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### Original Research Article

## Structural and Content Analysis of Visual Components of Calligraphic Inscription in Safavid Period Toranji and Mehrabi Carpets

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### Abstract

The Safavid period marks the pinnacle of calligraphic inscription art and sets the foundation for its integration into industrial arts such as carpet weaving. The calligraphic inscription has the most significant presence in Toranji and Mehrabi carpets. Although the material and texture limitations of carpets distinguish them from calligraphic inscriptions in architecture and metalwork, a careful examination reveals distinctive visual components in these carpets that have resulted in apparent differences in structure and content between calligraphic Toranji and Mehrabi carpets. The thematic content and different applications of these two patterns seem to have a significant impact on the similarities and differences of the visual components in the written calligraphic inscriptions of these carpets, which have not been explicitly addressed until now. Hence, the focus of this study is on understanding these components. What are the structural and content differences in the visual components of calligraphic inscription in Toranji and Mehrabi carpets during the Safavid period? This research aims to explore the structural and content aspects of prominent visual components and their differences in calligraphic inscription in Toranji and Mehrabi carpets during the Safavid period. This study used a descriptive-comparative method and gathered data through library research. The sample included seven Toranji carpets and seven Mehrabi carpets dating from the mid-9th to the early 11th century AH (Islamic calendar). The samples were among the representative samples available for each type. The study of the visual components of calligraphic inscriptions in Toranji and Mehrabi carpets during the Safavid period demonstrates significant differences between them. The calligraphic inscriptions in Mehrabi carpets exhibit a greater diversity in visual components compared to Toranji carpets, with the script playing a more fundamental role. On the other hand, calligraphic elements in Toranji carpets are considered a more localized part of the arabesque patterns in the carpet's design, often following a consistent approach. However, there are shared elements such as spatial composition, rhythm, and the use of Naskh script in the calligraphic inscriptions of both types of carpets.

**Keywords:** *Calligraphic Inscriptions, Toranji Carpets, Mehrabi Carpets, Visual Components, Safavid Period.*

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## Introduction

With the spread of Islam in Iran, calligraphic inscription underwent a remarkable transformation and reached its peak during the Safavid period. This branch of art is highly valuable due to its significance in conveying information, religious and social beliefs, and literary aspects. The term “katibeh” refers to a space in which a meaningful or decorative written script is composed. The term “ghali” (carpet) is seen in written sources from the 3rd century AH (Islamic calendar), and it is mentioned in the book “Futuh al-Buldan” in reference to the wife of Arminaghes (the king of Armenia), whose name was “ghali”. Carpet weaving in Iran has a long history, and during the Safavid period, with the support of kings such as Shah Tahmasb and Shah Abbas Safavi, significant developments in the design and patterns of carpets occurred in the early and mid-10th century AH. One of these transformations was the widespread use of calligraphic inscription in carpets during this period. The inscriptions on these carpets are prominently displayed within the designs of two patterns known as “lachak-e toranji” and “lachak-e mehrabi”, which are also referred to as prayer rugs and prayer mats. These calligraphic elements feature verses from the Quran, the names of God, or poems by poets. The visual components of these calligraphic carpets include framing, calligraphic styles, color schemes, spatial arrangements, and various rhythms, which visually differ from one another. The present study aims to understand the structural differences and similarities between the written calligraphy of the Mehrabi and Toranji carpets. Exploring the structural and content differences in the visual components of calligraphic inscriptions in these carpets and comparing them with collected carpet samples can provide valuable visual insights into the composition of writing and its integration with visual elements for contemporary artists and graphic designers.

## Research Background

Extensive research has been conducted on carpet weaving and calligraphic inscription in Iran, particularly

during the Safavid period. Most sources have focused on the philosophical, mystical, and historical themes of these carpets, while limited sources specifically emphasize the visual components of the calligraphic inscriptions, highlighting their aesthetic and structural differences and similarities. It is worth mentioning that the Tehran Carpet Museum does not have any samples of calligraphic carpets from the Safavid period on display, and the mentioned samples in this research have all been extracted from the museum’s catalog. In most related articles, the main focus has been on the mystical and philosophical themes and the interpretation of the calligraphic inscriptions, emphasizing their spiritual concepts, with more extensive studies done on the Mehrabi calligraphic carpets. However, the studied sources provide valuable information for understanding the structural differences and similarities in the calligraphic inscriptions of Safavid carpets in the two patterns of Toranji and Mehrabi. In this regard, the following samples can be mentioned:

In the articles section, there is an article titled “A Study of the Themes of Nastaliq Calligraphy in Safavid Carpets of Iran” that focuses on the written and conceptual themes of calligraphy in Safavid carpets (Khosravi Bijam, 2019). Another article titled “Carpet Calligraphy as a Text” discusses the interpretation of calligraphy (Mirzaei, 2009). In the research paper “Manifestation of the Divine Names in Safavid Prayer Rugs”, six samples of Safavid prayer rugs are examined with an emphasis on the manifestation of the divine names in these carpets (Mirzaei et al., 2014). The article “Quranic Inscriptions in Carpet Weaving and Metalwork of the Safavid Period” (Shariat, 2008) focuses on identifying Quranic inscriptions in metalwork and carpet weaving during the Safavid period. Additionally, among books, “Masterpieces of Iranian Art” can be mentioned. In this book, the author dedicates a separate chapter to Safavid carpets by examining the history of carpet weaving in Iran (Pope, 2008). The book “Literature and Mysticism in Iranian Carpets” discusses the interpretation of a collection of calligraphic carpets (Khoshknabi, 1999).

The book “The History of Carpets” examines the evolution and history of carpet weaving in different periods and regions of Iran (Heshmati Razavi, 2008). In the present study, the categorization of carpets was based on their content and themes in this book. All the mentioned sources generally refer to Safavid carpets and calligraphic carpets or specifically delve into the conceptual interpretation of the written calligraphy in carpets, especially prayer rugs, with spiritual subjects. The subject of understanding the structural differences and similarities of calligraphic Safavid carpets in the two patterns of Mehrabi and Toranj distinguishes the present study from other related topics.

### Research Method

This documentary qualitative research was conducted using a descriptive-comparative method. The initial section provides a general introduction to the two groups of Toranji and Mehrabi carpets, followed by a study of the structural components of the visual elements of the calligraphic designs in seven Toranji carpets and seven Mehrabi prayer rugs dating from the mid-9th century to the early 11th century AH (Islamic calendar). Furthermore, the visually classified components of these calligraphic designs were introduced based on library sources. Then differences and similarities among their visual elements in the two patterns of Toranji and Mehrabi were examined focusing on the structure of the written calligraphy. Finally, based on the collected information, data analysis and conclusion are performed.

### Theoretical Foundation

#### • Toranji and Mehrabi inscription carpets of the Safavid period

After the arrival of Islam in Iran and the utilization of sacred scripts and alphabets with a divine origin, calligraphy paved the way for many artistic crafts (Burckhardt, 1990), including carpet weaving, reaching its peak during the Safavid period (Johle, 2002). Many of the exquisite and highly regarded carpets of this








period possess written or calligraphic inscriptions (Beh-Azin, 1965), resembling the art of calligraphy. Most of the calligraphic carpets were woven in the cities of Tabriz, Isfahan, Kerman, and Kashan, in two main patterns: Toranji (gable and toranj; with a medallion centerpiece) and Mehrabi (prayer rug) (Azarpad & Heshmatii Razavi, 2005). These carpets exhibit distinct visual components in their weaving and the structure of their calligraphy. These inscriptions are found within specific frames, on the edges of the carpet, on the border, on the corners, or in specific sections. They are often in the form of couplets inside the Toranji patterns and among the medallions in the Toranji designs. In some cases, the inscriptions are very free-flowing and densely packed in the main body of the Mehrabi carpets. The combination of calligraphy with arabesque and lungwort patterns is mainly used in the Toranji and Sar-toranj regions as a connecting element to strengthen the carpet’s components and prevent the dispersion between Toranji and Sar-toranj, which occurs along their length (Mirzaei, 2009).

The differences in the calligraphic inscriptions of Toranji and Mehrabi carpets can be attributed to their purpose and patronage by the court (B.Denny, 2014). The inscriptions in Toranji carpets, which were predominantly used to decorate palaces, are written in Nastaliq script combined with arabesque patterns to depict literary and historical themes. In Mehrabi carpets, which were used by worshippers during prayers, the inscriptions feature Thuluth, Naskh, and Kufic scripts to represent spiritual concepts (L.Keefe, 1973) (Tables 1 & 2).

#### • Structural study of visual components of Toranji and Mehrabi inscribed carpets of Safavid period

The visual components of the written inscriptions in the Safavid period Toranji and Mehrabi carpets can be divided into five main categories: framing, calligraphic style, color palette, spatial design, and rhythm. Each category exhibits structural differences within the two patterns (Fig. 1).

Table 1. The statistical population of this study in the section on Toranj-style calligraphic carpets of the Safavid period. Source: Authors.








No.	Image	Name of the artwork	Location	Date (AH)	Source
1		Hunting scene carpet	Poldi Pizzoli Museum, Milan	924 (AH)	Heshmati Razavi (2088)
2		Carpet with animal scenery, Toranji (with medallion centerpiece)	Poldi Pizzoli Museum, Milan	942 (AH)	Khoshknabi (1999)
3		Ardabil carpet	Victoria and Albert Museum, London	946 (AH)	Heshmati Razavi (2008)
4		A Toranji carpet with inscriptions	Paris Museum of Decorative Arts	950 (AH)	Malol (2006)
5		All-silk brocade Toranji carpet	Museum of Ancient Iran	The second half of the tenth century	Pope & Ackerman (2006)
6		Arabesque Toranji carpet	Baku Museum	Late tenth century	Khoshknabi (1999)
7		Brocade Lachak and Toranji carpet of Tabriz	Iran Carpet Museum	11th century	Daadgar (2001)

### • Types of Framing and Inscription Borders

The calligraphic margins in both Toranji and Mehrabi designs feature hexagonal geometric shapes in broken patterns and frames with curved lines in circular patterns, incorporating Persian and Arabic script. Within these framings, Mehrabi carpets often include Arabic phrases, hadiths, narrations, specific themes, and Quranic verses,

while Toranji designs incorporate Persian phrases with literary themes, poetry, or historical information, accompanied by Islamic and lungwort motifs in the background. These inscriptions are sometimes dispersed throughout the margins without continuity. Common types of framing in Toranji carpets include decorative and ornamental armlet frames, inner toranj (medallion

Table 2. The statistical population of this study in the section on Mehrabi-style calligraphic carpets of the Safavid period. Source: Authors.

No.	Image	Name of the artwork	Location	Date (AH)	Source
1		Zarbaft (brocade) Janamazi carpet	The Metropolitan Museum	985(AH)	Khoshknabi (1999)
2		Kashan lacquered carpet	Museum of Ancient Iran	1010 (AH)	Khoshknabi (1999)
3		Kalabattu Sajadeyi carpet	Owned by the Bakrie brothers	late tenth century	Pope & Ackerman (2006)
4		Silk Kalabattu Sajadeyi carpet	Madame A, Pravinci. collection	The end of the tenth century	Pope & Ackerman (2006)
5		Janamazi carpet of Isfahan or Kashan	Iran Carpet Museum	1120 (AH)	Khoshknabi (1999)
6		Janamazi carpet of Isfahan or Kashan 2	Iran Carpet Museum	1120 (AH)	Khoshknabi (1999)
7		Carpet with chandelier patterns	Topkapi Palace Museum, Istanbul	Early 11th century	Pope & Ackerman (2006)

centerpieces) or dated frames, and extended frames that can be seen continuously around the carpet. The framing variations in Mehrabi carpets include decorative and calligraphic armlet frames, inner Mehrabi frames, extended frames, Kufic framing, cloud framing, and geometric and free framing surrounding the Mehrabi

motif (Fig. 2).

#### - Decorative and calligraphic armlet framing

The term “armlet framing” refers to a category of frames that enclose fabrics containing Quranic verses and supplications in the armlets of wrestlers, accompanied by beautiful needlework (Azarpad & Heshmatii Razavi,

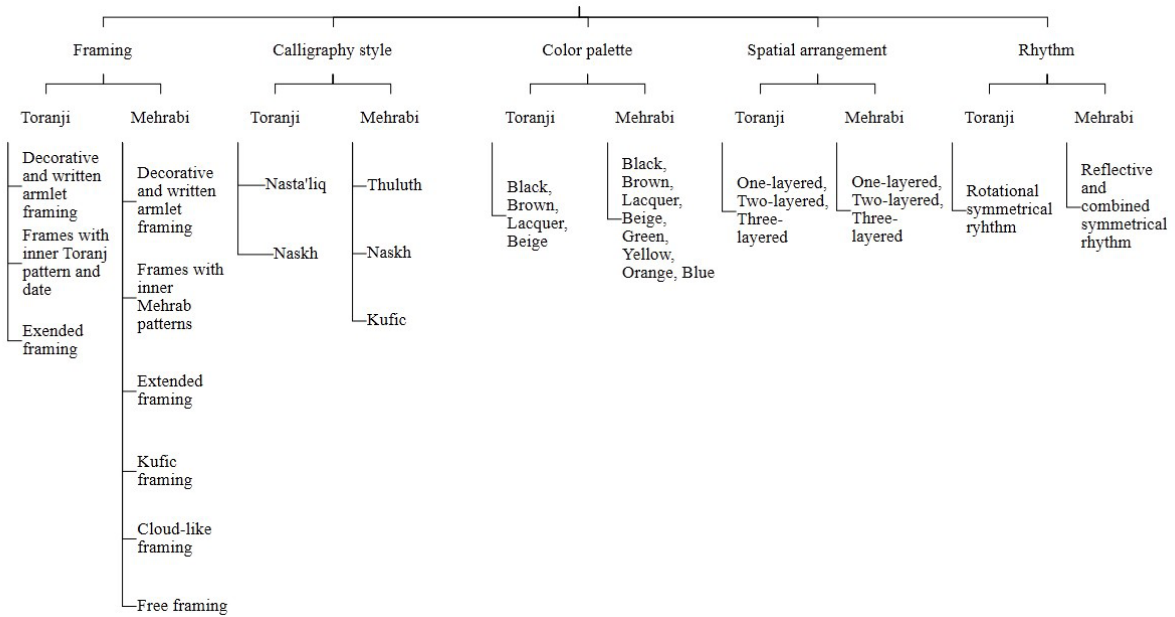


Fig. 1. Visual components present in the calligraphy of Toranji and Mehrabi-style carpets of the Safavid period. Source: Authors.

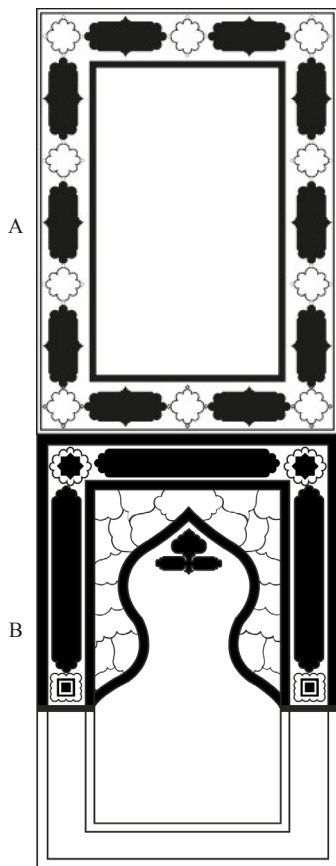


Fig. 2. A: Comparison of framing diversity in two Tabriz brocade silk Toranji carpets, B: The Mehrabi chandelier patterned carpet (Highlighted areas indicate the boundaries of the calligraphic framing). Source: Authors.

2005). Armlet framing is often used in the framing of Toranji carpets, with smaller Toranj motifs placed between each frame. In Mehrabi carpets, these frames are used with a larger length compared to Toranji carpets (Figs. 3 & 4). The common feature of these framing styles in both groups is the placement of inscriptions in the outer, middle, and central margins of the carpets. Examples of Toranji carpets with armlet framing include the Toranji carpet in the Musée des Arts Décoratifs in Paris, the all-silk brocade Toranji carpet in the Iran Bastan Museum, the silk kalabattu Toranji carpet in the Metropolitan Museum, the arabesque text Toranji carpet in the Baku Museum, and the Lachak (gable) carpet and lacquer brocade Toranji silk carpets in the Tabriz Carpet Museum. In the group of Mehrabi carpets, we see the use of armlet framing in the Ja-namaz (prayer rug) carpet in the Metropolitan Museum, the silk kalabattu prayer carpet in Madame A. Pravinci's collection, and the chandelier patterned carpet in the Topkapi Palace Museum in Istanbul.

**- Inner-Toranji (dated) and Inner-Mehrabi framing**

Inner-Toranji frames are commonly used for inscriptions

known as dated inscription panels, positioned in the middle, center, or top of Toranji carpets. The geometric form of these inscriptions consists of simple frames, either rectangular or hexagonal, with minimal decorations to enhance the legibility of the date of manufacturing and the weaver's name, often accompanied by a short poetic verse. One of the most famous examples of dated Toranji carpets from the Safavid period is the Ardabil carpet and the Hunting Grounds carpet.

Studies indicate that in Mehrabi carpets, there are no date inscriptions, but instead, inner-Mehrabi frames are observed. These frames contain phrases such as "Allah" or "Allahu Akbar Kabira" and signify mystical and spiritual themes, symbolizing the return of the soul to the source of existence (Figs. 5 & 6). Examples of inner-Mehrabi carpets with inner-Mehrabi frames include the silk brocade Janamaz (prayer rug) carpet, the lacquer background Kashan carpet, the silk Sajadeyi (prayer rug) carpet in the possession of the Bakri brothers, the silk kalabattu Sajadeyi (prayer rug) carpet, and the silk Isfahan or Kashan carpet, as well as the chandelier patterned carpet.

#### - Extended framing

Extended framing refers to frames in which the text is placed in a continuous sequence. These frames can be seen as a border surrounding the carpet or within the carpet itself, encircling the central design of the Mehrabi or Toranj pattern. The text within these frames is usually smaller in size compared to other inscriptions. Due to the limited space, fewer arabesque motifs are used in the decoration of these frames. In Toranj carpets with animal landscapes, the extended framing is noticeable in the border surrounding the carpet, creating a continuous band. Among the examined Mehrabi carpets, examples of extended framing can be found in the brocade Janamaz carpet, the lacquer Kashan carpet, the kalabattu Sajadeyi (prayer rug) carpet, the silk kalabattu Sajadeyi (prayer rug) carpet, the silk Isfahan or Kashan carpet, and the chandelier patterned carpet.

#### - Kufic framing

Kufic framing refers to frames in which the text is written



Fig. 3. Framing comparison of the border of a silk Lachak and Toranji carpet of Tabriz. Source: Dadgar, 2001.



Fig. 4. Mehrabi chandelier-patterned carpet. Source: Pope, 2008.



Fig. 5. The frame of the hunting scene carpet with the date and an inner Toranj pattern. Source: wikimedia.org.



Fig. 6. The frame of the Kalabattu Sajadeyi carpet with inner Mehrab pattern. Source: Pop, 2008.

in Kufic script within square or polygonal frames. Kufic inscriptions are commonly found in Mehrabi carpets. Notable examples of Mehrabi carpets with

Kufic framing include the chandelier patterned carpet, the brocade Janamaz carpet, the lacquer Kashan carpet, and the Janamaz (prayer rug) carpet from Isfahan or Kashan in the Iran Carpet Museum. These inscriptions often contain religious themes and are visible in the four upper corners of the carpet (Takhti et al., 2009) or within the Lachak (corner) motifs surrounding the central Mehrabi design and the borders of the carpets. The placement of Kufic script within defined framing, with a geometric structure, creates a visual contrast between the calligraphic lines and the dense inscriptions within the Mehrabi carpets (Fig. 7).

#### - Cloud-like framing

One of the most important visual elements and distinguishing features between calligraphic Mehrabi and Toranj carpets is the framing, specifically referring to symmetrical or asymmetrical cloud-like framing. This type of cloud-like framing, often containing the names of God, is not commonly seen in Toranj carpets from the Safavid period. The so-called cloud-like frames that densely surround the Mehrabi motif can be considered influenced by Eastern art. Within these frames, the names of God are written in Thuluth or Naskh scripts in different directions, utilizing the minimal space available for the text. These frames, located at the upper part of the carpet, in the area where the head and hands of the prayer performer would be positioned, are compressed and presented in various colors, aiming to evoke mystical concepts. The inscription within these frames is intended to guide the viewer's gaze towards the upper central area and the inner part of the carpet, where inscriptions with phrases such as "Allah" or "Allahu Akbar Kabira" are placed in the position of the prayer prostration. These inscriptions in the upper part of the carpets, with a ratio of 2/3 (Takhti et al., 2009), prevent stepping on divine words during prayer, while the lower part of the carpets is usually filled with arabesque and lungwort motifs. Examples of Mehrabi carpets with cloud-like framing include the chandelier patterned carpet, the silk Northwest Iranian Sajadeyi (prayer rug) carpet, and the brocade carpet from the Fletcher collection at the

Metropolitan Museum (Fig. 8).

#### - Free framing

Among the various frames found in Safavid period carpet inscriptions, a particular type of framing does not fit into a specific category, as it exists in a free and geometric form, both symmetrical and asymmetrical. This type of free framing is commonly used in Mehrabi carpets and is rarely seen in Toranji carpets. They serve the purpose of filling the space surrounding the Mehrabi motif and, in the margins, similar to cloud-like framing. The internal text within these frames also contains the names of God, similar to cloud-like examples. Notable examples of this type of framing can be observed in the Kashan kalabattu and lacquer Mehrabi carpets (Fig. 9).



Fig. 7. Collection of Bannai Kufic scripts in Mehrabi-style carpets. Source: Pope, 2008.



Fig. 8. A section of the inscription on the cloud-like framing of the kalabattu Janamazi carpet, Metropolitan Museum of Art. Source: metmuseum.org.



Fig. 9. Free-form frames of kalabattu Sajadeyi carpets, Northwestern Iran. Source: Pop, 2008.

### • Calligraphic style

The calligraphy of inscriptions on Toranji and Mehrabi carpets can be divided into two main groups: Persian and Arabic inscriptions. Toranji carpets feature Persian inscriptions for writing literary and historical content (Berinstain, 1996), with Nasta'liq and Naskh scripts being the most commonly used based on available samples. The writing on these inscriptions has undergone significant changes due to the limitations of the carpet's texture and material, setting the calligraphy of carpet inscriptions apart from other examples of calligraphy in artworks. On the other hand, Mehrabi carpets feature Arabic inscriptions for writing Qur'anic verses and divine names. The calligraphic styles used in this group include Thuluth, Naskh, and Kufic scripts. While Thuluth and Naskh scripts still exhibit noticeable structural variations, the Kufic script displays fewer deviations in the principles of calligraphic line formation.

### • Color Palette

Coloring in the two groups of carpets, as with other visual components, differs. In Toranji patterns, colors such as black, brown, lacquer (dark green), and chickpea (light beige) are used for the background, while contrasting colors such as black, white, and chickpea are used for the written text, drawing inspiration from the color scheme of the carpet's design (Dimand & Mailey, 1973). In the calligraphy of Mehrabi carpets, we observe a high density of colors to create further distinction and enhanced legibility within the limited space of the inscriptions. Additionally, the use of colors in Mehrabi carpets can be attributed to mystical concepts. In this regard, we can refer to verse 69 of Surah Al-Baqarah in the Noble Quran, which mentions the delight of viewers in colors: "Their color will be pleasing to the observers" (Heshmati Razavi, 2008).

### Spatial Design

The spatial design of inscriptions in Toranji and Mehrabi carpets, combining written text and arabesque patterns within a framed area, creates a multilayered space for the viewer. The spatial design of these inscriptions, in both

patterns, involves the use of contrasting colors for the text, background, and arabesque patterns. Additionally, the use of very thin and delicate outline strokes, which may not be visible from a distance in some cases, gives the letters a three-dimensional and layered effect for the viewer. Spatial design is one of the few visual components that exhibit significant similarities in both Toranji and Mehrabi patterns. In Toranji patterns, due to more space for the text and less density of lines, the spatial design is more pronounced, accompanied by more detailed arabesque patterns. For example, in the brocade Toranji carpet of Tabriz, we see dark outline strokes for white text on a lacquer background, combined with arabesque patterns, creating a three-layered spatial impression for the viewer. In the brocade Janamazi carpet, on the other hand, outline strokes are not used for the text due to the density of lines and patterns, but contrasting arabesque patterns on a cream background create a two-dimensional spatial effect when combined with the text (Figs. 10 & 11).

### Rhythm (Repetition)

In general, the rhythms (repetitions) found in the inscription carpets of the Safavid period can be categorized as follows: symmetrical or reflective



Fig. 10. Spatial arrangement of texts and the background arabesque motifs in a Tabriz Toranji carpet. Source: Pope, 2008.



Fig. 11. Brocade Janamazi carpet. Source: Khoshknabi, 1999.

rhythm, rotational symmetrical rhythm, and combined symmetrical rhythm. In most cases, except for dated Toranji carpets, we see a symmetrical rotational rhythm for the inscriptions. However, in representative examples of Mehrabi carpets, we witness a noticeable use of both reflective and combined symmetrical rhythms simultaneously in a single carpet. Notable examples of reflective rhythm in Mehrabi carpets include the Lachaki (corner) parts of Isfahan or Kashan prayer rugs (Fig. 12), where the inscriptions are woven in a mirrored fashion, evoking mystical, and philosophical concepts as well as unity with the divine essence (Halimi, 2011).

Examples of Toranji inscription carpets

• **Hunting scene carpet, Poldi Pezzoli Museum, Milan (950 AH), and Ardabil carpet, Victoria and Albert Museum, London (946 AH)**

The Hunting Scene Carpet and Ardabil Carpet are among the oldest dated carpets. The method of inscription in both carpets is similar. The study of the visual components of the inscriptions on these two carpets shows the inclusion of a verse of poetry to embellish the carpet's design by the weaver and the inclusion of the weaving date. The inscriptions are placed within an inner Toranj frame, using Nastaliq script that does not adhere to the usual rules of Nastaliq calligraphy, and they are woven in dark brown color on a beige background to create distinction and enhanced legibility in a two-dimensional space. Due to the presence of only one central inscription, the visual component of rhythm does not apply to these two carpets (Fig. 13).

• **Animal Landscape Carpet, Poldi Pezzoli Museum, Milan (942 AH)**

The visual components of the inscription in this carpet are presented in an extended framing and the spaces between the verses are filled with arabesque patterns. The calligraphy used in this carpet is the Nastaliq script with shorter letter heights compared to the proportional rules of calligraphy. It is woven in a beige color on a dark brown background to differentiate the inscription text from the main text of the carpet. The spatial design

of this inscription is dual-layered and does not exhibit a symmetrical rhythm (Fig. 14).

• **Toranji Carpet, Museum of Decorative Arts, Paris (950 AH) and Brocade Silk Carpet, Museum of Ancient Iran (10th century AH)**

Both Toranji inscription carpets in the Museum of Decorative Arts in Paris and the Museum of Ancient Iran have ten inscription panels. The visual components of the inscriptions in these carpets include extended armlet-like framing and Nastaliq calligraphy. Due to the relatively wide width of the frame, the calligraphy has a tall height, and the placement of dots and letter junctions in each section of the inscription panel varies

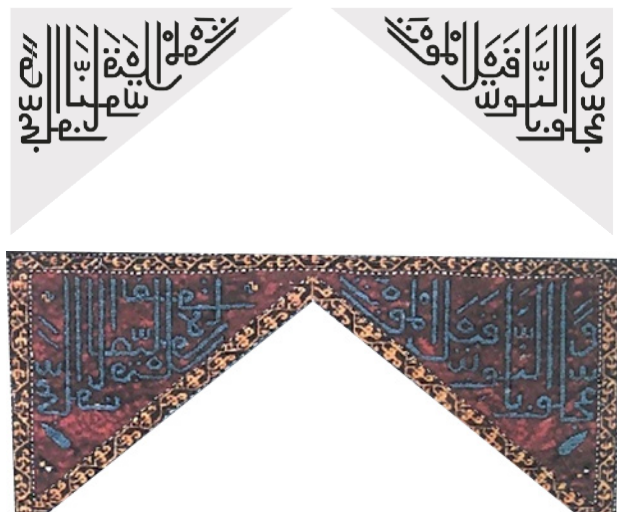


Fig. 12. Lachaki (corner) inscriptions with reflective or mirrored symmetrical rhythm in an Isfahan or Kashan Janamazi carpet. Source: Authors.

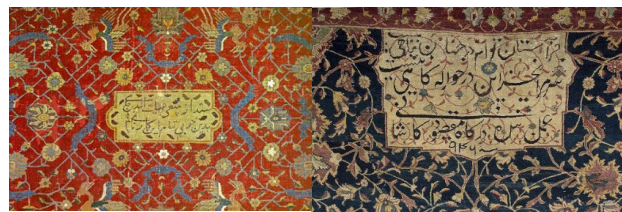


Fig. 13. Dated inscription of an Ardabil carpet and the hunting scene carpet. Source: Victoria and Albert Museum, photo: Steven Zucker, CC BY-NC-SA 2.0, wikimedia.org.



Fig. 14. Part of a Nasta'liq inscription on an animal landscape carpet / 942 AH. Source: Khoshknabi, 1999.

due to its unique space. The color of the inscription text is beige on a lacquer background, and the background is adorned with contrasting arabesque patterns, creating a dual-layered space that directs attention to the inscription panel. One layer is the space between the inscription and the outer border, and the other layer is the space between the inscriptions with contrasting arabesque patterns. In these carpets, the inscription panels are arranged in a rotational symmetrical rhythm around the central Toranj (medallion) in the large outer border (Figs. 15 & 16).

• **Toranji arabesque carpet, Baku Museum (late 10th century AH)**

The weaving date of this carpet is estimated to be in the late 16th century, during the Safavid period, when Qarabagh was part of the Iranian territory. This carpet features ten inscription panels with armlet-like framing for the outer border and extended framing for the central border, along with Nastaliq calligraphy in brown color on a beige background. The spatial design of the inscriptions in this carpet creates a contrasting layered space between the arabesque patterns and the script, along with a rotational rhythm in the outer border (Fig. 17).

• **The Brocade Lachak and Toranji Tabriz Carpet, Museum of Ancient Iran (11th century AH)**

This carpet features ten inscription panels with armlet-like framing and Nastaliq calligraphy in both the outer and inner borders. The outer inscription panels are notable for their beige inscription text with dark brown line borders on a lacquer background, accompanied by arabesque patterns. The narrow inner inscription panels are woven with dark brown inscription text on a light beige background, creating a color contrast between the space of the inscriptions and the carpet's text. The contrasting colors direct the viewer's attention to the central Toranj (medallion). The prominent and zarbaf-style (brocade) inscription verses create a dual-layered space and exhibit a symmetrical rotational rhythm (Fig. 18).

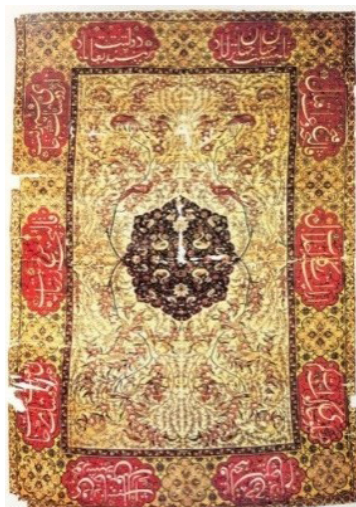


Fig. 15. All-silk Tabriz carpet, brocade with Toranj design, Iran Ancient Museum. Source: Pope, 2008.



Fig. 16. Silk Toranj kalabattu carpet, Museum of Decorative Arts, Paris. Source: Malol, 2006.

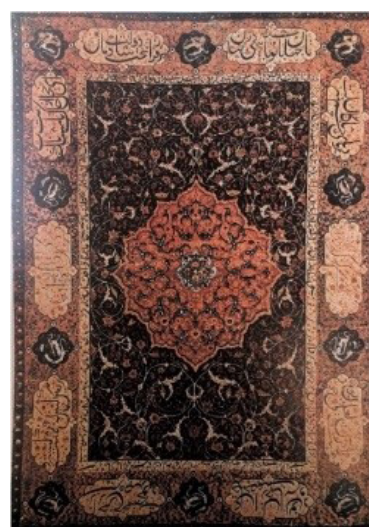


Fig. 17. Toranji carpet with arabesque patterns, Baku Museum. Khoshknabi, 1999.

### Examples of Mehrabi Inscription Carpets

- **Brocade Janamazi carpet, Metropolitan Museum (985 AH), Chandelier-patterned Carpet, Topkapi Museum (11th century AH)**

These two examples of Mehrabi carpets share many visual similarities in their inscription panel components. These Mehrabi carpets have six sets of inscription panels in armlet-like, extended, inner toranj, and cloud-shaped frames in the upper three-fourths of the carpets. The calligraphy style of the inscriptions in both examples is Thuluth, Kufic, and Naskh. The color palette of the inscriptions includes orange, lacquer, navy blue, green, and black. The placement of the script and the dense colors are designed to enhance the visual flow and readability to convey spiritual concepts. Unlike Toranji carpets, the space in these Mehrabi carpets is more limited, and we see fewer multi-layered spatial arrangements. The inscription panel design in these carpets combines rotational and mirrored symmetrical rhythms (Figs. 19 & 20).

- **Lacquer Kashan carpet, Museum of Ancient Iran (1010 AH), Kalabattu Sajadeyi Carpet, Property of Bakri Brothers (10th century AH)**

These two carpets share many visual elements and have a more free-form structure in their inscription panels compared to other examples. In both cases, we see Kufic, extended, free-form, and inner Mehrab-like framing. The outer large border of the lacquer Kashan carpet has extended framing, while the outer large border of the kalabattu (braided gold thread) Sajadeyi (prayer rug) carpet features free-form geometric frames in the shape of flowers. Inside the Mehrab design of both examples, we observe geometric and free-form framing, which is the most significant visual component of these two carpets, as this type of framing is less commonly seen in other carpets. The calligraphy styles found in both carpets include Thuluth, Naskh, and Kufic. The distinguishing feature lies in the color palette. The lacquer Kashan carpet incorporates shades of blue, lacquer, white, and black or dark indigo for the inscriptions, while the kalabattu Sajadeyi carpet uses yellow, green, lacquer,

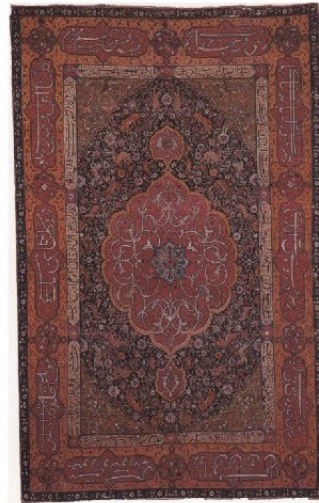


Fig. 18. The Brocade Lachak and Toranji Tabriz Carpet, Iran Carpet Museum. Source : Dadgar, 2001.

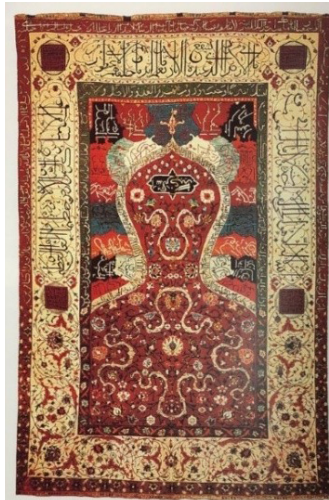


Fig. 19. Brocade Janamazi Carpet from the Fletcher Collection, Metropolitan Museum of Art, New York. Source : metmuseum.org

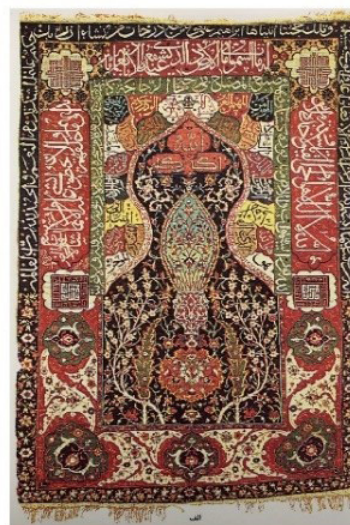


Fig. 20. Chandelier-patterned carpet from Topkapi Museum, Istanbul. Source: Pop, 2008.

and beige colors for the inscriptions. The outer borders of the lacquer Kashan carpet feature dual-layered spatial arrangements, whereas the kalabattu Sajadeyi carpet lacks layered spatial arrangements due to the limited space of its framing. The rhythm present in the Kufic and free-form inscription panel design of the outer borders of the kalabattu Sajadeyi carpet is a symmetrical rotational rhythm, while the Kufic inscription of the lacquer Kashan carpet has a symmetrical mirrored rhythm. However, the inner Mehrab design of both examples lacks a symmetrical rhythm (Figs. 21 & 22).

• **Kalabattu Silk Sajadeyi carpet, Madame A. Prvinci's Collection (end of the 10th century AH)**

The structure of the visual components in this carpet follows a unique approach (Cecil, 1983). The composition of the inscriptions combines geometric and lyrical styles, creating a creative yet orderly structure. In this example, we see nine sets of inscriptions in Kufic, extended, cloud-shaped, and inner Mehrabi-like frames, featuring Thuluth, Naskh, and Kufic calligraphy (Vandshoari & Askari, 2019). The color palette of the inscriptions includes white, black, lacquer, and yellow for both the script and the background. In this carpet, there is no layered spatial arrangement in the inscriptions, and the inscriptions are not combined with arabesque patterns. The rhythm of the Kufic inscriptions is a symmetrical rotational rhythm, while the other inscriptions lack a symmetrical rhythm (Fig. 23).

• **Isfahan or Kashan Janamazi carpet, Iran Carpet Museum I (1120 AH)**

The calligraphy of this carpet exhibits one of the most unique visual structures among calligraphic prayer carpets. This is because the framing of the inscriptions for the decorative Kufic inscription on the outer border is in an extended form, and uses an inner Mehrab-like framing for the lachaki (corner) motifs inside the carpet. In this carpet, two decorative Kufic scripts appear for the outer borders as a regular and symmetrical interlocking pattern, giving the impression that the phrase “La ilaha illallah” has been calligraphically embellished. The upper section of the carpet’s inner lachaki motifs is designed in

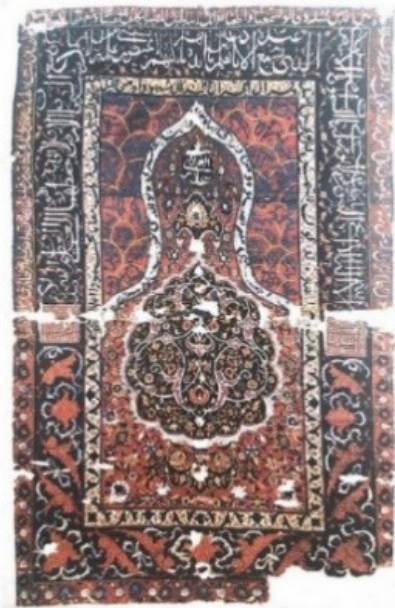


Fig. 21. Lacquer Kashan Carpet, Iran Ancient Museum. Source: Khoshknabi, 1999.

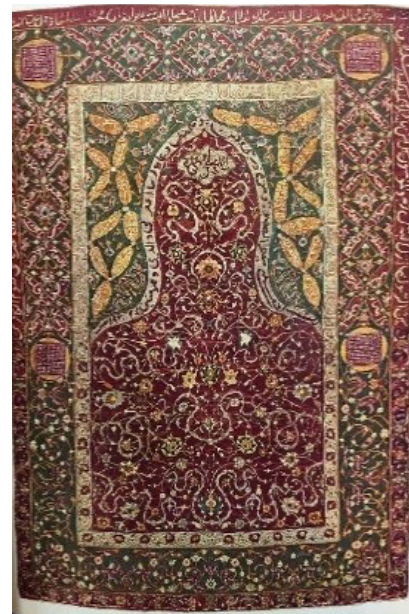


Fig. 22. Kalabattu Sajadeyi Carpet, owned by the Bakri Brothers. Source: Pope, 2008.

geometric harmony with Thuluth script, accompanied by a blue color on a lacquer background. The phrase “Ajallu bil-salah qabla al-fawt wa ajallu bit-tawbah qabla al-mawt”<sup>1</sup> is woven into the carpet (Khoshknabi, 1999). On the left side of the carpet, the same phrase is repeated in a mirrored pattern. The inscriptions of this carpet do not have a layered spatial arrangement, but the

most significant visual component of the calligraphy is the presence of a symmetrical mirrored rhythm in the inner inscriptions. This rhythm evokes multidimensional religious and mystical concepts and the search for the reflection of the soul in the existence of God (Fig. 24).

#### •Isfahan or Kashan Janamazi carpet, Iran Carpet Museum II (1120 AH)

The visual elements of calligraphy in this carpet are also noteworthy. This carpet is adorned with four sections of calligraphy that are different from the other mentioned examples in terms of composition and script. The major portion of the calligraphy in this carpet is located within the inner Mehrab-like frames and an extended frame above the Mehrab design, with the phrase: “Ajallu bil-salah qibla al-fawt wa ajallu bit-tawbah qabla al-mawt”. This phrase emphasizes the urgency of fulfilling the obligation of prayer and repentance. Unlike other examples, the inscriptions on this carpet are written in a single-colored black Naskh script with yellow diacritical marks for better legibility. The spatial arrangement of the inscriptions in this carpet is multi-layered, and it does not have a symmetrical rhythm (Fig. 25).

#### Conclusion

Studies conducted on the calligraphic carpet samples of Toranji and Mehrabi from the Safavid period indicate that the visual components of the inscriptions include framing, calligraphy style, color palette, spatial arrangement, and rhythm. In terms of framing, there is more diversity in the types of frames used in the composition of inscriptions in Mehrabi carpets compared to Toranji carpets. The predominant calligraphy styles in the calligraphic Toranji carpets are Nasta'liq and Naskh, whereas, in the calligraphic Mehrabi carpets, two to three calligraphy styles such as Thuluth, Naskh, and Kufic are used simultaneously in the composition of inscriptions within a single carpet. Therefore, there is more variety in the calligraphy styles in Mehrabi calligraphic carpets compared to Toranji calligraphic carpets. In terms of color palette and scheme, the inscriptions and backgrounds of the Toranj carpets use two to four colors,



Fig. 23. Kalabattu Silk Sajadeyi Carpet, Madame A. Pravinci's Collection. Source: Pop, 2008.



Fig. 24. Isfahan or Kashan Janamazi Carpet I, Iran Carpet Museum. Source: Khoshknabi, 1999.

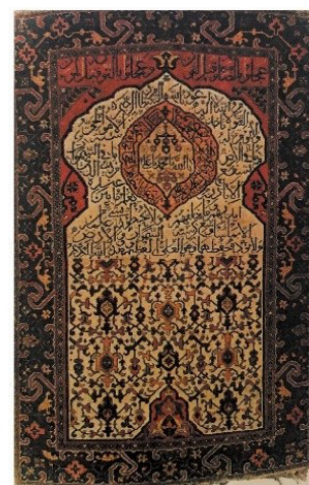


Fig. 25. Isfahan or Kashan Janamazi Carpet II, Iran Carpet Museum. Source: Khoshknabi, 1999.

while the Mehrabi carpets exhibit over eight different and contrasting colors for the inscriptions and their backgrounds within a single carpet, indicating greater diversity in this component in Mehrabi calligraphic carpets. Spatial design and arrangement are the only elements that have partial similarities in the calligraphy of both carpet groups. However, in the Toranji carpets, due to more space available for calligraphy, multi-layered spatial arrangements, combinations of calligraphy and arabesque patterns with contrasting colors, and colored outlines of the lines are more prominent. This is because the density of writing and inscriptions is higher in Mehrabi carpets. The rhythm or repetition found in the calligraphy of Toranji carpets is mainly rotational, whereas the calligraphic inscriptions of Mehrabi carpets exhibit rotational, reflective and mirrored, and in some cases, combined rhythms in the composition of inscriptions within a single carpet. In summary, it can be concluded that the diversity of visual components and their compositional structure is greater in the calligraphic carpets of Mehrabi than in Toranji carpets, and the main point of distinction between these two groups

of calligraphic carpets lies more in the application of carpets and the content of the inscriptions (Table 3).

### Declaration of No Conflict of Interest

The author declares that there was no conflict of interest for her in conducting this research.

### Endnotes

1. Hasten to perform prayer before death, and hasten to repentance before dying.

### References list

- Azarpad, H & Heshmati Razavi, F. (2005). *Farshnameh Iran*. Institute of Humanities and Cultural Studies.
- B.Denny, W. (2014). *HOW TO READ ISLAMIC CARPETS*. MetPublications.
- Beh-Azin, M.A. (1965). *Iranian Rugs*. Ibn Sina.
- Berinstain, V. (1996). *GREAT CARPETS OF THE WORLD*. Vendome Press.
- Burekhardt, T. (1990). *Sacred art* (J. Sattari, Trans.). Soroush.
- Cecil, E. (1983). *The Persian carpet* (M.H Saba, Trans.). Book Lovers Association.
- Daadgar, L. (2001). *Cultural heritage: Safavid period*

Table 3. Differences and similarities of visual components in Toranji and Mehrabi inscription carpets of the Safavid period. source: authors.

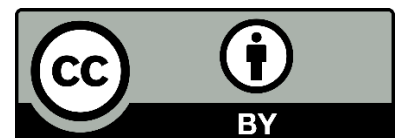
No.	Visual components of inscriptions	Toranji inscription carpets	Mehrabi inscription carpets
1	Framing	-Armlet-like (With inner Toranj pattern dated) -Extended	-Armlet-like -With an inner Mehrab pattern -Extended -Cloud-like -Free framing
2	Calligraphy style	-Nasta'liq -Naskh	-Thuluth -Naskh -Kufic
3	Color palette	-Black -Dark brown -Lacquer -Beige	-Black -Dark brown -Lacquer -Beige -Green -Yellow -Orange -Blue
4	Spatial arrangement	- One-layered - Two-layered -Three-layered	- One-layered - Two-layered -Three-layered
5	(Rhythm repetition)	Rotational symmetrical rhythm	-Rotational symmetrical rhythm -Reflective symmetrical rhythm -Combined

carpets in Iran Carpet Museum. *Bukhara*, (24).

- Dimand, M. S., & Mailey, J. (1973). *Oriental rugs in the Metropolitan Museum of Art*. New York Graphic Society.
- Halimi, M.H. (2011). *Aesthetics of calligraphy in Isfahan Jame Mosque*. Qadiani.
- Heshmati Razavi, F. (2008). *Carpet History: The Persian Carpet Evolution and Development*. Samt.
- Johle, T. (2002). *A research on Persian rugs*. Yesavoli.
- Khoshknabi, R. (1999). *Literature and mysticism in Iranian carpets*. Soroush.
- Khosravi Bijam, F. (2019). Study of the Themes of Nastaliq Inscriptions in the Carpets of Safavid Period of Iran. *The History of Islamic Culture and Civilization Quality Journal of Research*, 10 (34), 117-140. <http://dorl.net/dor/20.1001.1.22520538.1398.10.34.4.7>
- L.Keefe, K. (1973) *ISLAMIC PRAYER RUGS*. Renaissance Society at University of Chicago, Exhibition and catalogue.
- Malol, G. (2006). *Baharestan: a Doorway to Persian rugs* (S. Dehghani, Trans.). Zarin and Simin.
- Mirzaei, K. (2009). Inscriptions of Carpets as a Text. *Goljam* , 5(13), 123-140. <http://dorl.net/dor/20.1001.1.20082738.1388.5.13.22.8>
- Mirzaei, A., Shajari, M. & Pirbabai, M.T. (2014). Epiphany of Asma'al Hosna in Mehrabi Carpets of Safavid Era. *Goljam* , 10 (25), 63-84. <http://dorl.net/dor/20.1001.1.20082738.1393.10.25.1.6>
- Pope, A. (2008). *Masterpieces of Persian Art* (P. Natel Khanlari, Trans.). Scientific and Cultural.
- Pope, A & Ackerman, P. (2008). *A Survey of Persian Art from Prehistoric Times to the Present* (S. Parham, Trans.). Scientific and Cultural.
- Shariat, Z. (2008). Quran calligraphy in rugs and metal of the Safavid period. *Mah Honar*, (120), 55-44.
- Takhti, M., Samanian, S & Afhami, R. (2009). Geometric analysis of Safavid period mihrab carpets. *Goljam*, (14), 125 -140. <http://dorl.net/dor/20.1001.1.20082738.1388.5.14.22.0>
- Vandshoari, A. & Askari, P. (2019). Study and analysis of Quranic verses and hadiths in Safavid Mihrabi carpets. *Rajshmar*, 1(2), 115-126. <https://doi.org/10.22077/rajshomar.2020.3380.1007>

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