Aesthetic Analysis of Mosques’ Ornamentation and Tiling in the Safavid Era:  
A Case Study of Sheikh Lotfollah, Char Bagh, and Shah Mosques in Isfahan

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Abstract. Ornamentation in the Islamic architecture in addition to elegance, suggest other concepts such as pantheism and tiling considers an elegant method of ornamentation throughout Muslim’s world. In Safavid era seven-colored tiles were widely used in Isfahan palaces.

The present study aims to analyze the ornamentation of mosques in Safavid era from an aesthetic point of view. Therefore, Shaikh Lotfollah, Char Bagh and Shah Mosque of Isfahan are samples studied in a descriptive-analytical method and library document data collection, data analysis is based on the Gestalt principles. Finally, aesthetic of mosque’s ornamentation is analyzed based on the principle of perception and formulate some criteria to identify it.

Keywords: Safavid era, Mosques, Tiling, Aesthetic Analysis

INTRODUCTION

Human perception of art depends on cognitive principles, it can be found how to recognize and perceive a figure. Due to ornamentation cognition, Islamic architecture in art is being studied, while it is more significant in Safavid era in this respect which tile’s ornamentation reaches to its higher-end. The research analyzes the lines on mosque tiles through Gestalt psychology. To review, first study the history, then Gestalt principles in perception, examine some mosques as a sample and their ornamentation, finally develop aesthetic criteria.

History

In this section, the findings of others research are collected.

A. Taher Rezazadeh studies the use of gestalt theory in art and design. Also, he finds gestalt principle consists of ten items (Similarity principle, proximity principle, continuity principle, closure principle, figure-ground principle, common fate principle, and close edge, touch, overlap and combining. All of these principles influenced by Pragnanz which is the core of perceptual gestalt theory.

Ramin Kavoosi represents 6 items of Gestalt principles by studying gestalt practices and attitudes. (Law of closure, law of similarity, law of symmetry, law of proximity, law of continuity, law of pregnancia.)

He concluded every observable phenomenon such as a Gestalt only its totality aesthetic is important, without beginning and without ending.

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Juan Carlos Sans in his book titled “Image in Gestalt Principles” states 8 items of gestalt principles. (Law of proximity, parallelism, good gestalt, closure object or area, past experience, law of symmetry, law of continuity, law of figure-ground.)

In phi phenomenon and Levin’s field theory, there is 6 items of the principle to study perceptual organization rules. (Closure, similarity, proximity, good continuity, smoothness, figure-ground.) 12 items of gestalt principles have found in series of books and educational materials in PHD level mention Levin’s theory to advance gestalt theory. (Law of closure, law of similarity, law of proximity, close edge, touch, overlap and combining, law of continuity, law of figure-ground, masking law, law of common fate, law of completeness.)

HadiSafaeepour and Hassan Ali Pourmand in an article titled “covering concept in Safavid architecture by analyzing and studying” reach to the concept of sky, monotheism, paradise, prefect human. Maryam Heidari in an article studied Safavid mosque architecture and concluded although most of modern mosques build by facilities, there are infirm to make a spiritual space. It may be occur in this regard that architectures are neither interested in their work nor used his experience in mosques.

ElhamParvizi and Hassan Ali Pourmand in their article titled “Manifesting purgatory world” in Safavid architecture ornamentation, a case study of Isfahan Imam Mosque; Study the quality and possibility of its manifestation particularly in purgatory world in Safavid architecture. All theories and findings on gestalt and Isfahan Safavid mosques are studied briefly.

Table 1. Collecting criteria to identify valuable ornamentation and using gestalt; Sourced by the author.

<table>
<thead>
<tr>
<th>Scholar</th>
<th>Gestalt approach</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramin Kavoosi</td>
<td>Focus on an aesthetic effect on perception</td>
<td>Closure, similarity, symmetry, proximity, continuity, pregnancia</td>
</tr>
<tr>
<td>Taher Rezazadeh</td>
<td>Usage in art and design</td>
<td>Similarity, proximity, continuity, closure, figure-ground, common fate, close edge, touch, overlap and combining</td>
</tr>
<tr>
<td>Carlos Sans</td>
<td>Gestalt principles’ perception</td>
<td>Proximity, parallelism, good gestalt, closure object or area, past experience, symmetry, continuity, law of figure-ground</td>
</tr>
<tr>
<td>Levin</td>
<td>Organize perception rules</td>
<td>Closure, similarity, proximity, good continuity, smoothness, figure-ground</td>
</tr>
<tr>
<td>Educational materials in PhD</td>
<td>Advance Gestalt theory</td>
<td>Closure, similarity, proximity, close edge, touch, overlap and combining, continuity, figure-ground, masking law, common fate, completeness</td>
</tr>
</tbody>
</table>

**Literature**

**Mosques architecture in Safavid era**

Islam played an important role in development and evolution of most arts in various periods particularly in Safavid era. Architecture arts, painting, calligraphy, illumination, manufacturing of carpets and textile, tiles and etc. are culminated to some extant which works like them are less in future and past. It was started during the rule of Shah Abbas. In this era, several buildings were constructed not only in Isfahan, but also in Shiraz, Ardebil, Mashhad, Tabriz and other Iran cities.

Shah Abbas’ consultant to make this ambitious architectural project, was a distinguished man named Sheikh Baha’aldin Muhammad Amili; as a theologian, philosopher, Qur’an commentator, Juris consult, astronomer, scholar, poet and architect, he was an exemplary character of Shah
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Abbas the Great. In Safavid era, Iran’s ancient architecture was revised, shape and materials in building found their roles. Most buildings in the Safavid era such as mosques, schools and inns were structured four porches. Using seven color mosaic tiles ornamentation were prospered plentiful as this era’s religious building among Dome, Porch, Arcades, Entry and even Minaret were ornamented by tile. Calligraphy on the tile in building ornamentation were common which several buildings were decorated by Thulth, Naskh, Nasta’liq and other scripts. Since mosques are the most important Islamic buildings, it can be said the Islamic art has in fact emerged from the mosques and these constructions can be considered as the most important places to manifest both Islamic art and architecture.

Ornamentation in Safavid era (Islamic Mosques)

At this time, all buildings were decorated by tiles ornamentation. Sheikh Lotfollah mosque, Caesarea entrance, Imam (Shah) mosque in Naqsh-i Jahan square were illustrated by mosaic tiles. Squared bricks of painted tiles famous as seven-color mosaic tiles were used in buildings widely. This era buildings have special ornament for tiles’ designs and colors. Not only walls were decorated by tile and mosaic, but also Domes, Porches, Arcades, Entrance and Minaret were. In Safavid era, building large entry with transparent tiles were culminated and Mogharnas tore were developed very much. The composition of a great entrance and minarets in both sides, a four porches Apron and buildings around it, also inserting the dome so that it is compatible with all buildings. Due to Iran’s security in this period, great and excellent buildings were built like Ali Qapu palace, forty columns (Chehel Sotoun), eight paradise, Ashraf Hall in Isfahan and Shazdeh Hosein Shrine, Chehel Sotoun, Ali Qapu edifice in Qazvin. The walls of these palaces are covered with colorful tiles. Moreover, there are a link between all of these designs by famous artists. The ceilings and walls were mostly decorated by woodcarving. Wooden decorations played a main role in non-religions buildings. There were illumination and Lacque-painting at higher level which have close relationship with the art of miniature. Carving, wood turning especially in the doors and ceilings were specific arts in this era. Frescos has been used in Ali Qapu palace, Ashraf hall and Chehel Sotoun; also there were decorating with mirrors in building like Mirror Home. In general the tenth and eleventh centuries AH consider as Islamic art’s heyday in Iran which Isfahan is one of the most important and beautiful cities in this period.

Explain perspective (Gestalt phenomenon)

What is Gestalt?

Through the wide concept of gestalt, there is no direct translation in any language. The word means shape and form in German; an unified whole, postulate, configuration in English; and can introduce as “figure, physique, format, total shape, …” in Persian; but none of them solely means it. Gestalt is a totality of physical, psychological and institutional and has coordinates which its components individually are lack of them. There is a limitation for information following by mind. When the amount of visual information increase, the mind seeks to simplify them by grouping. Therefore, gestalt principles assume an important role.

Gestalt principles

Gestalt psychologist believe there is a particular power in gestalt organizing issues in regular organizing issues in regular schemes, figures and models, also establishing perception and insight. In this regard, organization considers one gestalt feature and is composed of following laws.
Law of good shape (pragnanz)
The chief principle are used in all mental event called pragnanz meaning “essence” in German language. Koffka defined: a psychological organization to some extent control circumstances allow are good. Good for him are some states like complete simplicity, briefness, symmetry and regular. In other words, it is possible each psychological event be meaningful, complete and smoothness. Pragnanz law has been used by gestalt as a guiding principle to study perception, learning and memory.

Law of closure
This law is directly related to learning and memory principles, talk about our tendency to complete the incomplete experience. For example if one look at the line that looks almost like a circle with a small gap; he fills the gap perceptibly and recognize the shape like a complete circle. The principle obeys the same Pragnanz law. The meaningful organized experiences are achieved by the brain field forces and deformed sensory information. Therefore, the incomplete circle is what we feel and the complete one we perceive. The gestalt psychologist strive to show closed surfaces or complete shapes have a more stable and desired position than open surface or incomplete ones. Generally, every person has a tendency to complete inconvenient and asymmetrical situations and shapes. In fact, one become satisfied by organizing a situation or removing weakness while an imperfect situation will lead to dissatisfaction.

Law of similarity
According to similarity law, similar and homogenous materials are perceived better than dissimilar ones. Kohler researches in nonsense syllables indicate homogeneous syllables ate learned easier than heterogeneous ones. The similarity of objects and states from various aspects like color and shape lead to perceive and learn in grouping. In this law, similar items based on their analogy characteristics such as shape, color and etc. make common groups in the respect there were no proximity law. In other words, conforming to law of similarity, the objects are perceived similar in shape and color organizing in specific group. For example, if one receives fragmented models to make regular sets, generally s/he puts models which are similar in shape and color in a group.

Law of proximity
In accordance with law of proximity, phenomena and functions which are close to each other, are learned more easily and better. That is, elements which are adjacent to each other will understand integrated. The law represents factors make a special status in a scene, whatever these factors or units be closer together, there are more likely the risk of dependency. Not only physical distance and proximity of factors in this law create separate sets, but also the same is true for temporal distance. Sounds and words are uttered close together lead to form independent audio unit and those away from each other are lack of the feature. In fact when things are too far from each other, there is no unity. However, if the components be closer together, it will make more comprising and stable units. In this regard, whatever a memory is far older, there is a less chance to be remembered.
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Law of common fate

Good continuation or common fate law stated: perceptual organization is formed in a manner to resume a direct line as direct line, a part of circle as a circle and etc. This type of expansion is used in the completion of the letters and IQ tests in this category, the phenomena are perceived simplified.

Law of figure-ground

Through this law, the properties of Gestalt phenomena appear specifically in the ground that can be found. The figure in each ground is the same gestalt; i.e. one is perceived. The ground means a scene in which the figure appears. In other words, there is a well-organized in the perceptual area which draws attention to itself named “figure”. Moreover, the vague and indistinct part in this area which the figure emerges in it called “ground”.

Gestalt theory

After Behaviorism was accepted as an approved and popular method for psychologists in America, in the same way Wundt and Titchener’s method of introspection were criticized by behaviorists; small group of German scientists who named themselves Gestalt criticized severely behaviorism. Its founders and pioneers were Max Wertheimer along with Wolfgang Kohler and Kurt Koffka. The beginning of Gestalt movement was when Wertheimer traveling by train to discover phi phenomenon. He believes the phenomena differ from their components: “the whole is other than the sum of the parts”. The followers of this school believe they experience the world in meaningful whole or gestalt, not in separate stimulus. Also, decomposing the phenomena means to distort it. Indeed, it is important to find sensation, perception and connection result in a meaningful behaviorism theory. Samples of gestalt phenomena can be found in physics and psychology. Vortex is an example of gestalt. Water drops which vortex is composed of them could not singly represent vortex but the movement of water could. In Gestalt psychology, learning consider as a (whole form) not compounding or analyzing of components. Also, learning is the occurrence of changes in response to meaningful models or whole form. Most uses of gestalt principle were introduced by Wertheimer (1945) to teachers. He applied gestalt principles on education and wise-learning in his famous book published in 1945 entitled as “productive thinking”. Wertheimer reprinted the book by new findings in 1959. He was introduced the nature of the problem solving and teaching techniques, i.e. “productive thinking”. He criticized two common teaching method of his time, logic-based and association approach, and thought these methods portal learner’s perception and comprehension.

His ideas featured the productive thinking that the learners should understand materials to gain insight, also they should arrange the parts rather than have an analytical approach to solve the problem.

A case study

In the following, Gestalt principles in portal ornamentation have been considered by evaluating Isfahan Shah, Char Bagh and Sheikh Lotfollah mosques.

Imam (Shah) mosque building
Imam mosque is located in southern part of square is a masterpieces of the eleventh century AH in terms of architecture, tiling, sculpture, Greatness Dome and its tall minarets. Its main entrance inscription was scrolled by Ali Reza Abassi in Thulth dated on 1025 AH.

The mosque’s architecture was Ali Akbar Isfahani and H’s Steward was Mohib Ali Beygollah.

Sheikh Lotfollah Mosque
The mosque located in eastern part of the square has a beauty tile-covered dome which has a great vine or an arabesque plan proportional to the size and shape of the dome. The mosque corridor ends in its unique nave and sanctuary has an elegant brick tiling and perforated stone windows.

The interior tiling of the nave involves cute seven-colored and Mosaic tiles. Also, there is mosaic inscriptions captures of turquoise tiles and perforated tile windows. Various designs and coloration such as Azure blue and orange give a stunning beauty to the nave. There is an amazing diamond interior nave ceiling. The Mogharnas and Mosaic tile of sanctuary is a masterpiece among the major works of art.

Char Bagh School
A school with an entrance, a dome and two skyscraping minarets has attractive in aspect of coloring and tiling style. These building; School, Inn and Bazaar were built in Char Bagh street. The school lusters as four porches which the exterior face of the building includes a skyscraping, splendid, beautiful entrance and seventeen two-story brick arches around it. The entrance is decorated with finely and Mogharnas tile including full of different lines whose inscription was scribed by AbdulrahimJazayeri in with Nasta’liq on azure blue tile craving the date 1112 on it.

Data analysis
The aesthetic criteria based on gestalt principles are identified mainly in tiling and mosque ornamentation in the following table. The findings determine some criteria in physical and conceptual scopes.
<table>
<thead>
<tr>
<th>Aesthetic criteria</th>
<th>symmetry</th>
<th>Proximity</th>
<th>Continuity</th>
<th>Figure-ground</th>
<th>Common fate</th>
<th>Parallelism</th>
<th>Good shape</th>
<th>Closure</th>
<th>Past experience</th>
<th>Smoothness</th>
<th>Touch</th>
<th>Overlaps</th>
<th>Combining</th>
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<td>Shah Mosque</td>
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CONCLUSION

Considering to primary data analysis, there is a unity in this era based on gestalt between tiling and mosque ornamentation designs. Proximity, continuity, experience and comparison everyday impressive in mosque designs.

It should be noted in accordance with designs analysis, there is more gestalt principles in Shah Mosque. The research considers to study the principle on various sources to find and classify the strategies and criteria. Then, to introduce the principles by examining them in special ornamentation buildings. Finally, it can be concluded the principles like smoothness, experience and comparison everyday life, proximity and continuity are the most popular ones in Islamic architecture and ornamentation in Safavid era mentioned mosques.

REFERENCES