (Wilber, 1969, 53) manifested on the wooden doors and shrines. Plant decorations with abstract positions and calligraphy are noticeable. «All decorations, whether floral or foliate, abstract or calligraphic, adhered to the rules of symmetry, reflection, repetition, and geometric order... Dividing shapes into infinite parts

creates a multitude of new forms; thus, like the diversity of voices in an orchestra, it brings about greater unity and richness» (Wilber & Golombek, 1995, 172). As mentioned, although the art of wood carving had flourished in earlier periods, based on the type of design, motifs, and techniques used during the Timurid era, especially from the 9th century A.H. onwards, it can be said that the peak of wood carving art or the golden age of wood carving in Iran was experienced. It must be acknowledged that only a few researchers have dedicated themselves to studying wood carving in Iran, especially during the Timurid period. This matter is also evident and apparent in the overall subject. The use of terms such as bas-relief or low relief, and high relief, which originated in Western art and are still in use today, has no relevance to Iranian woodcarving art. What occurred in the Timurid era was the discovery of the Iranian character of wood carving art. The intricate twists and dense patterns, which were the legacy of the Mongol steppe dwellers' art, gradually blended with Iranian designs and motifs. The concave paving of the motifs matured and ripened, reaching its peak with the foundation of Iranian symbols and myths. The following discussion focuses on the visual characteristics of wood carving art in the Timurid era, informed by the author's twenty years of experience and extensive field observations of Iranian wood carving art.

The Method of Jast (Relief Carving) and Tij (Cutting/Carving) in the Timurid Era

From the late 8th century A.H., wooden works were carved with greater depth. The works were placed within a rectangular frame, following the arched frame, where the background depth ranged from eight to twenty millimeters, and their concave polishing was pursued with seriousness. The depth of the polishing was between 2 and 7 millimeters, and the walls were carved vertically in a pyramidal shape. From the early 9th century to the early 10th century A.H., various regions of Khorasan, especially Herat, Samarkand, Turkistan, and Khoqand, became major centers of wood carving. Plant decorations, soft and tall stems, and single flowers reveal the heritage of the Far East in the wooden works of Turkistan. Considering the examined issues, the Timurid era might be regarded as the golden age of this art. The combination of circular motifs and knots has brought balance and harmony, which is likely one of the reasons for the great depth in the works of this period, as well as the prevalence of two- and three-part plans. Another type of treatment is the three-petal flowers, which are rendered with two concave lobes (in the Ilkhanid period, they were rendered with a single lobe). Additionally, the arabesques of this era are crafted in a way that gives them a closer resemblance to natural elements. The Tij technique gained popularity in woodcarving works with the reduction of the number of surfaces during the late Timurid period. Three levels were reduced to two or one level, and the carved objects were finished with less depth. The depth of the negative background of the work was reduced to two to seven millimeters. The depth of the pavement elements of the design was reduced or polished flat, making it visually more harmonious with the background. In the Safavid era, wood carving spread from the regions of Khorasan to Mazandaran, Gilan, Zanjan, Abadeh, Kashan, and Isfahan. In this era, doors were made based on frames and panels, with intricate geometric patterns and latticework. The motifs were designed with two thick borders (Hamil) and became lighter in execution, with an under-and-over pattern. The latticework of wood and the use of animal motifs and multi-petal flowers intertwined with each other became popular with the concave technique. Fish scales were used instead of a background in the knot fragments themselves. The Nasta'liq script and concave tile work became popular, examples of which can be seen at the entrance of the Shahzadeh

Hossein shrine in Qazvin and the Imamzadeh Gugod. Wood carving with ebony and ivory is a traditional craft, although the desire to create objects and carve ebony has existed since ancient times, gaining momentum in the late 15th century (Varjavand, 1972, 28).

Artistic Features of Wood Carving in the Timurid Era

Although growth and development have been observed in many arts, it has been particularly remarkable in architectural embellishments. In this category, the wooden works that were primarily installed on buildings with various uses should be mentioned. In this regard, considering the extensive field studies conducted over a wide area from Tabaristan to Khorasan and Isfahan, it must be acknowledged that wood is not a durable material and, unlike other arts such as tile work that have remained, it has not been able to escape the influence of natural and human factors. The studied works are elements embedded in the structure of religious architecture; therefore, due to the sanctity of the place, they have been respected and appreciated, and have suffered less damage. Therefore, it should be noted that doors, grave boxes, pulpits of mosques, and shrines have been examined, from which the characteristics of the Timurid style of wood can be derived. Additionally, the guild system, in which a considerable number of apprentices are trained by a master, including members of the master's family, was well established in Iran. This situation is particularly evident in the case of wood carving and the wood industry in Mazandaran (Wilber & Golombek, 1995, 106). In books such as «Al-A'laq al-Nafisiyah» by Ibn Rusta, «Ahsan al-Taqasim» by Al-Muqaddasi, and the travelogues of Marco Polo and Clavijo, there is little noteworthy content regarding wooden artistic works. Before enumerating the artistic characteristics attributed to the Timurid period, it is essential to mention its carpentry method first briefly. In terms of construction or carpentry, it should be noted that all wooden works from the Timurid period have been crafted using the frame and panel method. The doors of the Imamzadehs, which are primarily found in the region of Tabaristan, are crafted as bifold doors. Each fold of the door includes a head frame (two square frames on the sides and one elongated rectangle in the middle). In mosques, such as the door of the Azghand Mosque in Torqabeh, Mashhad, or the door of the Jameh Mosque in Gorgan, in a larger size, there are two leaves, each consisting of five frames, with two rectangular frames paired at the top and bottom and a horizontal elongated rectangle in the middle. The wooden boxes are arranged in a rectangular cuboid shape, featuring rectangular and square frames in various forms, showcasing the carpentry skills of the craftsmen of that era. In art history, there are different methods for classifying history. Sometimes, the continuous flow of secular events is divided into various periods, and sometimes into styles, schools, and movements (Hauser, 1984, 252). According to «Winckelmann», «style is a specific culture passed down from generation to generation, distinguished by another that corresponds to the same civilization, which undergoes transformation or change» (Minor, 2008, 168); in other words, he considers art to be dependent on history and its transformations, resulting from the changes in the cultures that create it (Adams, 2011, 38-37). «Jacob Burckhardt» introduced cultural history in the 19th century, and «Gottfried Semper» attributed general value and aesthetic expectation to technical motivation (Venturi, 2005, 278). After this materialistic view of function, materials, and technique, thinkers like «Riegl» and «Wölfflin» engaged in discussions from a visual perspective. According to «Wölfflin», art history is based on the premise that artistic goals and stylistic tendencies collectively constitute an era, and the names of artists should be disregarded. Based on this premise, style has a geographical scope, racial characteristics, and specific historical periods (Madhushiyan Nezhad, 2020). It is worth noting that among Iranian scholars, style also carries a distinct meaning. Style is

a particular manner of expression unique to each speaker (Zarrinkub, 1993, 175). «Bahar» considers it a specific method of perception and expression of thoughts (Bahar, 2007, 5). Style is a unity observed in an individual's works (Shamisa, 2009, 16). In summary, it can be said that style refers to a specific manner of form and motif characteristic of a particular historical period and geographical region. From extensive field studies conducted over fifteen years and the characteristics and features of wood carving art in the Timurid era in various sources, it can be inferred that form, design (text and margin), and technique have specific visual manifestations in the wooden works of this period:

1. Form: The form, which encompasses the overall perimeter of a visual element in the arts, has been distinctly utilized in examples of Timurid wood carving.

1.1. Bifold Doors with Two, Three, Five, and Seven Frames: Typically, three-, five-, and seven-frame doors are crafted differently on each fold, depending on their intended use. Generally, in the construction of mosques, which serve a more public and significant role as both political and religious centers, large doors with five or seven panels are used. In contrast, smaller structures like shrines often feature doors with three panels. For example, one can refer to the door of the Azghad Mosque in Torghabeh, Mashhad, which features three large frames on each fold, and the Jameh Mosque of Gorgan, with five frames on each fold, designed to accommodate a larger number of people. The square-domed doors, similar to those of the other Babol Museum (861 A.H.) should also be mentioned, which can be counted among the single doors (Fig 1).



Fig 1. From the right, in the Gorgan Mosque, in the Azghad Mosque, and in the Imamzadeh Taher Kiyakala in Babol. 9th century A.H. Source: the author. Source: Author.

1.2. Toranj (Medallion) and Mihrab Forms: The Toranj form, in either a vertical or horizontal orientation, is prominent on door frames and especially on wooden boxes from the 9th century A.H. The toranj has appeared in various forms and can be considered one of the distinctive visual elements of this period. The Toranj (Medallion) is sometimes adorned with one or two Sar-Toranj on the frames. The mihrab form appears throughout the design in a geometric and rotating manner on wooden doors, which in the geometric form primarily culminate in the pabariq motif. This form is more prominent on the middle frames or single-frame doors (Fig 2).



Fig 2. From the right: The curved and geometric Toranj form on the doors of the tomb of the Amir of Samarkand, 808 A.H. Source: Collection of Musalla doors in the Great Khorasan Museum (third decade of the 9th century A.H. and Imamzadeh Ismail Isfahan, 875 A.H.). Source: Author.

1.3. Armbands and Four, Six, and Eight-Petal Flowers: This form is depicted on large-sized doors, door frames, and boxes. An example of this form is prominently featured in the tile works of the Timurid period. This form in the margin is observable in the shape of long sixes, armbands, eight or elongated Shamsa accompanied by hexagonal patterns or four and six-petal flowers (Fig 3).



Fig 3. An armband on the main frame of the Timurid door. Preserved in the Sheikh Jam collection warehouse and also on the edge of the door of the Sheikh Abubakr Tayebadi shrine in Taybad. Source: Author.

1.4. Chalipa: It is one of the common forms of the Timurid period in wooden works. The cross form is depicted in square frames on boxes such as the Baba Rokneddin box from the village of Khosroyeh Farooj, the Fakhruddin Darvish box from Babol, or abstractly on the door of Imamzadeh Abbas in Sari (Fig 4).



Fig 4. From the right: The Chalipa on the entrance door of Imamzadeh Abbas Sari, 857 A.H., in the Ahar Museum, the box of Dervish Fakhruddin Baboli 833 A.H. and a frame on the box of Baba Rokneddin in the village of Khosroyeh, Farooj, 897 A.H.Source: Author.

1.5. Sineh-Baz: In a general form and in various styles, it is evident in the wooden works of the Timurid period. Forms such as the tulip flower, carved on the collection of Musalla doors, have been expanded in a mirror-like manner on the Harooniyeh box and in a rotational and reflective manner on the Imamzadeh Saleh Marzroud box. The use of this motif in the tiles of this period is also evident (Fig 5).



Fig 5. A Sineh-Baz piece on the middle frame of the collection of preserved doors in the Great Khorasan Museum and one of the lower frames of Imamzadeh Saleh Marzroud 846 A.H. Farahabad, Sari. Source: Author.

2. Motif (Text or Inscription and Margin): What distinguishes the wooden artifacts of 9th-century Iran from other historical periods and gives them a unique character is the motifs. Whether in the inscription or the main frame, or in the margins, the motifs have prominent manifestations that can be considered related to a specific and unique style from this perspective. Although these motifs may have been used in the early 10th century, it should be noted that their continuity into the subsequent period until the formation of an independent character in later eras is a natural and certain matteris

2.1. Fish Scale: This motifs a commonly used in the corners of frames, particularly in wooden boxes. It has also been used in pairs as a border on wooden door frames. This motif has been carved in a regular and consecutive manner with a concave surface, and in some frames, such as the pulpit of the Jameh Mosque of Khaf, it has also been adorned with a battlement. This motif has been used in the frames to fill the background and, of course, to highlight the main frame (mostly a medallion) (Fig 6).

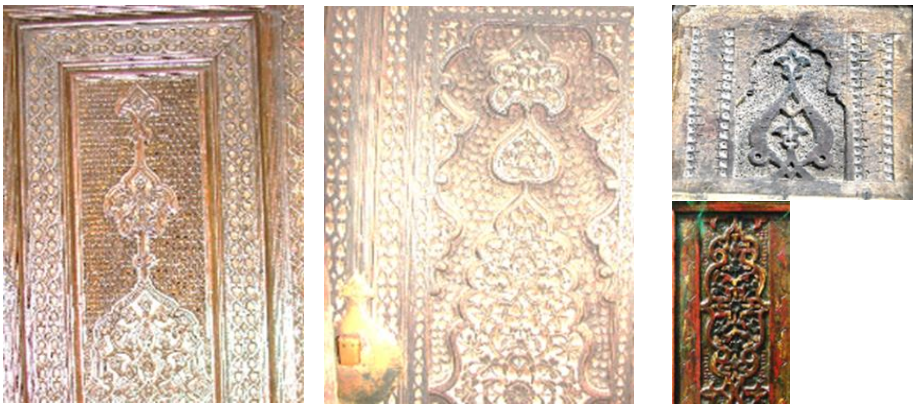


Fig 6. From the right: Fish scales in the background of the frame of the Imamzadeh Hossein Sari door, 890 A.H. and the storage of Imamzadeh Abbas in Sari, a frame on the pulpit of the Jameh Mosque of Khaf in 908 A.H., and the background of a frame in the shrine of Imamzadeh Sefid Chah in Behshahr in 850 A.H. Source: Author.

2.2. Two and Three-Petal Paired Flowers, and Four-Petal Simple and Interlaced: It must be acknowledged that the Khatai flowers, which exhibit a strong inclination towards naturalism, have played an unparalleled role in the Timurid wood carving art. Its use in Timurid Khatai design is predominantly widespread in the crown or headband of Khatai, depending on the form of the environment. These flowers are designed, typically with a structure and featuring in pairs of petals, with a concave surface using a Jast technique. It should also be noted that this flower has been executed in a four-part form, either simply or with varying degrees of interlacing, but its prominent feature is the paired three-lobed structure. This motif is more prominent in the context of the toranj frames and geometric sections of the knots (Girih). The delicacy in design and execution in the art of wood carving evokes admiration, a quality also observable in Timurid tiles (Fig 7).



Fig 7. From the right: Three-petal flower on the door and box of Imamzadeh Ibrahim in Babolsar, 841 A.H. The interlaced and simple four-petal flower design on the box of Imamzadeh Zain al-Abidin and Shahzadeh Hossein, Sari, 847 A.H. Q. Source: Author.

2.3. Sunflower and Pinwheel: Frames designed in the form of squares, medallions, and knot-like motifs with Khatai all have a central point of gravity that starts from a round flower with six, eight, ten, twelve, or sixteen petals. This sunflower is designed either in a completely simple form or as a clockwise spinning top, with Khatai branches and leaves branching out from it and growing on the surface of the work. This flower is designed in a relatively large size compared to other motifs such as flowers and leaves, and in a way, it has brought the principle of balance and harmony to the frame. The sunflower and Pinwheel, due to their concave carving style, emphasize the lines of the edges and borders in execution,

which in turn creates a clear manifestation in the design and bestows a solid strength along with grace to the artwork (Fig 8).



Fig 8. Sunflower and pinwheel motifs on the central frame in Imamzadeh Abbas Sari, Fakhruddin Babol 833 A.H., and Imamzadeh Ibrahim Amol 925 A.H. Source: Author.

2.4. Pomegranate Flower on the Lozenge or Six- and Eight-pointed Shamsa Frame: In square frames or the center of other frames, primarily on wooden doors, the overall form of a lozenge or a six- or eight-pointed Shamsa is designed on a Khatai or Arabesque background, adorned with a pomegranate flower at the tips of the lozenge angles or the petals of the six- and eight-pointed Shamsa. The Shamsa and diamond are designed in a curved form and are complete in all the studied examples. However, the designer made a deliberate choice in depicting the pomegranate flower, designing the main pattern in a large scale. In this case, the pomegranate flower is illustrated at the corners of the square, where there is space for the flower to be displayed. In practice, it must be said that these two motifs complement each other, and other patterns are noticeable among them (Fig 9).



Fig 9. The elongated pomegranate flower on a lozenge and octagon in the frames of the doors of the Khorasan Museum complex, the box of Prince Hossein Sari 847 A.H. and the forehead of the door of Imamzadeh Qasem in Babol, 890 A.H. Source: Author.

2.5. Arabesque Floral Motifs in Vase-Like Frames: Arabesque floral motifs have appeared in a remarkable variety in the designs of the Timurid period. Among these, the simple dragon-head arabesque that, when placed in pairs reflectively next to each other, forms a vase-like frame, should be mentioned. This motif is engraved on the small side frames of pulpits or the borders of doors and boxes to fill them, while the rhythm of the lines harmonizes with the Arabesque form inside, reminiscent of the style and plasterwork of the Ilkhanid era. These lines, drawn on pomegranate flowers, are also noticeable, and in the overall view of the arabesque design or pomegranate flower and other large motifs, they remind us of the principle of beauty in continuity (Fig 10).



Fig 10. A vase-like arabesque on the side section of the Khaf minbar, 908 A.H. and Imamzadeh Zain al-Abidin Sari 905 A.H. Q. Source: Author.

2.6. The coexistence of Arabesques and Khatai: In the decorations of the Timurid period, knot (Girih) patterns, Arabesques, and Khatai play a fundamental role. «Tavasoli» believes that in the early period of Herat, the motifs and bands of Arabesques and Khatai were not executed together (Tavasoli, 2014). «Pashazanus» also believes that this significant development took place during the reign of Sultan Husayn Bayqara (Pashazanus, 2009). «Ajand» also believes that such a thing does not happen in the era of Shahrukh (Ajand, 2013). Although in the meantime, some like «Hillenbrand» believe that it is very likely that many Arabesque and medallion designs were used in the royal artistic workshops of the provinces in the arts (Hillenbrand, 2007, 213). Najiboglu also does not directly refer to it, but he does refer to the complex radial designs with curved line patterns that occur in the Herat school (Necipoğlu, 2010, 154). Lings also expresses the issue cautiously and believes that they used salimy to fill the frames (Lings, 1998, 171). Although local and foreign researchers have not explicitly addressed this issue, the study of architectural decorations suggests the simultaneous use of Khatai and Arabesque motifs in the early 9th century A.H. (Sheikhi, 2017, 81). Considering the taste of the rulers, the grandeur and magnificence in architecture, and the extensive surfaces of architectural elements, the creativity of artists in combining Khatai and Arabesque patterns has created a more complete visual rhythm. It must be acknowledged that the all-encompassing artists of Herat were able to balance the geometric and Arabesque designs of western Iran with the realistic plant motifs of southern Iran in eastern Iran (Sheikhi, 2017, 82). Thus, it is reasonable to accept that Quranic designers played a role in the design of the inscriptions of important Timurid buildings and had a close religious and functional connection with each other. One can propose the interpretation that the harmony and softness of Shiraz's design principles with Tabriz's geometric principles laid the foundation for balanced templates in Khorasan, exemplified by the wooden door of the Azghad Mosque (834 A.H.) and the doors of the Balasar School. The decorations on the doors of the Balasar School resemble those on the doors of the mausoleum of Shams al-Din Kola in the Green City (probably built in 841 A.H.), where the letters at the top of the square decorative frame (Pabariq) are shown in relief against a leafy background, resembling (O'kane, 2007, 301). Additionally, a similar example can be found on the door of the shrine of Taybad and the «Tree of Life in the shrine of Tuman Agha in Shahzadeh Zendeh» (O'Kane, 2007, 245) and the Goharshad Mosque (Fig 11).



Fig 11. Design and collaboration of Arabesque and Khatai from the 9th century A.H. On the door of the Azghad Mosque in Torghabeh, Mashhad, 834 A.H., and in the shrine of Abu Bakr Taybadi in Taybad. Source: Author.

2.7. Sprawling Branches of Flowers and Leaves in the Corner of the Main Door Frame: Although this design is also seen in the corners of the pointed arches of architecture, such as in the door of the shrine of Abu Bakr Taybadi, in the corners of the main door frames, the naturalism and the cluster of fresh flower and leaf branches are beautifully depicted, as if the frame is embraced by flowers and leaves embrace the frame. Usually, these sprawling branches are adorned with large and small flowers, offering a multitude of blossoms and leaves to the eyes. Certainly, this level of maturity should be sought in the «tranquility of the 43-year reign of Shahrukh and his successors» (Mirjafari, 2014, 87). His son, Baysunghur, also established a «palace of the White Garden in Herat, a gathering of scholars, elites, poets, writers, calligraphers, illuminators, painters, and renowned musicians» (Zamchi Esfazari, 1960, 25). Amir Ali-Shir Navaei also considered him a patron of the arts (Navaei, 1984, 125). Dolatshah Samarqandi also considered him an artist and a patron of the arts, to whom artists and scholars from all around came to serve (Samarqandi, 1959, 264) (Fig 12).



Fig 12. From the right: The sprawling branches in the frame and border of the doors of the Seyyed Vaqef shrine in Natanz, 825 A.H., Imamzadeh Noor in Gorgan, 865 A.H. The Jameh Mosque of Gorgan, 870 A.H., and the preserved doors in the Great Khorasan Museum from the 820s A.H. Source: Author.

2.8. Geometric Loqots Filled with Plant Motifs: In fact, the logic of density (Halimi, 2011, 210) and the compression of decorative elements have been a subject of scholarly research and attention by artists. These motifs are mostly found on the lateral sections of pulpits, such as the pulpit of the Gorgan Mosque or the pulpit of the Goharshad Mosque in

Mashhad. Patterns that start from the center of a flower or a Khatai headband and adorn the entire space of the knot (Girih). The coexistence of plant motifs creates a beautiful and velvety space that, with its chiaroscuro, evokes a scene or statue of paradise in the mind (Fig 13).

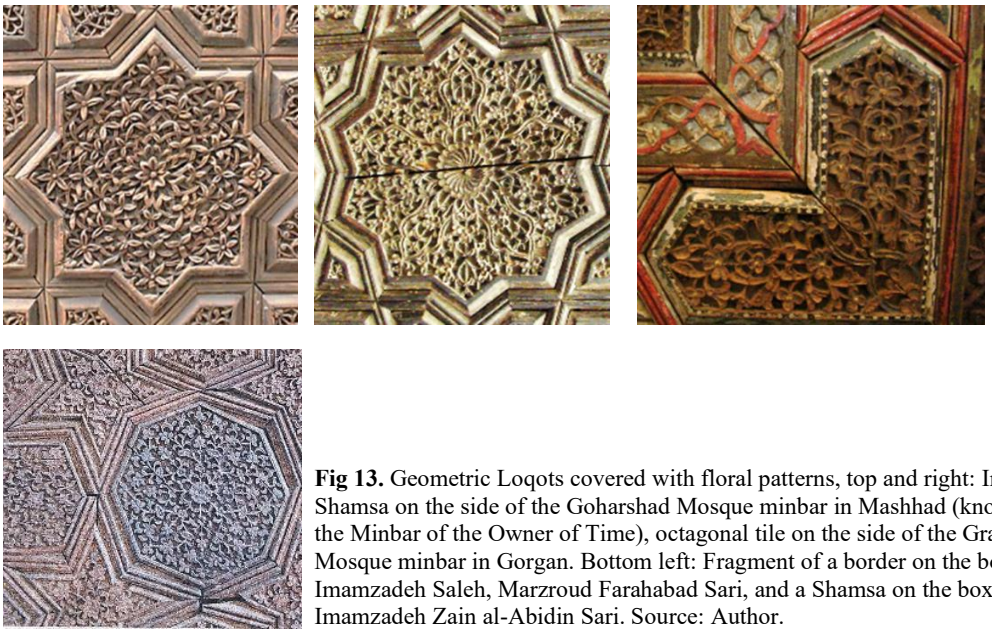


Fig 13. Geometric Loqots covered with floral patterns, top and right: Iranian Shamsa on the side of the Goharshad Mosque minbar in Mashhad (known as the Minbar of the Owner of Time), octagonal tile on the side of the Grand Mosque minbar in Gorgan. Bottom left: Fragment of a border on the box of Imamzadeh Saleh, Marzroud Farahabad Sari, and a Shamsa on the box of Imamzadeh Zain al-Abidin Sari. Source: Author.

2.9. Endless Knot (Girih): This motif, which was used since the Ilkhanate era, also appears in the Timurid era in the form of the «la» (the letter «لا») motif or inscription. As a decorative motif, it appears in the frames of the Khaf pulpit or the lower part of the «لا» on the door's lintel. The letter «لا», which, from a mystical perspective, negates everything other than the essence of the one true being, emphasizes this point with multiple twists and highlights the phrase «لا اله الا الله» among the floral motifs. Interestingly, the head of the library, in addition to the art of bookbinding, also oversaw fine arts such as decorative architecture, including stone carving, tile work, shell carving, and engraving, among other artistic endeavors (Ajand, 2008, 48). Regarding the emphasis on the endless knot in «لا», it should be noted that the excellence of the phrase «لا اله الا الله» is highlighted (Afshari & Madani, 2002, 57). They have also considered it the best mention suggested by the Prophet (Vaez Kashifi, 1971, 33-31). On the one hand, it is worth noting that this motif, with its Sufi-oriented approach, as embodied in the Fata and Naqshbandi principles, which are centered on the work of Sufis rather than jurists, has played a significant role in life through ethical and mystical strategies. Perhaps it can be said that in every moment and every breath, its role has manifested itself in a realm of selflessness, blessing, and sustenance from God, inviting the servants to gratitude. This is confirmed in the writings of «Hessaraki Jalalabadi» (1980) and «Aslvar» (2012) (Fig 14).



Fig 14. The knot in the center of the Chalipa, next to the pulpit of the Khaf Mosque, 908 A.H.

2. 10. Medallion with a Sx-Petal Flower: (Shahzadeh Hossein 890 A.H.): Among other motifs, the medallions are in the form of tangent circles arranged in square rows of four. The tangent area is adorned with six-petal flowers, and Khatai motifs surround these

completely simple circles. The simplicity in the design composition has created a striking visual pattern (Fig 15).

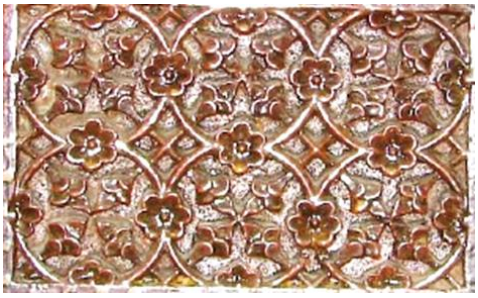


Fig 15. Medallions on the box of Shahzadeh Hossein, Sari and Imamzadeh Qasem, Babol. Source: Author.

2.11. In addition to Khatai and Arabesque motifs, geometric knots must be mentioned, which are engraved on various wooden frames. These knots have created a space where the artist can place Khatai and Arabesque motifs to create a suitable and worthy balance. This coexistence of tile work, wood carving, and inlay is commendable. «The art of woodwork experienced remarkable growth during the era of Shahrukh». For example, on the carved doors of the Gur-e Amir in Samarkand, intricate and masterful wood carving has been executed on ebony, ivory, and silver (Jackson, 2003, 414).

3. Margin Motifs: Among the other motifs used in Timurid wooden artifacts, the designs that are solely framed as margins on the main panels should be mentioned.

3.1. Flower or Leaf Sprinkle in One or Three Branches: A delicate plant sprinkle is designed as a willow leaf or branch with the width of a pomogranate branch on the door, box, or pulpits. These relatively deep carved flowers cover the entire frame, or are drawn in six long geometrical Loqots and armbands (Fig 16).



Fig 16. The margin of the flower sprinkle; From Right: Mosque of Azgad 834 A.H. in the Great Khorasan Museum, Seyyed Abu Jafar Sayeri Village of Miandexar 855 A.H., Seyyed Hassan Waqf Nazar 849 A.H., Imamzadeh Ismail Isfahan 875 A.H., and the pulpit of the Goharshad Mosque in Mashhad. Source: Author.

3.2. Three-leaved Poplar Flower: The three-leaved flower (or trifoliate) features a structure of two round petals and one pointed petal, arranged in a heart-shaped form, and has adorned the edges of the box and wooden doors. This motif is repeated in a continuous pattern throughout the frame and comes in various sizes (Fig 17).



Fig 17. The poplar flower on the margin of the door preserved in the Mofakham Museum of Bojnourd and on the left, depicted on the Harooniyeh box, 834 A.H., in museum of the ruines in Mashhad and the box of Sheikh Bidwaz in the Mofakham Museum of Bojnord. Source: Author.

3.3. The Form of Touching, Interconnected Single or Twin Ovals: (Mirfenderesk 874 A.H. and the Imamzadeh Abbas warehouse in Sari). From the continuation of two simple or four-banded structures side by side and their continuity along the longitudinal axis, a horizontally oval shape has formed in two rows, which, in some works, is filled inside with button-like decorations. This pattern has generally been simple and has been used with flat or slightly raised relief (Fig 18).



Fig 18. Oval form on the margins of Timurid doors; top right: Door of Imamzadeh Yahya in Sari, 849 A.H., in the Ahar Museum. Bottom from the right: The door of the Imamzadeh Mirfanderesk, Aliabad Katul, preserved in the Golestan Museum, 874 A,H. The box of Shahzadeh Hossein, Sari, in the shrine of Sultan Mohammad Tahrir, Amol. Source: Author.

3.4. Upside-Down Mirrored Tulip: A horizontal band divided into triangles in an upside-down mirrored pattern, with a three-petal tulip sitting on the base of the triangle in a mirrored reverse manner. This design should also be considered among the simple carved margins on Timurid works (Fig 19).



Fig 19. Upside-down mirrored tulip motifs on the margins of the Sheikh Bidawazi box preserved in the Mofakham Museum in Bojnoord and the Taj al-Molk box in the Rhode Island School of Design Museum in the USA. Source: Author.

3.5. Chain of Braided and Chain-Like Arabesques: (Abdul-Saleh Marzoo and Dervish Fakhruddin Babol): Wood art experienced remarkable growth during the Shahrukh period. One of the characteristics of the carvings from this period is the pairing and intertwining of

two layers of relief Arabesque motifs! (Jackson, 2003, 414). The movement of two bands overlapping at intervals has formed a chain that extends alternately along the longitudinal axis. Within this band, lines have been drawn for aesthetic purposes and have been used around the frames. It is also necessary to mention the simple Arabesques that are adorned in a chain-like manner with pearl-shaped beads, which are intertwined and, from two strands of Arabesques, form an oval-like shape that repeatedly encloses the frames (Fig 20).



Fig. 20. Simple and plant-based braided chains on Timurid wooden works; right: the Minbar of Khaf, left: Dervish Fakhruddin Babol 833 A.H. Source: Author.

Conclusion

What was examined were the wooden artifacts from the 9th century and the early decades of the 10th century A.H. These works, which have remained in the form of doors, boxes, and pulpits, are scattered across various parts of Iran, from Transoxiana to Khorasan and from Tabaristan to the edges of the central Iranian desert. The aforementioned works have been created and installed in sacred places, from mosques to shrines and the mausoleums of mystics. Certainly, the Timurids' support for such arts was not merely for decoration, but rather to a certain extent, it demonstrated their consolidation, legitimization, love for art, and patronage of the arts. This art is imprinted on works that played a significant role in architecture as thresholds or places for sermons and the ruler's proclamations. The design of the Timurid period wood carving can be considered relatively harmonious, with geometric, floral (Khatai and Arabesque), and inscriptional motifs carved into the text and margins of the works. Based on the conducted studies, it can be stated that Transoxiana, Khorasan, Tabaristan, and Isfahan were likely centers of wood carving during that period. Various forms of Toranj (Medallions) in different shapes, arm bands, and circular flowers, as well as Sineh-Baz and tulip frames on government doors with three or five frames, are characteristics of the wooden works of this period. Fish scale motifs, paired two- and three-petal flowers, sunflower and pinwheel, lozenge-framed and six- and eight-pointed Shamsa, a vase-shaped frame with an Arabesque band, the coexistence of Arabesque and Khatayi, plant branches on the corners, sections filled with floral and leaf motifs, medallions, and endless knots (Girih) alongside geometric knots are characteristics of the motifs in Timurid wooden works that have come into view within the frames. It is also necessary to mention the delicate plant vine, the pine cone flower, the twin ovals, the braided chain, and the tulip form, all of which stand out in the margins of the wooden frames along the longitudinal axis of the upside-down mirrored design. What was primarily emphasized in the writing was more the visual aspect of the motifs, which, considering the author's two decades of studies, can be recognized and identified within the framework of the Timurid carving style. The Timurid style and its mystical manifestations can be the subject of future studies.

Author Contributions
This study had no contributors other than the author.

Acknowledgment
This research has no acknowledgments.

Conflict of Interest
The author (s) declare that there are no potential conflicts of interest related to this research, in writing, and publication of this article

Research Funding
The author (s) did not receive any financial support for conducting the research, writing up, and publication of this article.

References
- Adams, L. (2011). *Methodology in art* (A. Masumi, Trans.). Nazar. **[In Persian]**
- Afshari, M., & Madaini, M. (2002). *Fourteen treatises on futuwwa and guilds.* Cheshmeh. **[In Persian]**
- Ajand, Y. (2008). *The Herat school of painting.* Iranian Academy of the Arts. **[In Persian]**
- Ajand, Y. (2013). *Unpublished interview: Arabesque and floral design during the reign of Shahrukh Timuri.* University of Art. **[In Persian]**
- Aslvar, F. (2012). *The Ḥurufi movement from the beginning until now based on primary sources.* Mowla. **[In Persian]**
- Aube, S. (2017). Skills and style in Heritage: The woodworker Fakhruddin and his son Ali in the Mazandaran (Iran, ca 1440-1500). *EURASIAN Studies*, 15, 283-303.
- Bahar, M. T. (2007). *Stylistics or the evolution of Persian prose* (Vol. 1). Amirkabir. **[In Persian]**
- Clavijo, R. G. (1958). *Clavijo's travelogue* (M. Rajabnia, Trans.). Bongah Tarjomeh va Nashr Ketab. **[In Persian]**
- Hafez Abru, A. L. (2001). *Zubdat al-tawārīkh* (S. K. H. S. Javadi, Ed.). Ministry of Culture and Islamic Guidance. **[In Persian]**
- Halimi, M. H. (2011). *The aesthetics of calligraphy in the Jameh Mosque of Isfahan*. Qadyani. **[In Persian]**
- Hauser, A. (1984). *The philosophy of art history* (M. T. Faramarzi, Trans.). Negah. **[In Persian]**
- Hessaraki Jalalabadi, F. (1980). *Ṭarīq al-irshād*. Nīlāb Rahīmī. **[In Persian]**
- Hillenbrand, R. (2007). *Islamic art and architecture* (A. Eshraqi, Trans.). Ruzanah. **[In Persian]**
- Ibn al-Arabi, A. b. M. (1977). *ʿAjāyib al-maqdūr fī al-nawāʾib al-Tīmūr* (M. A. Nejati, Trans. as the astonishing life of Timur). Bongah Tarjomeh va Nashr Ketab. **[In Persian]**
- Jackson, P. (2003). *The Timurid period in Iran* (excerpt from The Cambridge History of Iran, Vol. 6, Y. Ajand, Trans.). Jami. **[In Persian]**
- Kalantar, A.-A. (2009). R*eflections of Shiʿi beliefs in religious buildings of Mazandaran until the end of the Qajar period* (Master's thesis Art research). Shahed University, Iran. **[In Persian]**
- Karimian, M. (2012). *Designing Qur'an stands based on Timurid woodcarving* (Master's thesis Crafts). Tabriz Islamic Art University, Iran. **[In Persian]**
- Kiyanmehr, Q. (2004). *Aesthetic values of Safavid-style woodcarving* (Doctoral dissertation Art research). Tarbiat Modares University, Iran. **[In Persian]**
- Lings, M. (1998). *Qur'anic calligraphy and illumination* (M. Qayyumi Bidehandi, Trans.). Geros. **[In Persian]**
- Madhushiyan Nezhad, M. (2020). *Stylistics of 9th-century A.H. wooden artifacts in Mazandaran* (Doctoral dissertation, Islamic Art). University of Tabriz, Iran. **[In Persian]**

- Madhushiyan Nezhad, M., & Askari Alamuti, H. (2025). Comparative study of the construction and decoration of wooden mihrabs in the Islamic world. P*aykareh*.14(39), 36-55. https://doi.org/10.22055/pyk.2025.19872 **[In Persian]**
- Minor, V. H. (2008). *History of art history* (M. Qasemian, Trans.). Iranian Academy of the Arts & SAMT. **[In Persian]**
- Mirjafari, H. (2014). *Political, social, economic, and cultural transformations in Iran during the Timurid and Turkmen periods*. University of Isfahan & SAMT. **[In Persian]**
- Mousavi Bojnourdi, K. (2014). *Comprehensive history of Iran* (Vol. 18, S. Sajjadi, Ed.). Center for the Great Islamic Encyclopedia. **[In Persian]**
- Navaei, A. A. Sh. (1984). *Majālis al-nafāʾis* (A. A. Hekmat, Ed.). Manouchehri. **[In Persian]**
- Necipoğlu, G. (2010). *Geometry and ornament in Islamic architecture* (M. Qayyumi Bidehandi, Trans.). Ruzanah. **[In Persian]**
- O'Kane, B. (2007). *Timurid architecture in Khorasan* (A. Akhashini, Trans.). Astan Qods Razavi. **[In Persian]**
- Pakyari, S. (2003). *The evolution of woodcarving in Isfahan from the 4th to 12th century A.H*. (Master's thesis Art research). Tarbiat Modares University, Iran. **[In Persian]**
- Pashazanus, M. A. (2009). Illumination in the Herat painting school. *Ketab-e Mah-e Honar,* (130), 10–19. **[In Persian]**
- Pope, A. U. (2011). *Masterpieces of Iranian art* (P. Khanlari, Ed.). Elmi va Farhangi. **[In Persian]**
- Samarqandi, Dolatshah. (1959). *Tadhkirat al-shuʿarāʾ* (M. Abbasi, Ed.). Barani Bookstore. **[In Persian]**
- Scerrato, U., & Grube, E. (1997). *Ilkhanid and Timurid art* (Y. Ajand, Trans.). Mowla. **[In Persian]**
- Shamisa, S. (2009). *General stylistics*. Mitra. **[In Persian]**
- Sheikhi, A. (2008). *Study of Contemporary Woodcarving Style in Prominent Regions of Iran (Isfahan, Golpayegan, Abadeh Shiraz, and Sanandaj)* (Master's thesis Crafts). University of Art, Tehran, Iran. **[In Persian]**
- Sheikhi, A. (2016). *Examining Power Relations in the Era of Shahrukh Timurid and Their Reflection in Khorasan Woodwork* (Doctoral dissertation Analytical and Comparative History of Islamic Art). University of Art, Tehran, Iran. **[In Persian]**
- Sheikhi, A. (2017). Analysis of design methods in decorative arts related to architecture and book ornamentation during Shahrukh's reign. *Islamic Art Negarineh Journal*, 14(4), 77–90. **[In Persian]**
- Shoja Nuri, N. (1998). *Iranian woodcarving* (Master's thesis Crafts). University of Tehran, Iran. **[In Persian]**
- Tavasoli, V. (2014). I*llumination and decoration in the Herat school based on Qur'anic manuscripts at Astan Qods Razavi* (Master's thesis Iranology). Imam Reza University, Mashhad, iRAN. **[In Persian]**
- Vaez Kashifi, H. W. (1971). *Futuwatnama-ye Sultani* (M. J. Mahjub, Ed.). Iran Cultural Foundation. **[In Persian]**
- Varjavand, P. (1972). *A survey of Iranian art and Islamic lands* (Honar va Mardom, 114). Ministry of Culture and Arts. **[In Persian]**
- Venturi, L. (2005). *History of art criticism* (A. Madani, Trans.). Faza Scientific and Cultural Institute. **[In Persian]**
- Wilber, D. (1969). *Gardens and pavilions of Iran* (M. Saba, Trans.). Bongah Tarjomeh va Nashr Ketab. **[In Persian]**
- Wilber, D., & Golombek, L. (1995). *Timurid architecture in Iran and Turan* (K. Afsar & M. Y. Kiyani, Trans.). Cultural Heritage Organization of Iran. **[In Persian]**
- Zamchi Esfazari, M. al-D. (1960). R*awḍāt al-jinān fī awṣāf madīnat Harāt* (M. K. Emām, Ed.). University of Tehran. **[In Persian]**
- Zarrinkub, A. (1993). *Poetry without lies, poetry without a mask*. Elmi. **[In Persian]**