



A Study of Stucco Decoration Techniques on the Tomb Tower of Semiran, Qazvin

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Abstract: The significance and attention accorded to religious rituals have ancient roots and are deeply valued across all human societies. Accordingly, tomb structures and their decorations have held great importance throughout cultural eras. These decorations have, at times, been depicted through the lens of imagination, and at other times, they have been produced with specific purposes and intents. Understanding the philosophy behind the stucco motifs in the tomb tower of Semiran, Qazvin, can provide insights into the cultural unknowns of northern Iran. This study examines these motifs through library-based and documentary evidence. It appears that the decorative stucco motifs of the Semiran tomb tower can be seen as a continuation of the stucco art styles from the Sasanian period and the early Islamic centuries. This research comparatively studies the remaining motifs and decorations in this tomb tower, seeking to revisit Iranian stucco art and its integration with religious and cultural concepts of northern Iran. Moreover, it aims to examine the artists' decorative and functional techniques to meet the specific demands of rulers and the aristocracy. Findings indicate that the Semiran Citadel reached its peak of growth and prosperity between the fourth and eighth centuries of the Islamic era. The surviving structures, particularly the tomb towers, significantly reflect the historical prominence of this citadel city during the Islamic period. Additionally, archaeological evidence suggests a flourishing social and cultural life in the central part of the Semiran Citadel City during the Timurid and Safavid eras. Collectively, archaeological and historical evidence suggests the prosperity and expansion of the Semiran Citadel City during the early and middle Islamic periods, especially under the rule of the Musafirids, Seljuks, and Mongol Ilkhanates. Despite its historical significance, the Semiran Citadel gradually lost its vitality and eventually fell into decline and oblivion.

Keywords: *Musafirids, Tomb Tower, Semiran Citadel, Stucco Decoration, Protruding Stucco, Support Structures.*

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Introduction

The Semiran Citadel comprises the remains of a castle and several tombs scattered across surrounding mounds. Examined and detailed in this study are unique stucco decorations on the interior and exterior of these structures, which diverge from other known examples. According to historical records, this tomb tower was used by various local dynasties, including the Musafirids, who governed during the late 3rd century AH (Islamic calendar). The Musafirids seized the mountainous Semiran Citadel and expanded their control to the Tarom region. This dynasty has been referred to by various names, including Musafirids, Kangarids, Langarids, and Sallarids (Arabani 1995, 49-50). With the advent and spread of Islam in the first half of the 7th century CE, Iranian history, culture, and civilization underwent significant transformations. One notable change during this period was the tendency of artists to avoid depicting living creatures in their works. Instead, abstract interpretations of nature, particularly floral and plant motifs, became prevalent and were commonly used to adorn mosques and other buildings (Askandari, 1999: 66). This cultural shift was also manifest in northern Iran, where the Musafirids patronized artists to incorporate stucco motifs into the tomb tower of Semiran. Addressing these stucco motifs is crucial for revisiting the evolution of stucco art in northern Iran and filling the existing gaps in understanding the decorative elements used in tomb towers during the Islamic centuries.

The collaborative interaction between local rulers and artists played a pivotal role in shaping the use of motifs, which were sometimes primitive and abstract and, at other times, purposeful and well-defined. This mutual influence led to the adaptation, reinterpretation, and application of patterns, forms, and symbols, resulting in unique artistic creations. Through a comparative analysis, one can uncover the similarities and differences in art within this context. The stucco motifs of the Semiran tomb tower exhibit an interplay and harmony between design and execution, which are linked to ancient pre-Islamic concepts. In light of these decorations, the current study aims to explore the evolutionary trajectory of stucco art before and after Islam and to uncover the unknown cultural and artistic approaches employed by artists in stucco decorations of tomb towers and mosques in northern Iran. It seems that the stucco motifs of the Semiran tomb tower reflect the religious and artistic beliefs of local rulers, notably the Musafirids and other local rulers of the time. Based on library and documentary research, the Musafirids had significant cultural and political influence in northern Iran. However, it remains unclear whether the cultural impact of this dynasty contributed to the stucco motifs in the Semiran tomb tower or whether these motifs were merely a continuation of the Sasanian stucco style, imitating the traditional stucco art forms commonly practiced in Iran.

Addressing the posed research questions requires a case study of the remaining motifs from the Semiran tomb tower. A comparative analysis of these motifs with Sasanian and early Islamic stucco decorations offers novel insights into the emergence of such designs in Islamic architecture. They also shed light on the cultural influence of the Musafirids and other local governments in crafting the stucco motifs of the Semiran tomb tower. In order to validate the findings and derive accurate answers, the study is guided by two hypotheses:

Primary Hypothesis: The stucco motifs' style in the Semiran tomb tower is linked to the ornamental motifs of Sasanian stucco art and early Islamic centuries. This art form likely held cultural and aesthetic significance in northern Iran during the preceding eras.

Secondary Hypothesis: It is plausible that the Musafirids and other local rulers in northern Iran used symbolic motifs that were adapted into a syncretic design framework with the advent

of Islam. These motifs incorporated Islamic principles while preserving elements of pre-Islamic religious and cultural traditions, reflected primarily in floral and decorative patterns.

Geographical Location

The Semiran complex (also referred to as Shemiran) is situated along the northern banks of the Ghezel Ozan River in the Khandan Rural District of Tarom-e Sofla, Qazvin Province. It is located at 36°50'36" longitude and 49°30'49" latitude (Figure 1). Despite its prosperous background, as evidenced by historical and archaeological data, the Semiran Citadel City has suffered significant degradation over time due to factors such as climate conditions, human intervention, and the passage of time. Moreover, a substantial portion of the ancient city's remains was submerged following the construction of the Manjil Dam and the subsequent rise in water levels. Today, the surviving elements of the Semiran Citadel City are scattered across an area of approximately 80 hectares. The most significant remnants include the Imamzadeh Qasem shrine, the Semiran Citadel, two tomb towers (a big and a small one), the Siyah Tower (Watchtower), two smaller dilapidated tomb towers, three domed structures believed to be associated with the Imamzadeh Qasem shrine, and a structure referred to as the Chahartaqi, which resembles the plan of traditional baths.

Citadel, two tomb towers (a big and a small one), the Siyah Tower (Watchtower), two smaller dilapidated tomb towers, three domed structures believed to be associated with the Imamzadeh Qasem shrine, and a structure referred to as the Chahartaqi, which resembles the plan of traditional baths (kallaj and keshavarz, 2019).

Research Methodology

A combination of field observation and comparative study was employed to analyze the stucco

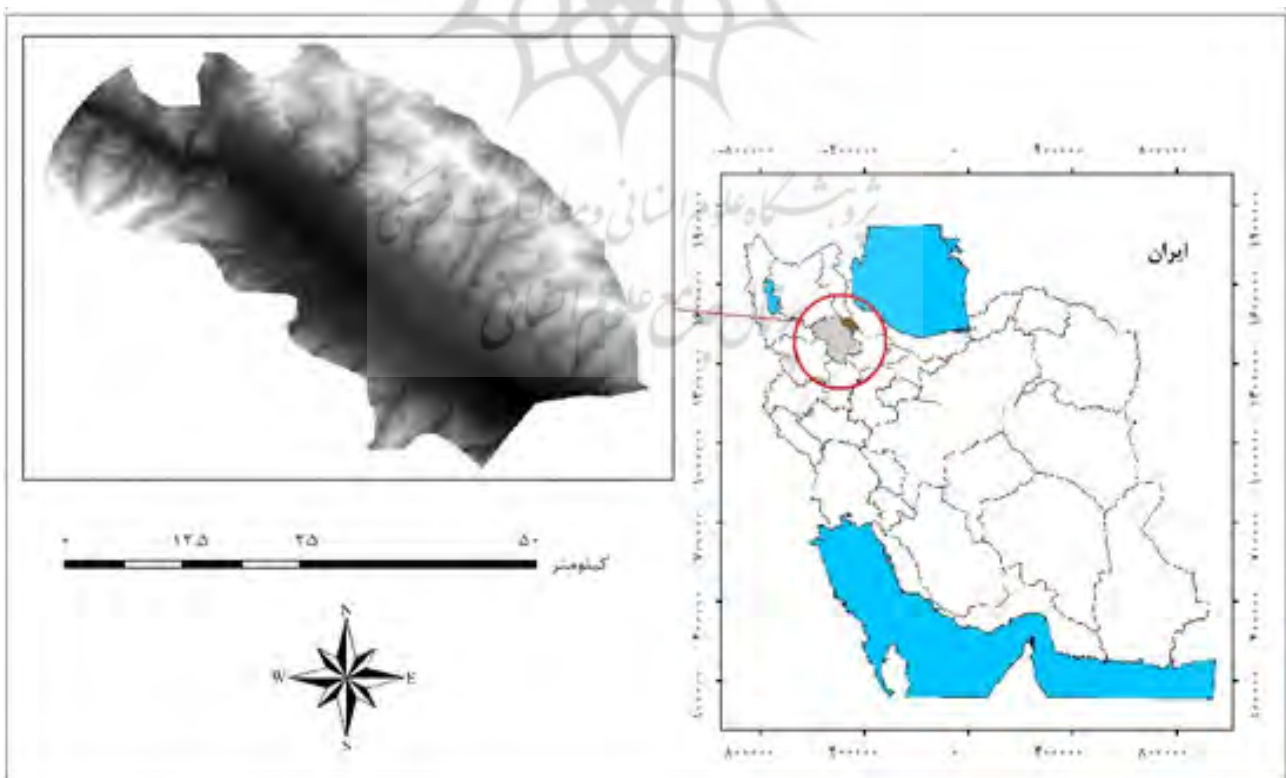


Figure 1: Map of the geographical location of the Semiran Citadel City

motifs of the Semiran tomb tower. The motifs were photographed and documented in detail, followed by a comparative analysis with similar stucco designs in other sites. Historical, archival, and library-based resources were collected to provide context. The motifs were categorized, and their aesthetic attributes were studied. Moreover, decorative symbols and motifs were analyzed and evaluated in terms of their artistic and cultural significance.

Literature Review

The earliest reference to Semiran appears in the writings of the Arab poet and traveler Abu Dulaf Yanbuci. In his descriptions of the Tarom region and Islamic cities of the 3rd and 4th centuries AH, he lauded the grandeur of Semiran. He writes: "I arrived at the castle of the king of Dailam, which is called Semiran. In its buildings, I saw things that I had not seen, even in the palaces of kings. There, there are two thousand eight hundred and fifty-odd small houses" (Abu Dawlif, 1963, 45). Similarly, Nasir Khusraw mentions this citadel city in his travelogue. During his visit to Tarom and Semiran in 438 AH, he describes Semiran as follows: "Beside the city, there is a tall castle, its foundation built on hard stone. Three walls have been constructed around it, and a qanat has been dug through the castle to the riverbank, from which water is drawn and carried into the castle." (Naser Khosrow, 2019, 8-9).

These accounts suggest that ancient Semiran had a larger area than what remains today. The references to two thousand eight hundred and fifty houses and three concentric walls highlight its vastness and significance, warranting exploration beyond the existing ruins. Recent studies have uncovered remnants of a wall constructed with natural stone and mud, approximately one kilometer in length, northeast of the village of Kallaj, about 10 kilometers from Semiran. This discovery is believed to be part of Semiran's third defensive wall. Numerous historians, including al-Maqdisi (Maqdis, 2006, 528), Yaqut al-Hamawi (Hamawi, 2001, 256), Hamdallah Mustawfi (Mustawfi, 1983, 527), Zahir al-Din Mar'ashi (Mar'ashi, 2016, 49 -52), Hossein Lahiji (Lahiji, 2016, 88 -89) and Ahmad Kasravi (Kasravi, 1974, 48) have also remarked on the grandeur and prominence of Semiran Citadel.

Historical sources continued to reference Semiran until the late 9th century AH, after which mentions of the city diminished significantly. Semiran's significance has long captivated the attention of researchers and archaeologists. Investigations into this area began in the 19th century CE. Until 1961, studies were sporadic, and the site was treated as an anonymous historical location without explicitly linking it to Semiran. The first known exploration of the site was carried out by British explorer Sir Henry Rawlinson in 1838. He visited Semiran and published a brief report on its ruins in the journal of the Royal Geographical Society (Wiley, 1995, 100). Among researchers, Ali Al-e Bouyeh played a significant role in identifying and naming this region (Al-e Bouyeh, 1964, 84). Subsequent studies of Semiran were conducted by various scholars and teams, including Manouchehr Sotoudeh (Sotoudeh, 1983, 176 - 184), Wolfram Kleiss (Kleiss, 1970, 89), Robert Hillenbrand (Hillenbrand, 1974), Boghrat Naderi (Naderi, 1980, 176 - 184) and Ezzatollah Negahban (Negahban, 2006, 120) who studied the site from various archaeological and architectural perspectives.

Theoretical Foundations

The extraction of data and information via archaeological research is currently the most effective tool for understanding human societies' natural cultural dynamics and archaeological transformations across temporal and spatial contexts (Matthews, 2003). The stucco art has undergone a significant developmental trajectory since its historical origins. Initially, stucco was primarily associated with the royal court, adorning palaces and aristocratic structures. However, during

the later Sassanian period, this art form expanded and flourished (Schippmann, 2004, 160). According to scholars, with the advent of Islam, Muslim artists embraced stucco for its economic feasibility and aesthetic appeal, adopting it on a vast scale in the Islamic world (Montashari, 2017: 58). The use of stucco decorations to embellish walls was a common practice in Iranian and Iraqi cities. Historically, this tradition can be traced back to the Achaemenid and Sassanian periods. Arabs adopted the craft during their conquests (Rahbari, 1984). Umayyad-era artists widely adorned palaces with elaborate stucco reliefs, as exemplified in the palaces of Khirbat al-Mafjar¹, al-Hayr al-Gharbi², and al-Minya³. Among these, the stucco of al-Minya is particularly significant due to its integration of human and animal motifs alongside geometric and botanical decorations (Kiani, 1997).

In the Islamic era, the stucco art developed along two primary trajectories. The first one is courtly stucco, which is heavily influenced by Sassanian artistic traditions. Courtly stucco motifs retain a strong connection to pre-Islamic themes. The second is religious stucco. In contrast to courtly stucco, Islamic religious stucco art was guided by a conscious effort to avoid idolatry and figurative imagery. Instead, it adhered to the principles of monotheism.

Artists transformed natural floral motifs into abstract arabesques or employed Quranic calligraphy. This approach not only avoided conflict with Tawhid⁴ but also served the cause of monotheism and its ideals. The miracle of Islam, i.e., the Word of God, embodied through stucco, granting the stucco art a sacred and symbolic value. Islamic-era stucco art, both technically and stylistically, was deeply rooted in Sassanian traditions. Motifs such as birds, grape clusters, and vine leaves, prevalent in Sassanian stucco, reappeared in Islamic works (Manouchehri, 1995, pp. 21-27). The intricate arabesques seen in Iranian mosques can be regarded as extensions of Sassanian vine scrolls, with three-lobed leaves often incorporated into the terminal forms of Arabic calligraphy (Ansari, 1986, 318-317). The rise of the Buyid dynasty in the 4th century AH marked a renaissance of Iranian cultural identity, including a renewed appreciation for Sassanian artistic heritage. This period's architectural and decorative achievements, such as the Jorjir Mosque portal in Isfahan, exemplify this synthesis. The portal features motifs of tulips, birds, and Kufic inscriptions rendered through the combined techniques of stucco and brickwork (Busse, 2011, 229).

The Semiran Citadel City

The history of Semiran is intricately intertwined with the culture and heritage of Gilan, as this region was historically considered part of Mazandaran and Gilan provinces. During the Sassanian era, the forested province of Gilan was inhabited by two tribes—the Gils and the Daylamites. The Gils resided along the southern coasts of the Caspian Sea, while the Daylamites lived in the highlands near Qazvin. These two tribes shared a common origin, with Ptolemy suggesting their connection to the Medes (Kasravi, 2006, 18). A study of the region, which also encompasses Tarom, reveals the presence of South Caspian tribes that governed vast areas extending from the southern Caspian shores to the northern parts of Zanjan and Qazvin and portions of Azerbaijan. Among these tribes were the Cadusians (also known as Cadusii).

¹ Khirbat al-Mafjar, also known as "Hisham's Palace," consists of the ruins of a complex including a palace, a mosque, and a bathhouse. It dates back to the Umayyad period and is located in Wadi al-Nu'aymah, in the Jordan Valley, north of Jericho.

² A fortress or castle located 80 kilometers southwest of Palmyra, near the Damascus road in Syria.

³ Khirbat al-Minya is the ruins of a palace attributed to the Umayyads in the Occupied Palestinian Territories. This structure is also known as Hisham's Palace.

⁴ The concept of monotheism in Islam.

Some researchers assert that this tribe inhabited the southern shores of the Caspian Sea, with their territory bounded by the Caspian Sea and the land of the Amardians on the east and southeast, by Media Atropatene on the south and west, and by regions later known as Aran and Albania on the north (Nadari, 1970). Consequently, Cadusia corresponds to the area between the Caspian Sea and the northern slopes of the Alborz mountains, including the Sefidrud River basin—a region today recognized as the ethnic territory of the Talysh. Some scholars believe the Cadusians were indigenous to Iran before the arrival of the Aryans and that they settled in Gilan and northeastern Azerbaijan (Pirnia 1983, 1129). The oldest known form of their name, Thatagush, appears in Achaemenid inscriptions, later Hellenized as Cadusii (Abdoli, 1999, 28). Armenian historical sources refer to them as Katisians, identifying them as a significant and influential people (Arabani 1995, 25). According to Rawlinson, the northern and southern highlands of the Sefidrud Valley were once home to the powerful Cadusian tribe, whose central settlements likely shifted between Khalkhal, Tarom-e Olya, and Tarom-e Sofla (Rabinu, 1985, 450). From the Sassanian period onwards, the names Cadusians and Kassites gradually faded and were replaced by Daylam and Gol, with the region being called Daylamestan (the land of the Daylamites).

The Daylamites, whose homeland was the mountainous area north of Qazvin, had a long-standing martial tradition. They allied with the Sassanians in campaigns against Georgia and, like the Turks, served as mercenary soldiers even before the rise of the Buyids, playing key roles in Iran, Mesopotamia, and even further west (Frye, 2001, 218). Throughout Daylam, various dynasties ruled, the most prominent of which was the Buyid dynasty. From 320 to 448 AH, they governed extensive areas of Gilan's highlands south of the Caspian Sea and Daylam. The Buyids, Shia rulers with deep-rooted Iranian political traditions and cultural heritage, contributed significantly to the advancement of philosophy and science as well as the promotion of poetry and literature (Kreamer, 1996, 68). According to Iranian and Islamic historians, the Justanids family ruled Daylam and Gilan during the latter half of the 2nd century AH, with their capital in Rudbar. When the Justanids weakened under pressure from the Kangarids (later known as the Musafirids), they relocated their capital to Lahijan. Little is known about the early days of the Justanid dynasty. Nevertheless, the first notable king was Marzuban ibn Justan, a contemporary of Abbasid Caliph Harun al-Rashid (Arabani 1995, 49-50). Historical texts suggest that the Justanids realm included parts of Daylam and Gilan, extending to Tarom, Zanzan, and Abhar. By the early 4th century AH, the Justanids experienced significant internal conflict and faced a formidable rival in the Kangarids (Musafirids), resulting in their decline. The Musafirids assumed control over key highland regions of Daylam, including Rudbar. Consequently, from the 4th century AH onwards, a new ruling family, often referred to as the Musafirids, Kangarids, Langarids, and Sallarids, emerged in parts of Gilan and Daylam, with their capital established in Tarom (Turkamani - Azar, 2005, 13).

The ruling territory of Semiran's monarchs extended beyond the Tarom region during various periods, encompassing parts of Daylam and Gilan. The founder of the Musafirid dynasty was Sular, who adopted the Islamic name Muhammad. His father's name, Aswar, was Arabized to Musafir, and thus, the family became known as the Musafirids or Sallarids. In the late 3rd century AH, the Musafirids seized the mountainous Semiran Citadel, using it as a base to establish their control over Tarom (Bartold, 2006, 290). Muhammad ibn Musafir, the progenitor of the Musafirid dynasty, made this citadel his stronghold. This citadel comprised numerous houses and pavilions and was both immense and magnificent.

In the Semiran region, a trio of stone and brick towers is aligned from west to east. The semi-ru-



Figure 2: The spatial arrangement of the semi-ruined tower (Southern view) (Author, 2021)



Figure 3: The spatial arrangement of the Great Tomb Tower (Eastern view)

ined tower (grey-colored) is situated 270 meters northeast of the fortress on a mound 42 meters high at the easternmost part of Semiran. Given the damage it has suffered, this tower is referred to as the “semi-ruined tomb.” Scholars believe this tower once featured an inscription in the Kufic script, which held significant artistic value (Figure 4). The entrances to these towers were typically located on the south, north, or southwest sides. Due to extensive destruction, it is impossible to make definitive claims regarding the dome coverings of the towers. However, writings from some researchers suggest that the domes of the Semiran towers were originally double-shell, making these among the earliest examples of such architectural features.

The Great Tomb Tower, also known as the “Great Tomb” or the “Sasanian Castle,” stands atop a mound 31 meters above the surrounding plains. The construction of such towers during the Islamic period continued a funerary architectural tradition prevalent during the Sasanian era (Figure 3). This tower is the most spatially extensive structure in the area and remains relatively well-preserved compared to other structures despite the loss of its roof over the years. The structure features a southern entrance and an eastern window, each measuring 5.6 meters in height. The current height of the building is 10 meters. At the base of the exterior, a two-meter-high wall has been constructed around the entire perimeter. Above this wall are double-recessed arches on each side between the embedded columns, featuring multi-lobed arch designs at their apex. Inside the structure, an octagonal base is covered by a pointed-arch niche that extends the entire height. The transitional zone is formed by eight simple squinches with pointed arches and eight decorative niches with trilobed arches on each side. On the western interior wall, a spiral staircase, 80 centimeters wide, ascends to the roof. Today, apart from a few relatively intact steps inside the structure, the stairs leading to the roof are severely damaged and mostly destroyed.

The small tomb tower is situated atop a mound 15 meters above the plain. As illustrated in Figure 4, the structure has sustained significant damage, leaving only a 2-meter-high wall on the southern side and an 80-centimeter wall on the northern side. The dome and much of the wall have also collapsed. All the towers in Semiran are octagonal in design, each with varying dimensions. The structure has been built using a combination of mountain boulders and river-bed stones. The upper sections of the small tomb tower's walls have collapsed but are in better condition than the semi-ruined tomb tower.

This tomb is an octagonal structure both inside and outside, with each side measuring 3.2 meters in length. In 1970, the lower parts of the structure's exterior were severely damaged, losing their original form. However, a close examination and comparison with the Great Tomb Tower reveals that both structures share a similar design and layout and have likely been constructed simultaneously. A comparison between the two tomb towers, along with their overall condition, suggests that the octagonal tower originally featured a lower section that transitioned into a circular form at a height of 1.4 meters. This circular design extended upwards to the roof, creating an interesting pattern of protrusions and recesses on the building's exterior. Each side of the interior, situated between two rounded columns, was divided into two vertical sections. The upper part featured a framed recess filled with brickwork, forming decorative patterns resembling coriander leaves or ridged arches. This design, though simple, added a unique aesthetic to the building's appearance (Fig. 5). The structure was built entirely with rubble and



Figure 4: The spatial arrangement of the Small Tomb Tower (Southern view)

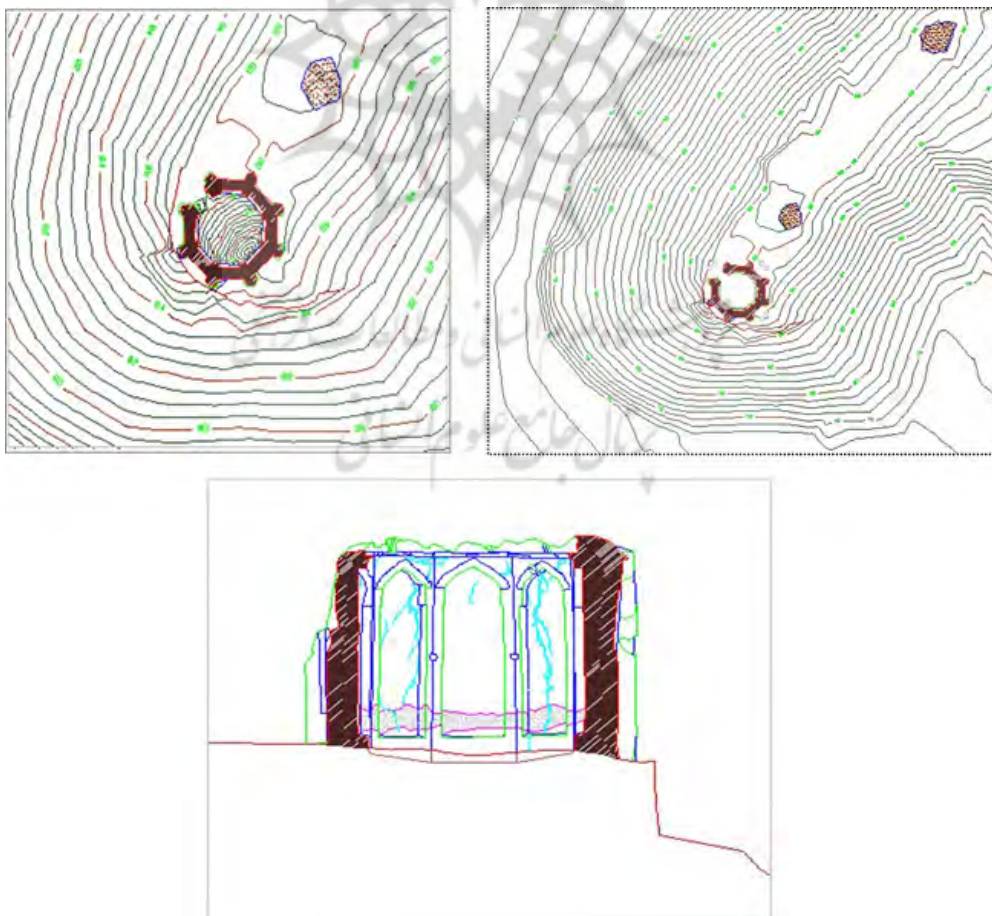


Figure 5: A 1:200 plan of the area and the Small Tomb Tower and a 1:100 plan of the Small Tomb Tower

cobblestones up to the roofline, after which the exterior was covered with plaster, giving it a beige-brown hue from a distant view. The plaster was also extended to the decorative designs. The stones used in this tower match the dimensions and forms of the stones in the other parts of the structure, suggesting they were contemporaneous. Bricks were used for the arches and dome of the structure, although the dome has since collapsed. The entrance of the tower faces the Great Tomb Tower, a feature likely not coincidental. Moreover, the entrance is rotated 90 degrees clockwise relative to the Imamzadeh and Great Tomb, oriented toward the southeast, potentially in alignment with the qibla. Inside the tower, geometric and floral patterns adorn the walls, which are of particular interest in this study.

The Support Structure

The term “support structure” refers to the foundation layer upon which various architectural elements are built. It serves as the primary support for the building and its associated decorative features, often constructed with stone or brick. Baked bricks, known for their high compressive strength and minimal moisture-induced expansion (rarely exceeding 2%), were frequently employed due to their resistance to thermal expansion and contraction. In wall decorations, the support structure refers to the layer that supports multiple decorative layers. Throughout various periods, stone, brick, or raw clay were commonly used to construct support structures. The support structure could also form part of the architectural components, such as walls or ceilings (Fig. 6).

A single decorative layer of stucco was observed in the Small Tomb Tower, featuring prominent stucco carvings from a single period. These decorations bear a resemblance to fifth-century stucco but are limited in scope and lack color. Despite being ornamental, these stucco decorations have sustained considerable damage. The designs consist of abstract floral patterns positioned below the dome’s base. The collapse of the dome and the considerable height of the decorations were both instrumental in the destruction and subsequent failure to restore these adornments (Fig. 7).

The stucco decorations in the tower rest on a substrate of loose sedimentary stones and, in some sections, bricks. Over the substrate lies a base layer of semi-coarse plaster, topped by an embossed stucco layer (Fig. 8).

Stucco Art Techniques

Various techniques have been employed throughout the history of stucco in Iranian architecture. Below is an overview of key methods, with a particular focus on those used in the tombs and commemorative structures of Semiran. Stucco techniques include Shir-o-Shekari, Barjasteh (Relief Stucco), Zebreh, Barheshteh (Protruding Stucco), Tokhmeh Daravari, Stucco on Mirrors, Gach Tarash, Patchwork Stucco, Pateh Stucco, and Noghri Tokhmeh Daravari.

Patchwork Stucco

In this technique, designs are carved or molded separately based on the dimensions and characteristics of the area to be decorated. These stucco pieces are then affixed to their designated locations with regular plaster. Often, different colors such as light blue, dark blue, red, green, yellow, and brown are added, and sometimes gilding is observed. Examples include the Seyed Roknuddin Mausoleum and Shamsieh School in Yazd and the Mausoleum of Hassan bin Keyk-hosrow in Abarkuh.

Protruding Stucco



Figure 6: The brick support structure in the dome's shaft



Decoration position

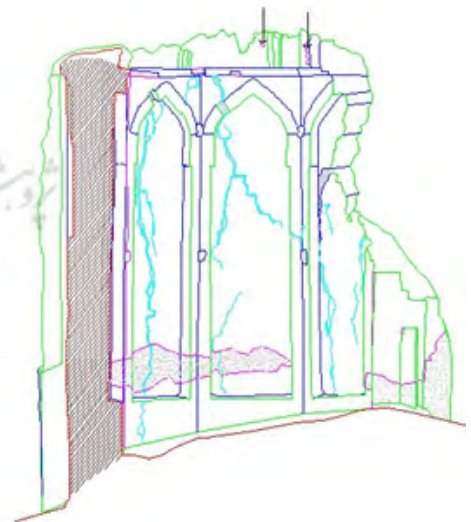
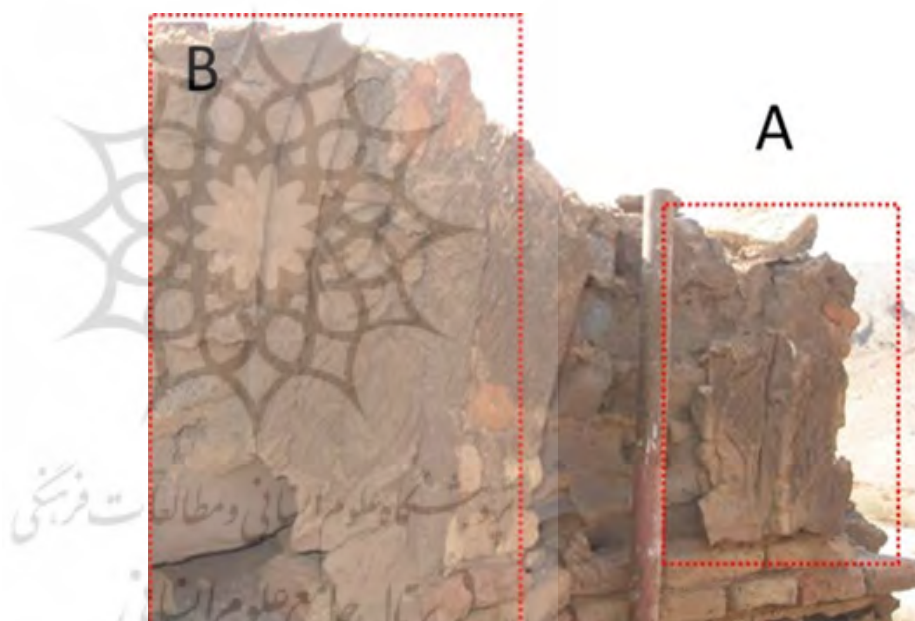


Figure 7: Overhead view of the decorations – collapsed ceiling



Figure 8: Decorative layers of the Small Tomb Tower

Figure 9: Protruding Stucco in the Razi style in the Small Tomb Tower



This style features high-relief designs that significantly project from the surface. In such stucco, the process can be visualized as a layered pyramid where the size of the motifs decreases with each layer outward. For instance, an arabesque design may be chosen, and an additional layer of plaster may be applied to create another motif over the initial arabesque. This approach is often used for motifs with larger dimensions, such as arabesques, which serve as “mother motifs” from which other designs branch out. Additional embellishments, such as floral patterns, can also be layered onto these motifs. The finest examples of this technique date back to the Öljaitü period, the eighth Ilkhanid dynasty ruler. However, its historical roots trace back to pre-Islamic times and were later adapted to the architectural styles of the fourth and fifth centuries AH, particularly in the Razi style (e.g., the Davazde Imam Building in Yazd). Notable examples from the eighth century AH include plastered altars, such as the exquisite mihrab of Pir Bakran’s tomb in Isfahan, where up to six plaster layers were applied, creating depths of 15–20 cm. The most prominent layers are visible in the smaller niches of the mihrab, while the thinner layers are evident in the

half-columns of the larger niches. This style, characterized by its deeply embossed designs, was employed in the Khorasani, Razi, and Azari architectural styles (Fig. 9).

Periodization of Decorations in the Small Tomb Tower

Historical texts indicate that the walls of the Semiran tomb towers were adorned with geometric and floral designs. In some cases, Kufic inscriptions were also reportedly carved. Today, only a small portion of these decorations remains, primarily located on the inner base of the dome in the Small Tomb Tower. A comparative analysis of the surviving motifs and historical examples, as corroborated by prior studies, reveals that these designs align with the Seljuk period. The remaining stucco in the Small Tomb Tower is categorized into two sections, labeled A and B. Collectively, the designs feature sterilized plant motifs, which are analyzed separately below. The most famous floral motifs in stucco can be classified into the following designs: Among the most significant motifs are palmette motifs, vine and ivy patterns, lotus flowers, grapes and pomegranate motifs, rosette and oak leaf patterns, and sterilized designs resembling fig, palm, thistle, and lotus leaves. These plant-based motifs were prominently featured in early Iranian art, particularly in the carvings of the Achaemenid era, such as those at Persepolis, where motifs like palmettes, rosettes, lotus flowers, and cypress trees were used (Sodaei and Khosravi, 2024). Over time, some floral designs incorporated geometric patterns and were modified with sterilized designs. An exceptional example of this combination is found in the Taq Kasra Palace

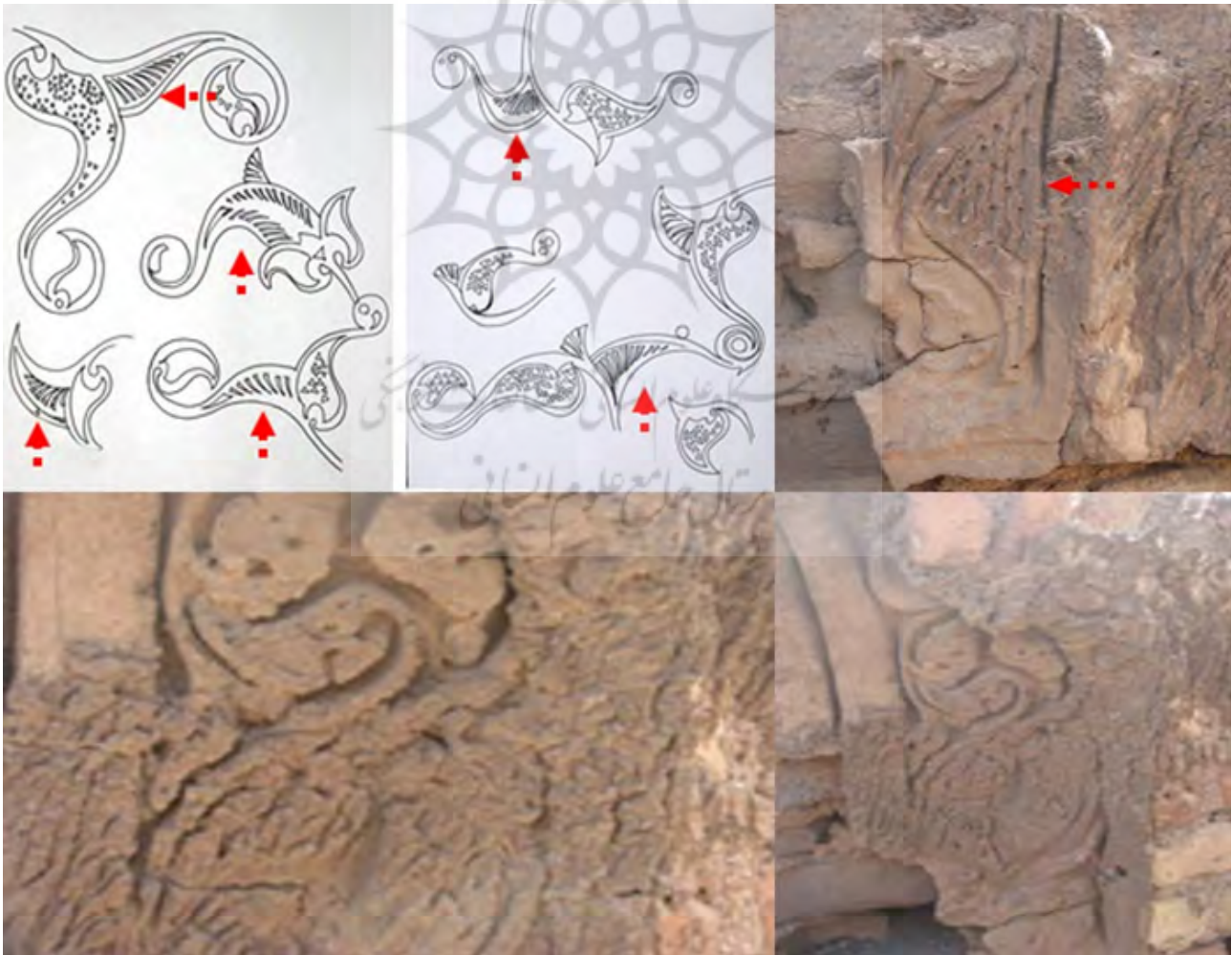


Figure 10: Enlarged view of sections A and B of the protruding stucco in the Small Tomb Tower



Figure 11: Enlarged view of a section of the image and a drawing of sterilized motifs in section B

(Ctesiphon), now exhibited at the Metropolitan Museum in New York City. Certain Seljuk-era motifs, such as the dragon's-mouth design, show a striking similarity to the patterns in section A of the Small Tomb Tower's stucco (Figs. 10 and 11).

Analysis and Evaluation

Based on written records and archaeological studies of cultural materials from the Semiran Citadel City, there is clear evidence of urban development and significant cultural-political transformations in the Tarom-e Sofla region from the early Islamic period onward. The existing monuments and structures substantiate this assertion. Through a comparative analysis of Semiran's cultural-historical artifacts and the social transformations of early Islamic centuries, particularly in northern Iran, one can identify similar cultural trajectories in Tarom-e Sofla. These insights illuminate the obscure cultural and historical facets of the region.

A cursory look at Semiran and its defining elements—especially the funerary complexes—reveals extensive cultural links with neighboring areas. The city's tomb towers are exemplary, showcasing the continuity of Sasanian decorative styles. While information on the stucco of mausoleums and tombs is somewhat fragmented, efforts have been made to trace the origins of these decorative techniques to pre-Islamic times. The remaining stucco decorations highlight the artistic sophistication and diversity in Islamic-era structures like those of the Samanid dynasty. In the verification conducted in this study regarding the hypotheses, our evaluation

indicates that the style of Islamic stucco art used in Semiran tower tombs' architecture continues the artistic and decorative traditions of the Sasanian period. This is particularly evident in the categorization of plant motifs, where designs such as palmettes, vines and ivy, lotus flowers, grapes and pomegranates, lotus and rosette patterns, oak leaves, fig leaves, and sterilized fig-like leaves resembling palm, acanthus, and lotus leaves were extensively used. These motifs carried conceptual meanings for the artists, rooted in beliefs from their inception during the Achaemenid period and adapted to align with prevailing beliefs during the early Islamic eras. This demonstrates that the stucco motifs of Semiran tower tombs are closely related to the decorative stucco art of the Sasanian period and the early Islamic centuries. Moreover, this art held cultural and public acceptance within the cultural sphere of northern Iran in the past.

As for the second hypothesis, the discussion centers on historical information and documents indicating that the Musafirid dynasty and local governments played a significant role in reviving the art of stucco motifs in Semiran tower tombs. The plant motifs were repeatedly used in these tombs primarily due to the need to maintain the dignity and beliefs of Islam while adhering to technical and decorative principles. These principles, a synthesis of religious traditions and Iranian customs and beliefs, have been employed from the Achaemenid period to the middle Islamic eras, reflecting a fusion of religious and artistic heritage.

Conclusion

One of the most common architectural styles for tomb structures is the standalone tower tomb. The main reason for this form is its visibility. Tower tombs exhibit diverse plans and façades, and most of the tomb towers in the northern belt of Iran have had circular or octagonal plans since the medieval Islamic period onward. Semiran tower tombs are based on an octagonal plan. Such a design can satisfy the demands of a central focus, typically centered around a stone sarcophagus, which is likely why architects favored this style. These tombs often feature decorations such as brickwork and stucco. As mentioned earlier, the Semiran tomb structures also include stucco decorations. The placement of these two tower tombs atop natural mounds can also be seen as a continuation of the tradition of building tomb structures during the Sasanian period. This study attempted to analyze the stucco work used in Semiran tower tombs, thereby examining the progression of stucco art in northern Iran and identifying commonalities or innovative aspects in this artistic style. Using historical records and documented evidence, the stucco decorations of these structures were evaluated. The study of historical texts and the descriptions of travelogues further highlight the importance and role of the Semiran Citadel City in Islamic-era studies. Thus, the decorations and stucco motifs of Semiran tower tombs were shaped within the broader context of Iranian and Islamic art. In addressing the research questions, it was concluded that local dynasties played a significant role in the emergence of stucco motifs in Semiran tower tombs. While inspired by pre-Islamic stucco art, the imitations adhered to established artistic principles, diverging from direct replication of post-Islamic examples. Instead, efforts were made to incorporate Islamic values into these motifs.

Conflict of Interest:

The authors declare that they agreed to participate in the present paper and there are no competing interests.

Authors' Participation:

This article was written by Alirez Rostami , and the analysis of data was done Amir Hashepoor Mafi and Farzad Mafi.

Bibliographical References

- Abdoli, A.,1999., History of the Kadus, Tehran, Fekr Rooz Publications.
- Al-Boye, A.,1964., Semiran Takhtgah Kangarian, published
- Arabani, E.,1995., The Book of Gilan. Tehran, Iranian Researchers Group Publications.
- Bartold, V.V., 1979., Tazkireh of the Historical Geography of Iran, translated by Hamzeh Sardadour, Tehran, Toos Publications.
- Fray, R.,(2001)., Ancient History of Iran, translated by Masoud Rajabnia, Tehran, Scientific and Cultural Publications.
- Hamavi, Y.,2001., Mo'jam al-Buldan, translated by Alinaghi Mehrparvar, Tehran, Cultural Heritage Organization Publications.
- Kasravi, A.,(2006)., Unknown Shahryaran, Tehran, Amir Kabir Publications.
- Kermer, J. L.,1996., Cultural Revival in the Buyid Era, Humanism in the Age of Islamic Renaissance, Tehran, University Publishing Center.
- Maghdasi, M.A.Sh., (2006)., Ahsan al-Taqaem fi ma'arfa al-Aqalim, translated by Alineghi Monzavi, Tehran, Kamesh Publications.
- Nagheban, E., (2006) A Review of Fifty Iranian Archaeology, Tehran, Cultural Heritage Organization Publications.
- Naser Khosrow Ghobadiani Marozi., (2019) Naser Khosrow's Travelogue, translated by Mohammad Dabir Siyaghi, Tehran, Zavar Publications.
- Pakbaz, R.,1990.,Deira-e-Ma'aref-e-Honar, Tehran, Contemporary Culture of Iran Publishing.
- Pirnia, H.,1982., Tarikh Iran Bastan ., Tehran, Donyayeh Kitab Publisher.
- Rabino, Y. L.,1985., The Rulers of Gilan, translated by Reza Madani and M.B. Jaktaji, Tehran, Gilgan Publications.
- Shipman, K.,1983., History of the Sassanid Empire, translated by Faramarz Najd Sami'i, Tehran, National Cultural Heritage Organization.
- Sodaei, B., Khosravi, L., 2024., The Study of Jahangir Dome amd Guriye Stucco Decorations: with an Emphasis on Applied Geometry. Persica Anttiqua.Vol.4 (6): 45-68.
- <https://doi.org/10.22034/pa.2023.397571.1052>
- Sotoudeh, M.,1982., The Castles of Ismailia, Tehran, Tahouri Publications.
- Sultanzadeh, H.,1982., The Process of Formation of Cities and Religious Centers in Iran, Tehran, Agah Publications
- Turkmeni Azar, P.,2005.,Deylmian in the Scope of Iranian History, Tehran, Samt Publications.
- Wilber, D., 1967.,Islamic Architecture of Iran during the Ilkhanate Period, translated by Abdullah Fariyar, Tehran, Book Publishing House.

Wiley, P., 1995., *Castles of the Assassins*, translated by Ali Mohammad Saki, Tehran, Scientific Publishing House.

Ansari, J., 1986., *Stuccowork of the Sasanian Period and Its Influence on Islamic Arts*, *Honar Quarterly*, Spring and Winter 1986-1987, No. 13, pp. 318-373.

Busse, H., 2011., *Iran in the Age of the Buyids*, *Cambridge History*, by Richard Nelson Fry, translated by Hassan Anousheh, Tehran, Amir Kabir Publications.

Eskandari, I., 1998., "Survey and Analysis of Wall Painting - From Prehistory to the Present Part I" *Visual Arts Journal*, Winter, Nos. 4, pp. 61-95.

Hillenbrand, R. 1974., *The Tomb Towers of Iran to 1550*, London, Publisher University of Oxford.

Kleiss, W. 1970., *Bericht über Erkundungsfahrten im Iran im Jahre*, Berlin Published Reimer.

Manouchehri, M., 2005., *The Evolution of Stucco in Iran during the Islamic Period*, Supervisor: Zahra Rahnavard, University of Tehran, Faculty of Fine Arts, Master's Degree.

Matthews, R., 2003., *The Archeology of Mesopotamia*, London, Published March 21, 2003 by Routledge.

Naderi, H., 2000., *A Brief Look at Gilan and Its Historical Monuments: Shemiran Castle*, *Athar Magazine*, Serial Nos. 2, 3, 4, Summer, Autumn and Winter, pp. 176-184.

Nasheri, M., 2017., *Investigating the Influence of the Art of Plastering in the Sassanid Era on the Stucco Decorations of Architecture from the 1st to 5th Centuries AH*, *Scientific Quarterly Journal of Green Architecture*, Autumn, No. 8, pp. 55-68.

