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in Art, Music, and Science

Persian Arts: A Brief Study

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Abstract

Persia has left numerous marks on the civilizations and cultures of human beings, dating back to ancient times. The purpose of this article is to glance through the Persian arts in different eras and also to present a more detailed visual analysis of a ceramic design.

1. Introduction

Persia (now Iran) was one of the nations which were invaded by Muslim Arabs in the seventh century. This brought to an end the *Sasanian* dynasty in Iran, and it was an end to the last phase of ancient Middle Eastern civilization there. The interchange of cultures and combinations of arts among nations living in a vast area, which included North Africa, a part of Europe, and the Middle East, created a type of art, known as Islamic Art. Even though there are common elements in the arts of included nations, each region and nation has kept its own identities in the presentation and performance of it. The greatest flourish of Islamic art was in the period of 800-1600 AD. Not all artists or nations involved in or influenced by the Islamic art were Muslims. Persians, because of their background in art and architecture were one of the most influential among these Islamic nations. "Iran, and Persian influence on literary taste becomes apparent in Arabic literature from the mid-8th century onward. Many stories and tales were transmitted from, or through, Iran to the Arab world and often from there to Western Europe" [1]. This influence also included visual art, architecture, music, laws, and medicine. In this article we focus our study of Islamic art to what has been performed under Persian cultures and beliefs.

2. Persian Pre-Islamic Art

Architecture and art were at their peak during the *Achaemenian* dynasty (549-325 BC), later falling, yet regaining strength during the Sasanian dynasty (224-642 AD). The ruins of *Persepolis*, the massive ceremonial palace complex built in the Achaemenian era, and the ruins of the Sasanian structures are evidence of a rich background in architecture (figure 1). Zoroaster's hymns in the *Gathas*, which date back to the second millennium BC, and other Zoroastrian items all present examples of their literary art. Metal goblets, glassware, ceramic vessels, stone and metal engravings and sculptures show sophistication in visual arts in ancient Persia (figure 2). Phillips Stevens of the Anthropology Department at the State University of New York at Buffalo points out "We cannot overstate the influence of the religion and culture of Persia on the development of Christianity. The sack of Babylon by Cyrus the Great in 539 BC ended the exile. Cyrus aided the Jews in their return to Israel, contributed to rebuilding the Temple, and was hailed as a messiah ... and Persian culture became ennobled and exemplary in Israel. New concepts of angels, ... and the structure of the whole Apocalypse ... were among the direct influences of Persia's religion, Zoroastrianism" [2]. There are older examples of arts from this region, dating back to 6000 BC,

which present friezes with various symmetrical constructions and rosettes of numerous cyclic and dihedral groups [3]. Maspero writes that the Chinese achievements in the third and fourth centuries BC, especially in astronomy and geometry, were due to information that they received from India and especially from Persia [4]. The art of the Persian carpet has its roots in ancient times.

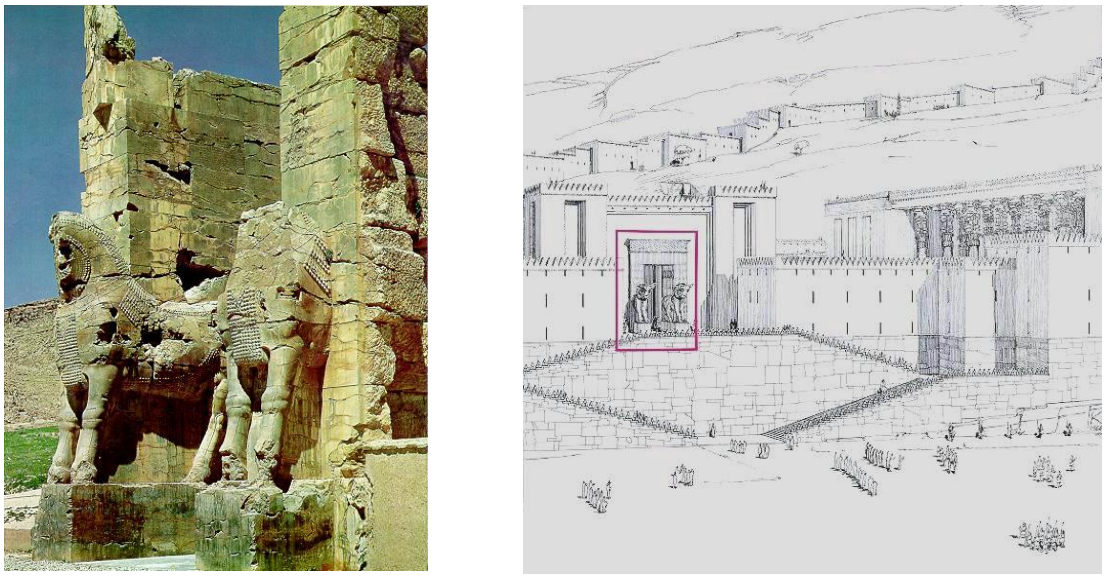

Figure 1: *Two 18-foot limestone bulls flank the doorway of the Xerxes Gateway at Persepolis. Persepolis was started by Darius the Great of the Achaemenian dynasty, and continued by his successors, notably Xerxes. It was a spiritual rather than an administrative capital. Noruz, the Persian New Year according to the vernal equinox, was one of the main events celebrated there.*

Figure 2: *(a) Lion Goblet (b) Gold Goblet with four winged oxen design, late second millennium and early first millennium BC. Lions and bulls were symbols of two opposite powers of summer warmth and winter coldness respectively.*

The ancient Persian arts included details in design and construction, which were carried to the Islamic era. Even though some branches such as ceramics and tiling improved drastically, the traditions of some of the other Persian arts (such as sculpting) received serious damage or were completely destroyed.

3. Persian Arts after Islam

In Persian Islamic art, similar to other regions of the Islamic world, representation of living beings for decoration of mosques and theology schools was prohibited. (This faithfully obeys both the ancient Zoroastrian traditions of Persia and the Judeo-Christian commandment in *Exodus* 20.) Therefore, the center of the artistic tradition lay in abstract geometrical designs, in calligraphy, and in floral forms. Figures 3 and 4 are examples for the calligraphic and for the floral-inspired designs, respectively. In calligraphy, words, as the medium of divine revelation, were written or carved in the walls or around the domes using geometrical rules. In floral-based forms, one spiral-shape branch with some leaves and flowers, without beginning or end, grows out of another, and with the application of mathematical symmetries, it may have numerous variations.

Figure 3: *A calligraphy design with two written lines. The lower line is written in Arabic and is from the Qur'an. The top line is in the Persian Language (Farsi). Using geometrical shapes, it is written that "the key of the treasure is in the hand of the scientist-philosopher." The script is in a stylized fashion that is difficult to read, even for a native user of the language.*

Figure 4: *A floral design from a part of the dome interior of the Marble Palace in Tehran. The dome is closely modeled on the Sheik Lotfolah Mosque in Esfahan, built in the Safavied period.*

3.1. The Art of the Miniature. In Persia, a highly refined art of miniatures developed. Iran was connected to China through the commercial exchanges and trading routes commonly referred to as the Silk Road. This road was instrumental, not only in the expansion of trade, but also the exchange of ideas and thoughts in the arts. After the invasion of China and then Iran by the Mongol dynasty, the relationship between Chinese and Persian artists expanded. The cooperation of artists improved the art of ceramics and miniatures. The art of the miniature became popular for the decoration of books and creating pictures of mythological figures and royal families and scenes of their hunting, fights, and celebrations (figure 5a). Miniature artists also represented the imagery world of the Persian poems (figure 5b):

> "A rose without the glow of a lover bears no joy;
> Without wine to drink the spring brings no joy."
>
> Hafez (1325-1390 AD)

Figure 5: *(a) A prince is hunting ,(b) Lovers served with wine.*

In China, porcelain designs were inspired by Persian verses of poetry and by maxims demonstrating perfection in the art of calligraphy. In Persia, Chinese paintings were mentioned in Persian books and manuscripts and influenced the Persian miniature. In buildings built by the side of the Silk Road used by caravans, there are wall paintings by Chinese artists depicting Persian faces of the Sasanian period. In return, most faces and dresses in the traditional Persian miniature had oriental origins.

In the traditional Persian miniature, the principles of perspective are not applied. The miniature artist believes that perspective is an optical illusion and in order for him to reach the divine milieu, he tries to refrain from observing the principles of perspective. Another characteristic of this art is that the artist uses dots to create shades, as in some of the Impressionists' works, and in the pop art of Roy Lichtenstein and others in the 1960s and 1970s.

Persian miniatures, however, never found a place in the architecture and decoration of religious buildings. The world of geometry acted as the main source for inspiration of the artist-geometer for decorations of mosques, theology schools, mausoleums, and students' residential buildings.

The traditional Persian visual artist avoids emptiness in his art. Each part of the art carries details that have their own symmetries independent from the entire work. Inside a flower or a star design, there are other self-similar smaller designs that have their own identities. This is also true in the imagery world of a poem.

3.2. The Literary Arts. The most sophisticated part of Persian poetry is deeply involved with the ambiguity in which the reader is oscillating between the worldly and the divine. The *Ghazal* was considered the most appropriate genre form for this type of poetry. The Persian poet *Hafez*, undoubtedly, is the most recognized among all other poets in this style. *Johann Wolfgang von Goethe* introduced Hafez to the German-speaking readers in his enchanting poems book, *West-östlicher Divan*, published in 1819. This book was the first aesthetic appreciation of Persian poetry in Europe, and was done by one of the highest European literary intellectuals of the century.

> The rose has flushed red, the bud has burst,
> And drunk with joy is the nightingale—
> Hail, Sufis! Lovers of wine, all hail!
> For wine is proclaimed to a world athirst.
> Like a rock your repentance seemed to you;
> Behold the marvel! of what avail
> Was your rock, for a goblet has cleft it in two!
> Hafez

Classical Persian poetry often mentions knights and kings from Iran's history alongside those from Arabic heroic tales. The cup of wine offered by the "old man of the Magis (Zoroastrian sage)" is comparable to the miraculous cup owned by the Iranian mythical king Jamshid or to Alexander's mirror, which showed the marvels of the world; the nightingale may sing "Zoroastrian tunes" when it contemplates the "fire temple of the rose." … Minute arabesque-like descriptions of nature, particularly of garden scenes, are frequent: the rose and the nightingale have almost become substitutes for mythological figures. The versatile writer was expected to introduce elegant allusions to classical Arabic and Persian literature and to folklore and to know enough about astrology, alchemy, and medicine to use the relevant technical terms accurately. Images inspired by the pastimes of the grandees — chess, polo, hunting, and the like — were as necessary for a good poem as were those referring to music, painting, and calligraphy [1].

The writer was also expected to use puns and to play with words of two or more meanings. He might write verses that could provide an intelligible meaning even when read backward. He had to be able to handle chronograms, codes based on the numerical values of a phrase or verse, which, when understood, gave the date of some relevant event. Later writers sometimes supplied the date of a book's compilation by hiding a chronogram in its title. A favorite device in poetry was the "question and answer" form, employed in the whole poem, or only in chosen sections [1].

3.3. Persian Architecture and Ceramic Art. There were two types of buildings that survived for centuries, religious buildings, and royal residences and fortresses.

In regards to their architecture and structure, each religious school was generally one or two stories in height and was comprised of many rooms, called *Hojreh*, with each room belonging to separate

individuals to reside. These buildings generally had a rectangular, open courtyard in the middle, with large rooms for studying and gathering, and normally were constructed near a mosque or shrine of a religious scholar.

The first mosques were designed as a square or rectangular space, which included a small ablution pool in the middle. The design came from the Zoroastrian temples [5]. Throughout time, religious centers remaining from the Sasanian dynasty rebuilt and changed to become mosques, and the aesthetics of these renovations were improved by the talent of Persian architects, along with a combination of artists from other cultures. The primary mosque in *Esfahan*, *Masjede Jame Esfahan*, has been estimated to be around 1200 years old, even though the main parts of this mosque had been destroyed and rebuilt throughout time. According to some sources of information, this mosque was first a Zoroastrian temple [5]. The oldest date carved in this mosque shows a date of around 1000 years ago, which is carved on the dome. This mosque included a large library with a three-volume bibliography of the library books and collections, however, a major part of this library was lost in a fire.

Palaces were not as secure as the mosques and schools were. Each conqueror, in general, destroyed the old structures. Nevertheless, there are palaces and fortress that have been kept in their original shapes in some older cities.

The decoration of walls using bricks also became important. Brick in its original shape is not flexible, but after cutting and carving it can be used everywhere in the surface of buildings for decoration, including round surfaces, which at that time was a very new idea. In the twelfth century, it became popular to use bricks to cover a surrounding area and then to design the area inside using ceramics with four colors of light blue, navy blue, brown and black. The color scheme improved rapidly by increasing the number of colors made through different combinations of metals.

During the fourteenth century, designs using tiling intensified, and the component tiles became smaller and smaller and the designs more complex. The sophisticated designs also involved curved tiles. Due to this transformation, the most complicated designs of Persian carpets could be carried out in ceramics by cutting and arranging ceramics composed of solid colors (figure 6).

Figure 6: *A ceramic pattern from the Safavid era, incorporating carpet-like details.*

In the *Safavid* era, especially during 1524-1629 period, there was a renaissance for architecture and art. The art of ceramics changed considerably throughout time, and every day new ideas were developed. The way in which ceramics were composed was also improved, introducing different sizes and colors.

The geometric designs and shapes used in architecture, based on their materials and the methods of their execution, can be divided into the following categories:

1. Lay brick designs.
2. Combination of brick designs for the border with ceramics for the main part.
3. Cutting and pasting ceramics.
4. Wooden designs created by using wooden strips which have been cut in different angles and have been put together in order to make a geometrical design and also function as a type of protection and blind for windows.
5. The art of Stucco for creating three-dimensional designs, that resemble stalactites, which were placed as decoration for corners and interiors of domes.

Although decorative designs were constructed using a wide range of materials, their mathematical layouts were quite similar. There were a number of hidden mathematical problems in the design of the entire project with respect to the local decorations and designs, which needed to be studied before the execution. Besides planning for the structure of the building, the architect needed to study the balance and harmony among designs performed for the decoration within an entire project, which is called rhythm of design. The movement of this rhythm from the floor to the wall, and finally to the interior dome design should make a harmony and gives us a feeling of balance and proportion for the entire execution. In fact, in each design we can find the pure mathematics of the division of space and the construction of shapes using essential geometric tools. In order to have an appropriate design and its execution, whether on ceramics, wood, stucco or other mediums, another important item to consider was color.

Before the use of ceramics, Persians used painting as decoration for walls. The use of painting continued until around the eleventh century, when ceramics grew increasingly popular, replacing painting.

4. Study of a Ceramic Design

Figure 6 is a ceramic design, which includes carpet-like details made from solidly colored, small, curved tiles (figure 7). The division of space of the layout creates geometrical pieces. Most of the time these pieces are standard and can be used for creating innumerable patterns. Therefore, each piece found its own name and identity known to the designer and ceramic maker. The artist-geometer learned how to construct each piece geometrically for a certain size without creating the entire pattern. Therefore he could communicate with the ceramic maker without referring to the entire design. Figure 8 provides the geometrical constructions of pieces in figure 6.

Figure 7: *The details of a design used in the ceramic pattern in Figure 6.*

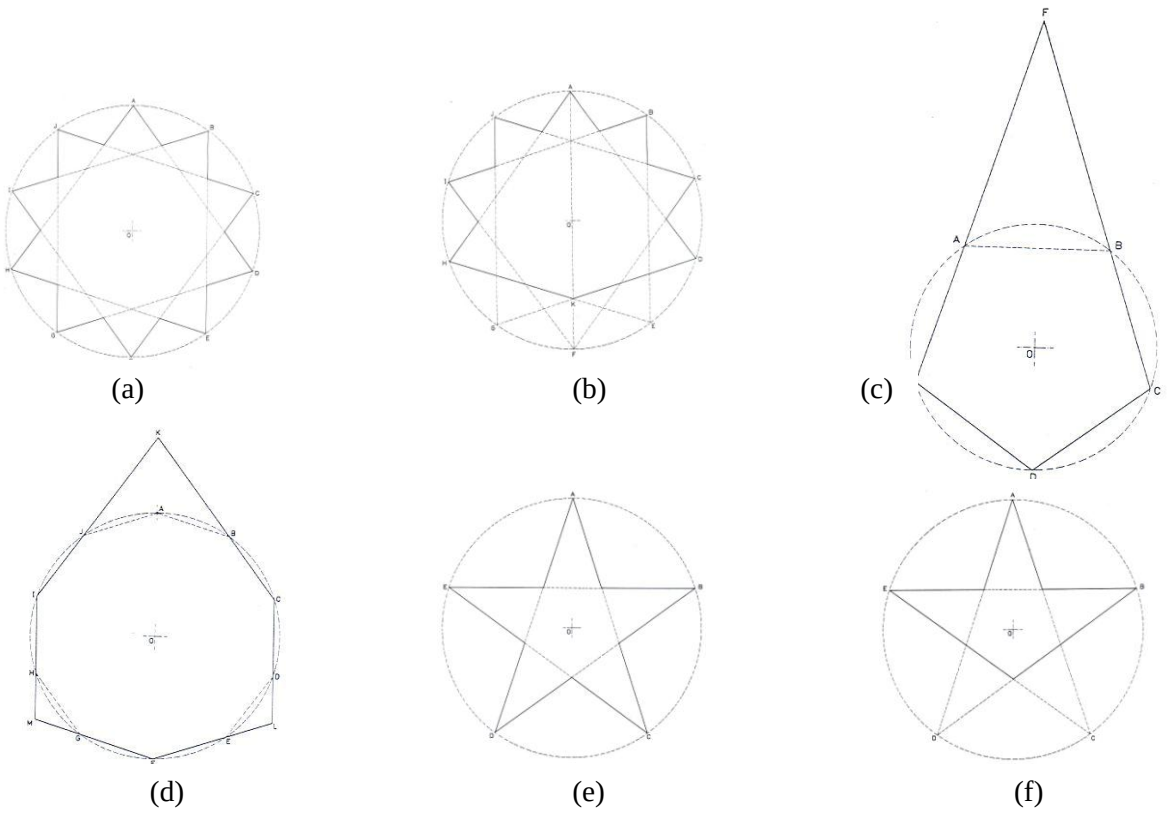

Figure 8: Ceramic designs: *(a) Sharp Ten Shamseh (Sun-like), (b) Cut Shamseh, (c) Sharp Toranj (d) Sharp Shesh (six), (e) Sharp Setareh (star), (f) Se Pari (three-wing). All the above designs have been created based on the division of a circle to five (that easily can be extended to ten). This division has fascinated artists and mathematicians for centuries [6].*

5. Conclusion

From the first scientific notions of astronomy and the measurement of the celestial sphere and determination of the new year according to the vernal equinox, to the mathematics of shapes, solids, and numbers, Persian arts have played important roles. Persian workers have combined skills in theoretical mathematics and practical techniques such as ceramics, along with artistic ideas from their own history and around the world. Putting these together, they have expressed several appealing forms, which bridge mathematics and the arts.

Acknowledgment: I would like to thank Bruce Martin for his helpful comments to complete this article.

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