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## **The principles of traditional designing dominant on carpet and tile designing and Islamic architecture**

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### **Abstract**

The feature of decorating curves in Iranian arts, paintings, illumination, cover decorating, Engraving Carving Sudoriferous Cloth carpet and several decorations related to architecture including tile, stucco have principles and features of traditional designing. Several types of figures of Khatayi and Ieslimi and their roles in combination and space besides having principles in proportion to ground have certain features. This article has been formulated by the aim of reading Khatayi and eslimi figures in both carpet and tile arts and its main issue is how to draw these figures and their system of combination in both of these arts. The methodology is descriptive. The statistical population includes architectural works of several Islamic periods and carpet works in contemporary period. All the designs presented in this article are drawn by the author and it has been attempted to be able to explain features of traditional design system exactly.

**Key Words:** *traditional design, tile, Khatayi and Ieslimi figures, Islamic Architecture*

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## Introduction

If the scope of the universe is looked in with the worldview, the moment by moment of this world will be a prospect of goodness of eternal painter and a manifestation of his grace and any motif will be the manifestation for his power, beauty and position. The designer in motifs of carpet, tile, and clay and so on with a fruitful thought and idea and use of an image has developed the universe separate from the time and place features in his five senses with help of inspiration from the power "the god is all power" and then has displayed it in an abstracted form from the nature of universe with his writing. Then, this work talks with silent language and separate from the commotion and turmoil of mundane existence in such a way that no power can explain it. when it is talked about the traditional design, the mind is focused on the motifs of Ieslimi figures and Khataei flowers and leaves, manifested in the arts of carpet weaving, Decorated volumes and margins of pages of the Quran and also facade, domes, minarets and interior and exterior spaces of mosques and religious buildings and Tazhib and so on. Selection of this writing has been founded on an experience over 25 years at the area of writing for traditional design and the authors' technical research at this area. This research has been grounded on arabesque of Khataei and Ieslimi motifs at two arts of carpet and tile with response to two questions: how to draw Khataei and Ieslimi motifs and how to examine the composition system for traditional design. The statistical population consists of works of contemporary Tabriz carpet and the buildings at the Islamic age at Iran, developed from various parts of design principles for Khataei and Ieslimi motifs in design of carpet and tile and the rules for composition of components and spaces in design structure of carpet and tile.

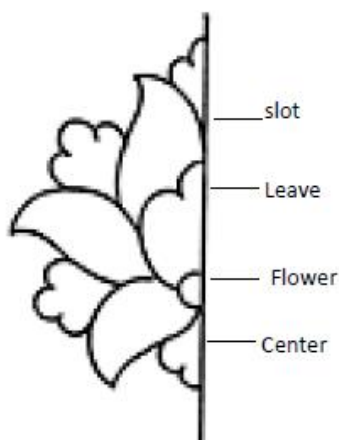
### The principles to design

The literature on Khataei and Ieslimi motifs in art history of Iran has been witnessed in

regular sequential motifs especially in epigraphic carvings, abstraction of natural reality of plant motifs with a twist in their bodies, constant novelty in components and array and structure of design with maintaining the stability at all art traditional in various historical ages. Khataei and Ieslimi motifs in traditional design system with a variety of types and categories enjoy particular principles and rules. These principles include presence of geometrical structure in design of motifs and composition system of arrays and spaces, which have provided the possibility for increasing innovation at the area of creation of art works during centuries in addition to the place of pattern for creating the work of art; this has caused novelty in the works of art and avoidance from stereotyping works of art in addition to having permanent maturity and constant creation besides having functional and synthetic features. The widest area for presence of Khataei and Ieslimi motifs is at arts of carpet and tile. Less works of carpet and tile can be found without such motifs in their texts or margins. Khataei and Ieslimi branches integrated with main themes of a variety of traditional designs including Corner Medallion, Medallioni, Bandi, Mehrabi, Ghab Ghabi, Derakhti and Goldani have enabled to display a beautiful manifestation with a style close to abstraction and simplification which are the inseparable feature of traditional design of Iran. For this, in various works of tile and carpet, beautiful Khataei and Ieslimi motifs have been in service of themes of nature and its abstracted manifestations.

### Khataei designs

Khataei designs include a bouquet of flowers, buds, and leaves on twisted stems creating very beautiful and unique combinations on revolving stems. Circular and dynamic motions of Khataei flowers play critical role in decorating the religious buildings, and it has been interpreted as allegory of heaven. In general, Ieslimi designs are forming the skeleton in the plant designs compounds, that they are visu-



▲ Pattern 1. Four components in design of Shah Abbasi flower with six petals

ally firmer, stronger and thicker, and Khataei flowers and leaves are found in Ieslimi designs (Moein, 2008). Khataei designs have been inspired from nature. Initial and similar examples of Shah Abbasi flower is pomegranate flower. Khataei designs having love-like stems include different types of leaves, buds, and flowers. These designs are stylization of nature in some aspects (Pashazanus, 2009, 12). Khataei designs are moving along with Ieslimi designs. Khataei designs are inspired from delicate and beautiful flowers found in nature, but artists have brought some modifications on their original form.

#### Shah Abbasi flowers

Shah Abbasi flowers are of a great importance among Khataei motifs. The suffix "Shah Abbasi" in various dictionaries has been used for this group of flowers. These flowers have a long history in Iranian arts and reached to

their climax in their application especially in work of various arts at Safavid age. Shah Abbasi flowers have two various forms of egg and round. Egg-shaped Shah Abbasi flowers are divided into two simple and compound groups. Simple and compound Shah Abbasi flowers in design have main components: center of flower, flower mirror, petal and slots. This is an exception in structure of simple Shah Abbasi flowers with three petals. Anari appellation in Ana'ri Shah Abbasi flowers has been based on flower mirror to the lines surrounding Ana'r which the petals of flower are arranged on it by putting in the middle part of flower. Simple Shah Abbasi flowers by having various decorations include a variety of flowers: flowers with three petals, flowers with four petals, flowers with five, six or eight petals, Tulips, leaves. Anari shah abbasi flower with six petals has the most used in design of various branches of traditional arts including tile, Tazhib and especially carpet.

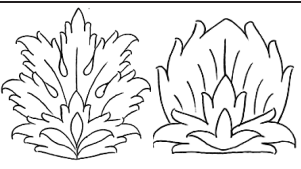
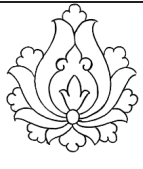


In design of carpet to achieve considerable dimensions of carpet, main and simple Shah abbasi flowers do not meet the space range of carpet. These flowers are just used in minor sizes and lesser sizes. Use of these flowers in large size even with required decorations and processes will cause reduction in their beauty, thus compound Shah Abbasi flowers are used to achieve Shah Abbasi flowers with larger size and well suited to the dimensions of carpet. Shah Abbasi flowers as seen in designs 6-13 raise from combinations of a variety of simple Shah Abbasi flowers. **Technical rules**

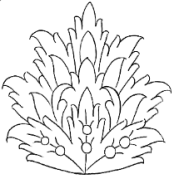
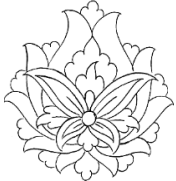

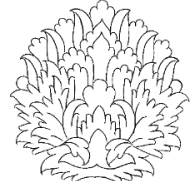
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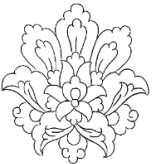


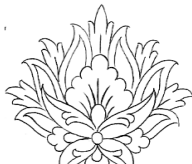
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|  |  |  |  |
| Pattern 5. two types of shah abbasi flowers   | Pattern 4. shah abbasi flower with tulip  | Pattern 3. shah abbasi flower with four leaves                                      | Pattern 2. shah abbasi flower with six leaves   |

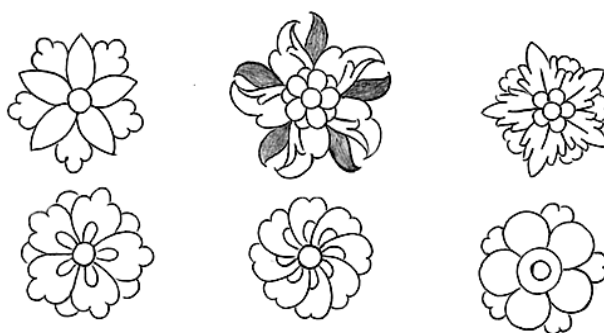
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|  |             |                    |  |
| Pattern 9.<br>combination of<br>two leaf flowers                                  | Pattern 8.<br>combination of two<br>flowers with four<br>leaves and tulip with<br>ten leaves | Pattern 7.<br>combination of<br>flowers with four<br>leaves, Anari flower,<br>Bargi flower and tulip | Pattern 6.<br>combination of<br>flower with six<br>leaves and one leaf              |

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|  |  |            |  |
| Pattern 13.<br>combination of<br>two anari flowers                                | Pattern 12.<br>combination of two<br>flowers with one leaf<br>and four leaves     | Pattern 11.<br>combination of two<br>flowers with one leaf<br>and tulip with eight<br>leaves | Pattern 10.<br>combination of<br>two flowers with<br>four leaves and six<br>leaves  |

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▲ Pattern 14. Design of several round khataei flowers

#### in drawing Shah Abbasi flowers

All Shah Abbasi flowers enjoys systematic geometrical rules of symmetry, proportionality and balance in quality of drawing.

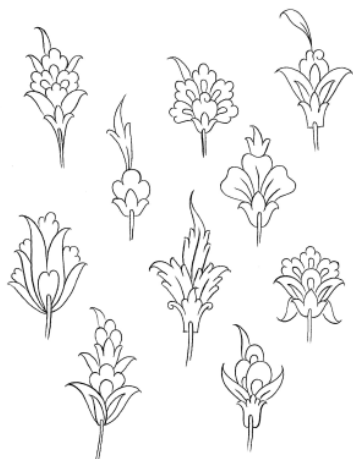
#### 1-design of flower based on line of symmetry

Shah abbasi flowers have been drawn in a symmetric way, thus both halves of flowers are similar to each other.

Compliance with size of leaves in proportion to their arrangement

Compliance with size of leaves, leaves' distance to each other and how to arrange them around flower mirror play a major role in the static and beauty of flower pattern. In shah abbasi butterfly and tulip flowers, size of up leaves is more than down leaves.

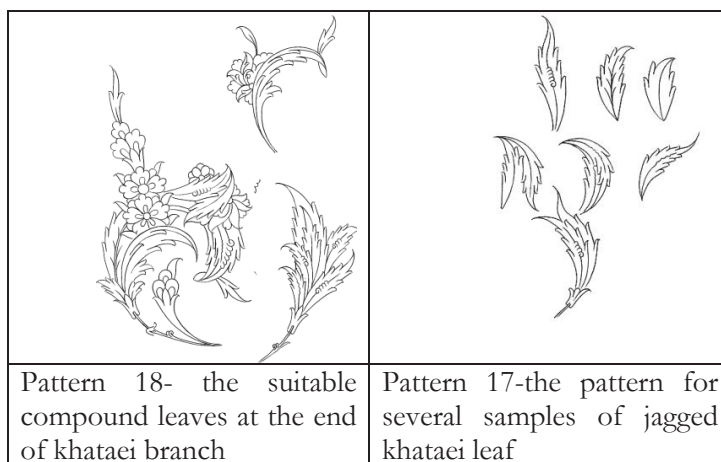
Orientation and association of Shah abbasi flowers moving on Khataei branch



▲ Pattern 15. Several samples of buds at khataei flower



▲ Pattern 16. Peach-colored khataei leaf



The required proportions in interior decorations of space of flower mirror and leave

#### Round-shaped Khataei flowers

Round-shaped Khataei flowers are among a variety of Shah Abbasi Khataei flowers, designed in a flat shape and without perspective. Components of oriented Shah Abbasi flowers including center, leave and slot are available in these flowers. Besides dynamism of oriented Shah Abbasi flowers, round-shaped flowers cause governance of silence in the design. Number of leaves to the flower largeness has been in range of 4, 5, 6 and/or 8, but flowers with five petals are used since the odd number of leaves makes the round-shaped flowers more beautiful.

#### Khataei buds

In traditional design, any flower which is not yet fully blossomed is called bud. Bud is

smaller than flower, developed from sepal and petal. a variety of Shah Abbasi flowers have their special buds and largeness of their sepals is proportion to size of their sepals. Pattern 15 displays several samples of buds of Khataei flower.

The technical points in drawing buds include:

- 1- Coordination of size of bud components to each other;
- 2- The full deployment of the petals on either side of the medial axis bud
- 3 decoration of the inner surface of the petals with patterns from the original form of petals.

#### Khataei leaves

Leaves have been another component of Khataei leaves, drawn in simple, peach-colored, jagged forms.

Peach-colored leaf is the simplest and smallest leaf among the Khataei components,



seen at the end of flowers and buds and/or the screw branch of Khataei (Pattern 16). jagged leaf is of great importance in design of Khataei flower. This flower has been larger than peach-colored leaf, seen various jags along it (pattern 17). Jagged-shaped leaves play a particular role in displaying the Khataei flower in a harmonized way. The twists in this leaf display quality of capabilities of Khataei flower.

Jagged-shaped leaves are designed in compound or cluster forms at the end of Khataei branch.

### Technical rules in drawing Khataei leaves

- 1- accuracy in compliance with proportionality of leaf's length and width
- 2- compliance with surface of leaf's decorations to one third of the entire space of leaf
- 3- in drawing the jagged-shaped leaf, compliance with the same distance of jags from each other and also distance of jags with the stem at the middle of leaf is of great importance.
- 4- size of leaves varies proportional to size of adjacent motifs and also the surface given to it, which might be designed wider, narrower, shorter and/or longer.
- 5- in designing the jagged-shaped leaves, it requires the arch at the stem of leaves has been delicate, avoiding large curve. With regard to the symmetry line in design of Khataei flowers, bending the leaves causes stability in flowers, harmonized the flower.

How the leaf widening from the beginning to the middle is and how the leaf narrowing from the middle to end are of great importance in maintaining with proportionality of leaf.

### Khataei branch

Compliance with geometry in quality of drawing the branch curve is of great importance. Khataei branch regarding pattern 19 has the rotary screw from out to in, directed to Clockwise and Anti-clockwise Directions. Rotary of Khataei branch starts with a desired radius and well suited to the space and continues with a circular trajectory to the center. number

of branch rings varies proportional to the dimensions of design space. the more space, the wider radius of rotaries and larger flowers and components of Khataei branch (pattern 19). Yet, the Khataei branch is designed without rotary and with harmonized curve in a harmonized path in the small spaces such as margin, inside the frame and/or a part of the bergamot and Corner medallion spaces, regarding pattern 20.

Technical rules in drawing the Khataei branch

- 1- distance between the branch rings is in the same size and same in all points. This helps for suitable arrangement of Khataei motifs such as a variety of flowers, buds and leaves, regarding pattern 21.

- 2- In split of Khataei branch, the second branch moves along the main branch, required being equal or smaller than it.

- 3- Diameter and thickness of Khataei branch have been proportional to the size of Shah Abbasi flowers, with the same diameter from the beginning to the end of movement.


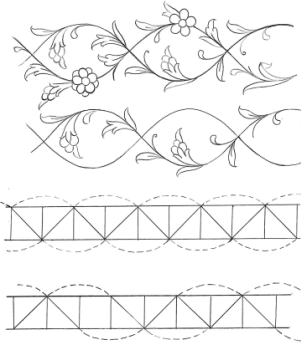
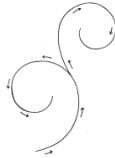
- 4- Khataei branch lacks Eslimi components. Eslimi branch lacks Khataei components and none of the flowers, buds and Khataei leaves are not drawn on Eslimi branch. The principles to design Eslimi motifs in design of carpet and tile

### Eslimi arrays

Eslimi arrays include Sagheh, Harp, Band, head-band and head-eslimi with various Phili, Dahan Azhdari, Goldar, kongereh and Mari types. Phili and Dahan Azhdari Eslimi is among the main types and Goldar, Mari and Kongereh eslimi belong to minor types of these arrays. Each of eslimi types has Harp, Sarband, Band and head-eslimi. Eslimi arrays in various arts including carpet, tile, wood, plaster, etching, fabric, illumination and miniature play the role of space creation for a variety of frames Medallion, Corner medallion, frames, head-Medallion, Ghandil and Kati-beh.

Eslimi branch

Eslimi branch regarding pattern 22 like Kha-

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| Pattern 21- arrangement of motifs on khataei branch                               | Pattern 20- how to draw khataei branches with harmonized movement                 | Pattern 19- how to draw khataei branch  |



▲ Pattern 22. How to draw eslimi branch via hollow eslimi branches; pattern 23. Space creation for corner, medallion, head-medallion and Ghandil




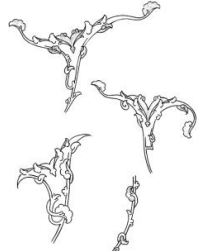
tai branch with screw rotary from out to in and consistent and inconsistent with movement of clockwise and with a diameter more than Khataei branch plays the role for space creation in design of carpet;

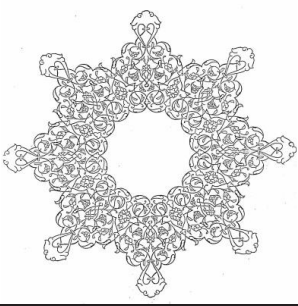
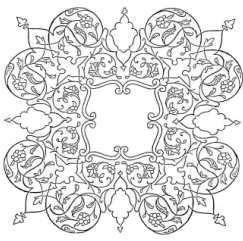
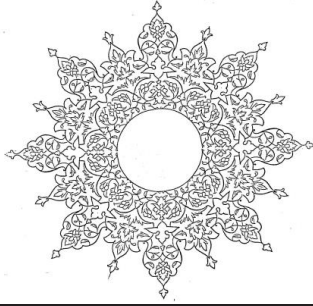
Movement of Eslimi branch has not been rotary, designed with a proportional curve and in a harmonized path in creation of geometrical spaces such as Medallion, Corner medallion, head-Medallion and inscription. Creation of these various spaces of Medallion, head-Medallion, Ghandil, Corner medallion, and the frames inside the margin are assigned to Eslimi branch and the Khataei branches with motifs of flowers, leaves and buds decorate the obtained spaces. Yet, in the spaces without Khataei rotary, eslimi branches are assigned with filling the space in addition to space cre-

ation. Creation of a variety of various spaces of Medallion, head-medallion, Ghandil, Corner medallion and the frames inside the margin are assigned to the eslimi branch and the Khataei branches together with the motifs of flowers, leaves and buds decorate the obtained spaces. Yet, in the spaces without Khataei rotary, eslimi branches in addition to creation of space are assigned with filling the space. None of Khataei elements including flowers, leaves and buds are put on eslimi branch; further none of eslimi elements are designed on Khataei branch.

#### **Eslimi harp and various types**

When another branch comes out of Eslimi branch, motif of Eslimi harp is designed like a node which connects these two branches to each other. Eslimi types are named regard-

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| Pattern 29-<br>screw eslimi   | Pattern 28- jagged<br>eslimi harp and<br>branch                                   | Pattern 27. eslimi<br>branch and harp with<br>flower                               | Pattern 26. dahan<br>azhdari eslimi harp<br>together with head-<br>eslimi on the branch |

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| Pattern 32- draw the<br>medallion decorations at<br>22.5 degree                   | Pattern 31- draw and<br>fill the medallion<br>decorations at 45<br>degree         | Pattern 30- draw the toranj<br>decorations at 22.5 degree                           |

ing type of their harp, found with a variety of Phili, Dahan Azhdari, Goldar and Kongerehi. Mari eslimi lacks eslimi harp, found with spiral movement. This type of eslimi has had a limited movement, lacked eslimi harp as another branch is not separated from it. Mari eslimi without starting from a root and/or connecting to an area is set among eslimi, Khataei and/or other motifs with harmonized and spiral motion in an independent way.

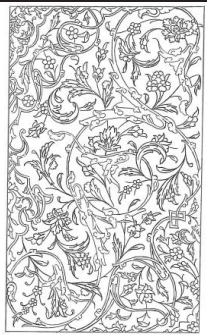


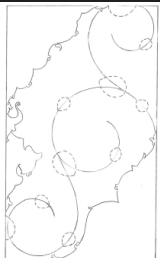

Medallion space and/or frame

Medallion space and/or frame is the structure of design in Medallion jagged types in a variety of arts of gilding, stucco, tile, ceramics, scrimshaw and rugs. There is just one medallion in corner medallion medallion and afshan medallion patterns centered at work and conducted all the elements in the text and margin to unity and coordination. Medallion with a variety of various eslimi and khataei decorations had the most circles, oval and diamond

forms. Medallion has two middle and main texts. If Medallion has more than two texts, it requires specified prevailing Medallion space and main space of Medallion during design. Size of middle medallion equals to one third of medallion size. In a way the medallion is designed and divided, the prevailing space should exist in the main medallion and include the prevailing color. Drawing circular medallion at angles 11.25, 22.5, 45 and 90 degree for design of four-segmented, eight-segmented, sixteen-segmented and thirty-two-segmented medallions is based on patterns 30-32. The most common angle for 22.5 degree medallion is of sixteen-segmented type. In circular medallion, the thorough design of medallion is obtained by design of a motif and repeating it on the medallion surface.

In images 15-20, a variety of medallion and Shamshe which have been created with spaces via eslimi branches and decorated via Khataei



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| Pattern 37-<br>arrangement of<br>eslimi and khataei<br>motifs in space<br>creation of text | Pattern 36-<br>space creation<br>via the text<br>through eslimi<br>and dahan<br>azhdari<br>branches and<br>rotary of<br>khataei branch | Pattern 35-<br>space creation<br>and decoration<br>of space via<br>khataei branch<br>and its<br>components | Pattern 34-<br>draw khataei<br>branch and<br>position of a<br>variety of main<br>and minor shah<br>abbasi flowers<br>on it | Pattern 33-<br>how to design<br>eslimi and<br>khataei next to<br>each other         |

branches are seen. The rules for composition of components and spaces in structure for design of carpet

The visual priority for eslimi arrays than khataei arrays

in a variety of carpet patterns in which the rotary of eslimi and khataei branches have been used, eslimi patterns due to power compared to khataei arrays are of greater visual priority. Firstly the eslimi branches and harps and then Khataei branches and their motifs are seen. Khataei motifs and branches pass beneath and above eslimi and have no interference with them. However the space has prevailed with khataei components and lesser part has been given to eslimi, yet thick eslimi causes visual priority in these motifs. pattern 33 and images 3, 4, 7, 9-12.

#### Principles governing arrangement of components on eslimi and khataei branches

1- unity and coordination throughout carpet and tile patterns rely on the rhythm which is created through rotary of khataei branch and how to arrange elements. Images 17, 18 and 20; Pattern 34 displays a drawing from how to start and rotate khataei branch in the space of text

2- arrangement of khataei components on

various rings of screw and harmonized khataei branches. Patterns 34 and 35

3- arrangement of khataei components on the khataei branch includes a variety of Shah abbasi flowers, compound leaves at the end of khataei branch, blossomed flowers with five leaves, buds and leaves in a harmonized form. images 17, 18, 20

4- the main pillar for arrangement of khataei elements is assigned to Shah Abbasi flowers. These flowers in addition to compliance with the same distance from each other are arranged on the branch with maintaining homogeneity. Proportionality of components on khataei branch is to the area of large shah abbasi flowers. images 17-20

5- Pattern 34 displays position of main Shah abbasi flowers on khataei branch.

6- Branch, leaves, buds and round flowers with five leaves are designed by specifying the place of main flowers on the remaining parts. Pattern 35 displays space creation and space decoration via khataei branch.

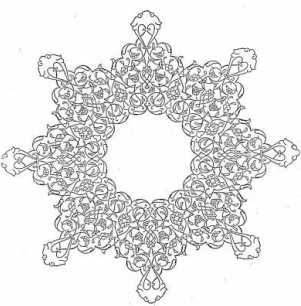
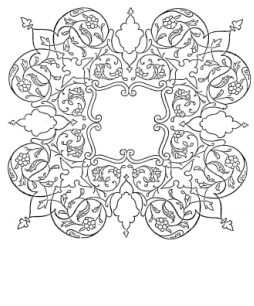
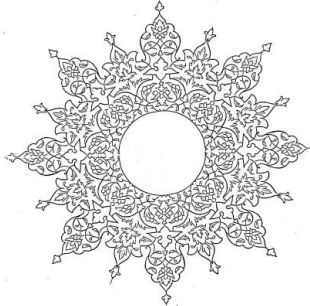
7- The leaves have a special position in filling the existing space between khataei stems and flowers.

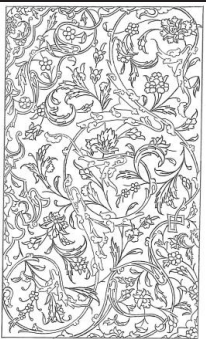
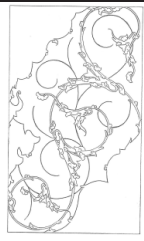

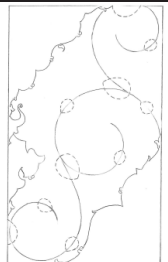

8- Size of leaves varies in proportionality to size of adjacent motifs and the surface given

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| Pattern 32- draw the medallion decorations at 22.5 degree                         | Pattern 31- draw and fill the medallion decorations at 45 degree                  | Pattern 30- draw the toranj decorations at 22.5 degree                              |

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|  |                               |         |                    |  |
| Pattern 37- arrangement of eslimi and khataei motifs in space creation of text     | Pattern 36- space creation via the text through eslimi and dahan azhdari branches and rotary of khataei branch | Pattern 35- space creation and decoration of space via khataei branch and its components | Pattern 34- draw khataei branch and position of a variety of main and minor shah abbasi flowers on it | Pattern 33- how to design eslimi and khataei next to each other                     |

to them, which might be designed wider, narrower, shorter or longer.

9- Regarding visual significance at the end of khataei branch, decoration of this part is assigned to the compound jaggedleaves with flowers and buds.

10- The main and large Shah abbasi flowers and then compound leaves at the end of branch enjoy greater visual priority in arrangement of khataei components.

11- khataei components create various surfaces on surface of work of art through rotary of branch and arrangement of flower, bud and leave elements.

12- As seen in pattern 36, eslimi branches play the role of space creation and khataei branch-

es play the role of filling the spaces.

13- Arrangement of khataei motifs is the function for movement of khataei branch. All the flowers, buds and leaves are designed consistent with rotary of khataei branch. patterns 35 and 37

14- Control on homogeneity and balance of heaviness and lightness of the arrangement of khataei components on khataei branch is of great importance.

15- eslimi and khataei have an independent character, thus each can be designed in an independent way from each other. yet, eslimi and khataei are complementary to each other by arranging eslimi and khataei branches in compliance with independence, whereby

beauty of work of art increases by putting eslimi and khataei next to each other. since eslimi due to lack of various components like khataei components have not the possibility to use wide ranges of color; on the other hand, khataei lacks the ability to create space such as eslimi, beauty of work increases by putting eslimi and khataei next to each other (patterns 33 and 37).

#### **The rules for composition in structure for design of carpet and tile**

Composition is called to arrangement of various elements in the pattern including the spaces and motifs with the aim of access to cohesion and unit in the entire pattern. The rules for composition of components and spaces in the entire structure of tile and carpet pattern include:

1- use of the systematic geometrical principles and rules including the compliance with balance, symmetry and proportionality in design of components and arrangement of the pattern spaces to achieve the beauty and giving effect to the work; the geometrical structure such as a pattern plays the role for organizing component and skeleton of the pattern. The design criteria for motifs and creation of various spaces and type of composition of the pattern are based on the geometrical structure. according to Pope, the contracts, traditions and standards in the principles for Iranian arts including the structure, pillars or decoration in addition to be considered as the barrier play the role of supporters for the novel innovation and diversity in creation of art works (Pope, 1994, p. 134). The basis for traditional design patterns such as Corner Medallion, Medallion, Bandi, Mehrabi, Ghab Ghab and so on enjoy the geometrical structure in design and composition. The exact geometrical and mathematical divisions for the motifs in the structure of pattern are a factor to prove qualitative beauty and its adjustment with the principles of Iranian traditional design.

2- avoidance from accumulation and concen-

tration of elements in various parts of pattern through compliance with principles of geometry in arrangement of components of carpet and tile design

3- creation of rhythm in surface of work through compliance with principle of coordination and proportionality in design of components and structure of spaces

#### **Rhythm and movement of motifs, spaces and colors in the surface of work cause orientation to focus on the viewer's attention and receive the sense of unity**

A part of rhythm is obtained from iteration of the same motifs in the margin and space of medallion and Shamseh which takes place due to the designers' intelligence in understanding of the form properties. Iteration of a motif and/or image in the surface of work proceeds based on compliance with symmetry of components, or it can say that the geometrical order in traditional design requires regular and systematic iteration of motifs throughout the pattern. Another part of the rhythm in the work is the product of the movement of eslimi and khataei branches which represent rotary of the motifs with the proportional rhythm throughout the work and cause the visual balance throughout the work. The harmonized rotary of colors and their suitable spread pave the other part of the rhythm. Images 1, 17 and 20

#### **Proportionality of dimensions with the pattern**

The pattern requires space to express the character, and that space requires having the capability for this expression. For instance, mihrab pattern by displaying the Qibla direction at square dimensions has not a good view, so far as there is no square mihrab in the architecture. The Corner Medallion in rectangular dimensions will be beautiful. The head-medallions in two sides of the longitudinal axis of medallion in addition to enhancing the longitudinal axis at the dimensions of the work cause better view of the medallion. In the meantime, rectangular dimensions are



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the best space which can display the medallion with two head-medallions in the best way.

5-coordination the form and size of motifs in the pattern

The dimensions proportional to their size need the motifs proportional to them. The motifs which are considered for small dimensions are suitable in the same size and the larger dimensions will not be suitable.

6-compliance with the range of design methods for various components in two flat and three-dimensional ways

Since the Iranian painters have had the ability for three-dimensional design, they have been deserved for the character beyond realists for various painting branches, in such a way that it has been sufficed to removing the three dimensions to two dimensions in design of human anatomy and/or tree for eslimi and khataei. Each of eslimi and khataei arrays which are designed in a flat way have special rules and have not the possibility for integration with the motifs which are designed in a perspective way. In drawing the leave with the aim of expression, the growing of leave has not been taken into consideration, thus the abstract way for this group of motifs is considered. Yet, the three-dimensional patterns remembered with Gol farang are made with accuracy in their details. in case of use of gol farang pattern in the khataei flowers, it requires to have these motifs with independent areas and separate roots.

7-Compliance with the structural rules of eslimi and khataei branches in traditional design  
Combining the motifs in the traditional design is based on movement of khataei and eslimi branches. eslimi and khataei branches have been both an independent organs which have specific components in addition to the independent movement and rotary. Thus, eslimi components are not used in khataei branches and khataei components are not used in eslimi branches. In the works existing in images 1, 8, 11, 13 and 15, eslimi motif has been used which lacks any khataei component.

Significance of margin in the composition system for design of carpet and tile

1-the horizontal and vertical direct lines at the margin work out by restricting the space as the frame of text.

2-margin by viewer's focus on the motifs on the text causes unity in the pattern and avoids the dispersion in the pattern. Images 9, 12, 17 and 20

The margin by enhancing the cohesion in the text avoids dispersion and disruption in the elements on the motif and pattern. The motifs in the margin lead to the iteration of the motifs and organizing the text and margin in the entire work of art. The prevailing iteration of the motifs at the margin seems like the headband which connects around the text and avoids dispersion of the motifs on the text.

3-use of margin increases power and skill of designer in the motif and color, through which it raises more visual effects on the viewer.

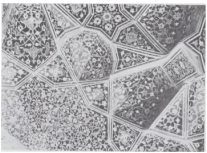

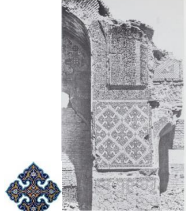
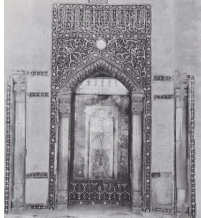



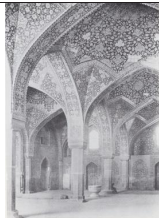


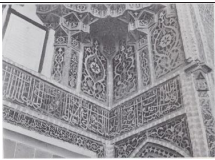
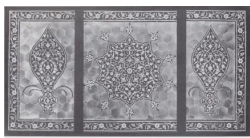




4-the margin leads to the symmetry and balances in the motif and pattern.

5-the margin with iteration of motif and color leads to the rhythm in the work. The detached motifs in the text which lack the starting point and suitable ending are ordered by means of margin. In this way, the margin causes filling some incomplete elements on the motif or pattern such as flowers, stems and animal bodies in the text. Images 9, 12, 17-20

## Conclusion





This study has been conducted aiming at studying the composition system of eslimi and khataei motifs in two parts of carpet and tile on how to draw the khataei and eslimi motifs and study the composition system of traditional design. khataei motifs in two tile and carpet arts include eslimi branch, a variety of eslimi harps, head-eslimi, eslimi-band and headband eslimi. The rules for composition of components and spaces in two tile and carpet arts have been the same, i.e. eslimi motifs have the role for space creation and khataei arrays have the role for filling the obtained spaces. eslimi arrays have more



|   |   |  |  |
|---|---|--|--|
|    |    |   |    |
| Image 4. tiling roof, hollow eslimi with khataei branch, Imam Mosque in Isfahan (ibid: 467)   | Image 3. entrance arch corners, phili hollow eslimi with khataei branch, Harun velayat temple in Isfahan, ibid, 459                         | Image 2. internal Shabestan at the Northeast, eslimi phili frames with khataei branches, Blue Mosque, Tabriz (ibid: 456) | Image 1. Mihrab with mosaic tiles, corners with Mari and phili eslimi patterns, Abarghu Mosque, the 9th century AD (Pope, vol. 8, 2008: 403)   |
|    |    |   |    |
| Image 8. Balaei, Mosaic tiles molded into space, composition of three eslimi branches, mosque of Yazd, 861 AH, ibid 539                                       | Image 7. dome, hollow eslimi branch with rotary of khataei branch, Sheikh Lotfollah Mosque, ibid, 483                                       | Image 6. Madar Shah School Dome, hollow eslimi with khataei branch, 1126 AH, Isfahan, ibid, 470                          | Image 5. tagh shabestan, an arrangement of eslimi frames with harmonized rotary of khataei branch, Imam mosque of Isfahan, ibid, 469   |
|    |    |                                       |    |
| Image 12. Image sanctuary, elephant hollow space with a turnover of branches by Art Imam Hussein, the mosque (Ferrier, 1989: 278)                             | Image 11. domes, arabesques elephant atmosphere through the branches Bold, Imam Mosque in Isfahan (Fisherman & Hassan-uddinkhan, 1997: 129) | image 10. Art combines solid elephant image with branches of Imam Hussein, the mosque Pamenar, Kerman (ibid: 545)        | Image 9. Esper, on both sides, pots and tree design with arabesques elephant hollow in the middle atmosphere circulation of Imam Hussein and Imam Hussein Shamse with arabesques elephant hollow and circulation branches, monastery of the 9th century AD (ibid: 544) |
|    |    |                                       |    |
| Image 16. Input ceiling nave, creating an atmosphere Shamse, Art elephant hollow branches with a rotary of khataei branch, Imam Mosque in Isfahan (Ibid: 186) | Image 15. Shamse image, elephant hollow space with arabesques, mosque in Yazd, 1375 AD (Ibid: 171)  | Image 14. The hollow space with arabesques elephant picture, mosque in Yazd, (Ibid: 170)                                 | Image 13. South porch, elephant hollow space with arabesques, mosque in Yazd (Giovanni and Gianroberto, 2007: 219)   |

▲ Table 1. Images of space creations for eslimi and khataei motifs in tiling works



|  |  |   |  |
|--|--|---|--|
|   |   |   |   |
| 20. carpet with corner medallion image, space creation with a rotary of khataei branches, Tabriz, designer: Ghareh (ibid: 283) | 19. carpet with corner medallion image, space creation with a rotary of khataei and eslimi branches, Tabriz, designer: M (ibid: 282) | 18. carpet with corner medallion image, space creation with a rotary of khataei branches, Tabriz, designer: M (ibid: 280) | 17. carpet with corner medallion image, space creation with a rotary of khataei branches, Tabriz, designer: Pournami (Akbari, 2014: 278) |

▲ Table 1. Images of space creations for eslimi and khataei motifs in tiling works

visual priority than khataei arrays. Unity and coordination throughout the tile and carpet patterns rely on the rhythm which is created through rotary of khataei branch and how to arrange the elements on it. The main pillar on how to arrange khataei elements is assigned to the Shah abbasi flowers. the rules for composition of components and elements in the entire structure of tile and carpet pattern include use of the systematic geometrical rules and principles including compliance with balance, symmetry and proportionality in design of components and arrangement of the pattern spaces to achieve the beauty and giving effect to the work. The horizontal and vertical direct lines at margin by restricting the space give more visual effects to the viewer.

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