

# **A Revetment**

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A thesis  
presented to the University of Waterloo  
in fulfilment of the  
thesis requirement for the degree of  
Master of Architecture

Waterloo, Ontario, Canada, 2013  
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## **AUTHOR'S DECLARATION**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions as accepted by my examiners.

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## ABSTRACT

Historically, in Iran, ornament was an integral part of architecture and considered a valuable part of built form. However, in time the use of ornament suffered from the decline of figural articulation in architecture, and its status was diminished to mere decoration. In this process, ornament shifted from a pattern that was integrated with the structure to the role of revetment, from symbolic to commemorative, and from meaningfully designed to arbitrary. Investigating the changing modes of ornament to understand its significance and survival, this thesis looks at the decline of ornament from its role as a necessary structural component and/or an expressive element communicating the common values of a society into an arbitrary fragment celebrating the significant past.

Traditional ornament was dependent not only on architecture but also on science, cosmology, culture, art, literature, as well as on society and its beliefs; therefore there was an intimate relationship between ornament and its context, and more importantly including the inhabitant or spectator who held those beliefs. However, today those close ties no longer exist and ornament is characterized variously as luxurious, decorative, and retrospective. This change is studied from various perspectives including historical forces, prehistory, traditional Persian cultural expression, the incursion of Islamic motifs and geometries, modernity and folk legend.

To retrieve and reinstate the link between ornament and building as well as with the spectator, the thesis project engages the narrative content of ornament to re-establish these relationships. It tells its own story not in a literal way, but rather through the complex tale of the lovers in the famous historical poem (c.1190) by Nezami. The thesis narrates the epic romance of Farhad and Shirin within a love triangle with its superb pictorial cues for depiction. The story unfolds through a series of architectures and architectural representations and images. The theme and motifs of the poem imply transition (both spiritual and physical) that corresponds to the transformative mode of ornament par excellence. The ornamental manifestation of the depicted poem is applied in a subway station which is in itself the locus of transition in our contemporary lives. The architectural details of the design project are fragments of the selected episodes from the story.



## **ACKNOWLEDGEMENTS**

Supervisor: Dr. Tracey Eve Winton

Committee Members: Ryszard Sliwka & Dr. Tammy Gaber

External Reader: Dr. Karin Ruehrdanz

I would like to have my sincere appreciation to Dr. Tracey Eve Winton, who kindly accepted to supervise me; I will always cherish her encouragement, keen support and valuable guidance.

I would like to thank Ryszard Sliwka and Dr. Tammy Gaber, for inspiration, compassionate wisdom, and their valuable inputs. Furthermore I am grateful to Dr. Anne Bordeleau, for helping me to develop the seeds of this thesis.

Many thanks to my thesis reader: Dr. Karin Ruehrdanz for her careful reading and valuable feedback.

I would also like to thank Dr. Omid Ghahraman, Dr. Andishe Ghadirin, and Dr. Saba Azimi for their kind reply and their clarifying notes on my questions.

And my deepest thanks to my dear friend, Lida Arbabi for conversations, criticisms, and her incredible support.





## **DEDICATION**

To my family:

My husband, Mehrdad, my sister, Maryam, my brother, Alireza, and my parents, Nahid and Hossein – you are love of my life.



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## INTRODUCTION

It was winter 2008 that two of my colleges and I completed the architectural layouts of Pol – e Rumi subway station; next step was to design inside the box. When I accepted the task of designing the interior skin of the station, I had to come up with both a compelling idea that could satisfy the aesthetic requirements of the site and a consistent design to embellish its vast surfaces. I found 430 pieces of artwork that were used in other subway stations in Tehran, and although they were all beautiful decorative elements they didn't seem to be connected with their physical context – the station – properly.

A combination of modern and traditional art is prominent in every station of the Tehran Metro. These stations showcase a wide variety of art styles from miniatures to Futurism and also of materials from metals to ceramics, clay and terracotta, and somehow an assemblage of these materials all in one. But what is its artistic value, and do works of art have a place in a public transport system? Should “snazzy décor”<sup>1</sup> suffice, or is there space for genuine works of art?

This question led me into my thesis question of whether decorative motifs and patterns in surface are art or whether another category with different motivations is needed. Also, is a subway in itself architecture or just infrastructure? What can transform the mundane work into something worthy to be called architecture?

Apparently decoration was not the answer. I was looking for a medium that enhances the structure and engages with the audience. In history ornament has served this purpose. Traditionally, ornament functioned as a revetment that was integral to the structure it cloaked. Since the seventh century, surface ornamentation became prevalent in Iran. In the late seventeenth century – during the Safavid era, the innovative use of ornament as revetment reached its peak. Presently surface ornamentation is not widely practised in Iran and in relatively few examples to be found, there is a disjunction between traditional and contemporary approaches; surface ornamentation is more considered to be a work of art independent to structure, and architects treat ornament as decor.

After comparing the use of ornament on the architectural surface up to the late seventeenth century with more recent examples of ornament, typically embellished facades of buildings in the last century in Iran, I could see a clear declining trend in two ways: less application of ornament in buildings, and naive adoption.

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<sup>1</sup> “Art in the Tehran Metro”, JadidOnline, accessed January 29, 2012, [http://www.jadidonline.com/story/29012009/frnk/art\\_in\\_metro\\_eng](http://www.jadidonline.com/story/29012009/frnk/art_in_metro_eng)

Traditional ways of ornamentation balanced form with function. Craftsmen's methods were straightforward and compatible with natural conditions and climate, simple to build, and used available material. Masters were careful to avoid waste and use appropriate scale in the course of design and construction. Buildings were built handsomely by following principles which all were in regard to the culture and responsive to the spirit of the age. Since culture is a dynamic phenomenon, if ornament aims to survive, it needs to integrate with its contemporary culture.

Existing practices, however, are more acts of imitation than original works. Applying traditional ornamentation without alterations will not comply with the contemporary social and the cultural milieu. So instead of mimicking inherited symbols, contemporary practice needs constant production of fresh archetypes or the reintroduction of appropriate older models for the society's demands. I was convinced after this study that existing uncertainty and identity issues in contemporary ornament are rooted in the lack of a clear philosophy or suitable model to follow.

In order to offer a coherent architectural scheme, understanding the evolution of ornamentation was necessary. I began studying the emergence of ornament in the form of inscriptions and rock – reliefs within ancient Iran around 550 BCE and its enhancement during the Sassanid era; then reviewed its transformation after Islam in the seventh century, its culmination in the form of revetment during the Safavid era and its decline by the end of the seventeenth century.

This study helped me to identify the circumstances in which these changes occurred to the application of ornament and its transformation in terms of its arrangement and meaning for the past two centuries.

In the study of the evolution of ornament, the activities of a group of architects, the Society of National Heritage, founded in 1921, stood out because they aimed to revive Iranian cultural heritage with modern language and to re – cultivate good taste. The group had a brilliant idea for attracting the attention of Iranians to their roots and aimed to reawaken cultural spirit by revitalizing all the power points of Iranian society. This group identified literature as a key point for focus. I found their approach quite appropriate and believe that the literature is part of a global conversation about human relationships and communication, which is somehow timeless; it was those qualities that inspired me with the idea that literature can be used as the main philosophy behind the design of the ornamental facings of Pol – e Rumi subway station.

Translating stories into the language of ornamentation and patterning is a form of expression that engages history, culture, and literature. It connects the people with their literature, which expands their commonalities, and leads towards better communication. Culture and history are crystallized in the narrative content of ornamental manifestations in the station in order to effect a change socially, as well as making a good memory of the space, and enhancing the experience of the community in their everyday situations.

In order to visualise a vivid and readable base for the culture and attitude of people, over the course of time spent researching for this thesis, I found it essential to make a comparison with the art of Persian poetry, as being analogous to ornamentation. Iran is a land of poets, and poetry is so very important for Iranians that their key cultural images come from their poetry. I could say that the tree of Iranian imagery found its roots in Persian poetry. Classic Iranian Literature in the framework of poetry tells the story of the culture. Literature has various dimensions, since it is affected by its time, as well as the place in which it is imagined, told, and created. Literature can tell stories as they happen, or try to explain the truth of its time through allegory. An author may choose to express his understanding of the truth beneath the appearances of the experience of his age and describe its cyclical story with a universal template.

The story of ornament is not an exception. After a period of research about the history of ornament in Iran, I found it to parallel closely with the epic poet Nezami's tale, *Shirin and Farhad*, written in the late twelfth century. *Shirin and Farhad* (also called *Khosrow and Shirin*) is one of the most accomplished examples of a story with both romantic and mystical overtones, which Iranian society desires. All the aesthetic elements that form the bedrock for the Iranian culture were there: the lovers, traditional values and Nature. The story shares a common theme with history. The legend is helpful in articulating historical events by giving it a cohesive narrative.

So as to follow the main theme of the thesis and express historical events more elaborately, the design scheme is divided into three episodes – each of which narrates the emotional disposition of Shirin, Farhad, and Khosrow in the story of *Shirin and Farhad*. The romantic story and the emotional volatility of the love triangle are synchronized with major shifts experienced by ornament through its tectonics and aesthetic features. The modes of ornamental media transform following shifts in the narrative themes.

The chronicle of ornament's evolution is depicted in narrative form on the wall surfaces of a subway station. The subway, as a transit hub effectively conveys the notions of transformation and transition which characterize ornament. Design patterns are communicated through figurative language that conveys qualities of key characters, objects, events, or ideas derived from the tale of Shirin and Farhad. Using the poetic device of personification, I have attempted to bring back to life forgotten motifs and patterns by conjuring up the collective memory of commuters.

This thesis includes two distinct kinds of research, first a research into the history and contemporary application of ornament in Iranian architecture, and second a study on classic Persian literature, which are investigated in the first and second chapters.

In the following pages the evolution of ornament in Persian culture will be considered in Chapter One. This is done in three parts: 1) Figuration of Nature 2) Divine motifs 3) Transitional Identity. Part one depicts ancient Persian ornament which was mostly tied to nature. I describe how natural orders and objects have been influential in the formation of figures and patterns. Part two investigates the new patterns and different methods of ornamentation which emerged out of the advent of Islam in Iran. Figures were abstracted and patterns ordered geometrically. This section addresses the stylistic transformation of ornament that caused by the new established Islamic faith and also the impact of scientific achievements on creation of the new form of ornament, *muqarnas*. Part three identifies the contemporary ornament with a focus on the transitional character of culture and distorted identity of contemporary Iran.

I did the opening historical research not to produce a comprehensive encyclopedia, but to explore conceptual and aesthetic possibilities. It is focusing on the change in meaning, order and function of ornament and these changes may or may not happen during the reign of a dynasty, so chronological study of the changes has not been the concern of this thesis. If the name of a dynasty is mentioned, it has been because of dramatic changes that had happened during their time. The historical research instead, is very much about comparing the figural qualities of ornament with the geometrical figures, upon which I am proposing a kind of definition of ornament that allows for the participation of these two realms at the same time. Through the examples we see recognizable floral motifs in the geometries and also figurative images that identify a kind of order that organizes them. The identification is a lead for us to see a way that architecture actually fits into our world; it is not a pure visual art and is certainly not just an engineering project that works in a basic structural system.

At the end of chapter one, my proposed solution to support a philosophy for creating ornamental models would proceed, then as a case study, the selected piece of Iranian literature – the story of Shirin and Farhad – is narrated in Chapter Two and is analyzed at the end of chapter. For this part of the research I took an almost entirely literary text due to its richness and transformed it into something architectonic and also contemporary. My really original contribution was to take the incredible poetry and bring it to one of the most mundane of experiences in the contemporary city, the subway station. So the subway would change into a different place.

In Chapter three the idea is articulated through a set of sketches for the story. This chapter includes the design which will combine the subway station, ornament, and narrative. All three elements of design are characterized as transitional and this quality links them together. Walls of a subway station, the most motionless of all constituents, narrate ornament's story of transformation in front of the eyes of commuters.

## **CHAPTER ONE - ORNAMENT**



Fig 1.1- Procession of soldiers and delegates, Persepolis, 550 BC, Shiraz, Iran



## **The art of Persian ornamentation**

Throughout Iran's history the art of ornamentation has been subject to perpetual shifts in its structural, functional, and perceptual aspects, experiencing several distinct modes of representation especially with the advent of Islam. For this chapter, which unfolds the history of Persian ornaments, I try to define fundamental architectural ornaments by addressing their distinctive styles. Each period of Persian art carries its own characteristic style as new motifs were added, introduced by invading races, and constantly emerging. Old motifs were modified or stylized differently according to prevailing artistic trends. I have roughly divided this timespan of development into three periods:

First: the formative years in which the motifs and concepts within Achaemenid and Sassanid traditions remained clearly distinguishable. To investigate the formation process, I studied how the formation of the ancient Persian mythology was related to nature. Persian columns, bas-reliefs and inscription were selected as representing key ornamental fragments of the period. A detailed account is given of their development from 550 – 330 BCE to 224 – 651AD. Second: the period of transformation, covering the shift of motifs from figural to geometrical and abstract, where the application of arabesques and muqarnas became fashionable. In terms of ornamental symbolism, the notion of the divine superseded the humanistic approach of the preceding cultures. And finally, the third period which started with a temporary decline in ornamentation but concluded with its revival. During this period, ornament lost its pre-eminence in architectural design and became limited to surface decoration. However, after decades of dormancy, when as modern movements penetrated Iran, ornamentation was revived as a medium to communicate contemporary values of Iran's re-established society up until now.

## Formation of Order, Figuration of Nature

### Nature in ancient Persian culture

The Iranian worldview inextricably links nature with society, running its very roots into the depth of Iranian life. Ancient Iranian aestheticism structured itself around reflecting the beauty of earthly elements observed in nature, and since architects would rather mimic the old than make superficial improvements, nature was a conventional source of inspiration.

The pre-Zoroastrian, religion of the ancient Iranians centered on nature cults mostly belonging to the Stone Age, such as cults of water and of fire. Elements such as water and fire were personified. Water itself became a goddess, the 'Apas' (modern Persian *ab*), with specific prayers and libations made to her. The elders of each household made regular offerings (of either plants or animals) to the nearest pool or spring, where there were communal ceremonies involving the priestly rites. Fire, named *atar* (modern Iranian *azar* or *atash*) was also worshipped with offerings consisting of clean dry fuel, incense, and animal fat, if available. The offerings to the elements of fire and water formed the basis of the daily priestly act of worship called by the Iranians 'yasna' (from the verbal root *yaz* – sacrifice, worship).

Proto – Indo – Iranians worshiped many gods including several 'nature gods', such as *Asman*, the Lord of sky (*aseman*; sky in modern Iranian), *Zam*, the earth goddess (*zamin* in modern Iranian), the sun and the moon, *Hvar* and *Mah* (*khoshid* and *Mah* in modern Iranian). Additionally, the wind gods *Vata* and *Vayu* were honoured as 'the wind that blows' and 'the wind bearing rain clouds'.

In addition to their gods with natural origins, there were certain facts drawn from natural laws and cosmology that had a specific influence on the general aspect of the Iranian culture. The Indo – Iranians believed that laws governed nature, which ensured that it followed its proper course. These principles of cosmic order, which they called *Rta*, determined the regularity of the sun's motions, bringing day and night. More abstract gods personified concepts such as war. For example, *Mithra* was also revered as the war-god who fought on behalf of the good in order to protect the virtuous. In later periods, he is also merited as being both the judge of the deeds of dead men and a solar deity charioted across the sky by white horses, shod in gold and silver, without casting a shadow. This latter characteristic has survived in Islamic literature wherein great religious men cast no shadow.

The first creation myth of the Iranians appears in this period (before 550 BC), describing a world created by gods in six stages. First they fashioned the sky from stone, a huge solid round shell, pouring water in its bottom half. Next came the Earth, resting on the water like a great flat dish, at the center of which were placed three animate creations in the form of a single plant, an animal (the bull), and man. Sixth, they conceived fire, both visibly and as a vital force. The Sun, wrought from the birth of fire, stood still overhead as if it were perpetually noon.

To animate the Earth, the gods offered a triple sacrifice by crushing the plant, then slaying the bull and the man. Their sacrifice set in motion the cycle of life – death followed by life – as new plants, animals, and humans arose. The Sun began its movement across the sky, regulating the seasons in accordance with *asha* which is referred to as the first Nowruz in Zoroastrian literature.<sup>2</sup>

### **Zoroastrians**

The remaining texts from 500 BCE explaining the philosophical ideas of the Zoroastrians has been collected and collated in a volume called the Avesta. Written in Avestan, younger versions of the book date as far back as the Achaemenid era (559 – 330 BC), taking the course of several hundred years – during the Sassanid and early Islamic period – to be compiled into a single volume. The most sacred portion, the Gathas (scribed in 'Gathic' Avestan) contains the hymns thought to be authored by Zoroaster himself. While the theme of the Gathic verses of Zarathustra is based more on dialogue and mythology rather than philosophical teachings, aspects of Zoroastrianism are scattered throughout the collection. The Gathas are composed in verse, metrical in the nature of ancient Iranian religious poetry, which is extremely terse.

Mazdysna, which means worshipper of wisdom, over time assimilated preceding customs and pagan practices such as fire worship and embraced some of the old nature gods like Mehr (the god of light). The Mazdian doctrine is a codified set of Mazdysna's beliefs written in the context of Pahlavi philosophical texts during the Sassanid and early Islamic periods (224 BCE – 651 AD). Reference is made within the texts to the existence of one God called Ahura Mazda, meaning 'the Wise God'.

To explain evil in the world, Gathas ascribes it to the powers and thoughts of Ahriman – badness. Indeed, Ahriman is positioned in opposition to goodness, not Ahura Mazda, the God. This partial monotheism, afflicted by many such dualities, is prophetic in its approach. In Mazdian thought, the absolute revered as the one God, the wisest, or Ahura Mazda. Although this association invokes the Quranic or Biblical Gods, his characteristics are not simple abstractions, but attributions of the fundamental elements of Nature (water, wind, earth, and fire), and man's celestial representation. In fact, Ahura Mazda was both material and celestial. Rather than asking "what is time?", "what is earth?", and "what is water?" the Mazdian follower

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<sup>2</sup> "Pre-Zoroastrian Religions of Iran", Culture of Iran, accessed December 12, 2011, <http://www.cultureofiran.com/pre-zoroastrian.html>

asks “who is time?”, “who is earth?”, and “who is water?” Therefore in the Mazdian texts, time is defined as the fifteen – year old youth, Earth is the angel of Esfand<sup>3</sup>, and Water is the angel called Anahita. These angels differ from their Quranic counterparts who are simply servant messengers for the divine. This duality gradually rooting itself deeper within Mazdian beliefs; it was emerged as a conflict between symbols of good and evil, each of which had their own creation and creatures.

In addition to this dual belief system, a significant and interesting characteristic of the Mazdian thought is its mythological and allegorical components. While in the embodiment of myths, they took inspiration from nature and gave moral aspects to nature, also rendered natural events semi – mythical. Full of myths, Mazdian literature and legend have been described and interpreted by historians in the context of a prayer song. The myth of Avesta with the slain Dragon is the most noteworthy example.

Fereydoun makes a plea to Nahid (the planet Venus):

*“You, the most powerful, bestow upon me the success of overcoming Zahak, the holder of agility and dexterity, the most powerful of devils, which injures human’s soul and body, the most powerful lie, Ahriman created against the material world to make that of ruin.”*

Nahid rewards Fereydoun with victory, eager to bestow good fortune on anyone who pleads in earnest, bearing wine, is willing to make the true sacrifice, and desires to succeed.

From the juxtaposition of these myths with events occurring in physical nature, it can be inferred that myths draw from the worldly realities experienced by their storytellers, and are rooted in natural phenomena. For example, in the myth alluded to by Ferdowsi in the Shahnameh, sharing the theme of Fereydoun's victory over Zahak, the God called Bahman conquered the dragon’s castle; ultimately vanquishing the vicious creature. With the castle’s captives released, its stagnant waters flowing freely again through the meadow, rainfall, and fertility returning to the soil, the young hero and newly emancipated prisoners celebrated the New Year. Fostering this myth, Ferdowsi reconstructs the tradition of overcoming drought and celebration of Persian New Year, or Nowruz.

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<sup>3</sup> Esfand is the name of the fourth of the angels. The name means "Pure piety and humility." The Angel in the world beyond- celestial- represents love, sympathy, tolerance, and humility of Ahura Mazda, and in the world within-earthly- maintains the earth fresh, fertile, and green. Its gender is postulated female. To encourage people in agriculture and developing the land, this angel is called Ahura Mazda’s daughter.

Another example illustrating the Mazdian belief of integrating natural rhythms into life cycles is the Yalda feast. In observation of the shifting seasons, Yalda was considered the night of the birth of the unconquerable sun, Mehr or Mithra (meaning love and sun respectively), and has been celebrated by the followers of Mithraism as early as 5000 BCE. The ceremony traces back to the historical combat myth between the forces of good/light against the forces of evil/darkness.

Ancient Zoroastrians believed that Ahura Mazda created light, day, and sunshine as representations of order and "the ahuraic," or good. The day is a time of work, harvest and productivity. They also believed that Ahriman created 'the night', a time of darkness, cold, hidden secrets and wild predators. Observing the cyclical changes in the length of days and nights, engendered a belief that light and darkness, or day and night are in continuous battle. The triumphant light brought about longer days, whereas the victory of darkness produced longer nights. It was believed that the greatest battle between the forces of good and evil was fought on Shab e Yalda, the night before winter solstice. From this day onward, the good forces of light triumph as the days grow longer and give more light.<sup>4</sup>

Also Ahura Mazda, who became more anthropomorphic over time, would enjoy the help of angels. Proprietor of qualities ascribed to the perfect man, Ahura Mazda, governs over angels that are individuated by corporeal elements of nature. The relationship of angels with the mortal realm is also mentioned in the Gathas. The six angels are manifestations of the primary elements including land, animals, fire, metal, water, and plants; elements of a corporeal and living institution, not merely a notional one. These are the six Mahin Angels fathered by Ahura Mazda, whose actions reflect the aspects of good in mankind. They are imagined as angels who refashion the world anew according to their father's will, gracing it with eternal life.

Ahura Mazda also granted special favour to the group of animals ploughing the ground. Moreover the cow will be addressed with goodness. So the older rites of the cow or bull sacrifice, or drinking Hum (a plant intoxicant), are prohibited in the Gathas. He taught ethics and rules of judgment for personal and social well – being, promoted tree planting and agriculture, while seriously opposing 'desert wandering', as well as nomadic or vagabond life in general.

Ahura Mazda created the world through goodness. Wherever such personifications originated historically, one thing was certain: this was an important step in the cultural metabolism of nature into a system of moral values; moral virtues were attributed with a natural and material existence as representations of nature.

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<sup>4</sup> "Borrowed Ideas; Persian Roots of Christian Traditions", Iran Chamber Society, accessed December 1, 2011, [http://www.iranchamber.com/culture/articles/persian\\_roots\\_christian\\_traditions.php](http://www.iranchamber.com/culture/articles/persian_roots_christian_traditions.php)



Fig 1.2 - Ahura Mazda, Palace of Xerxes, Persepolis

### **The effect of the Persian perceptions of nature on their architecture**

Reliefs of human and animal anatomy on column capitals and bas-reliefs were the first ornamental forms to emerge. We learned from the ancient worldview and culture of Iranians that they did not regard humanity out of the context of Nature. They structured their life based on natural phenomena, living forms and cosmological orders. It is therefore no wonder if artists of Iranian architecture frequently took elements of nature into consideration. For this reason the use of naturalistically rendered shapes of animals or their parts for ornamental purposes became a common practice among Iranians most strikingly during Achaemenid era (550 – 330 BCE). Column capitals and bas-reliefs are two ornamental elements that play a vital role in ancient Persian art, acting as symbolic representations of natural forms and contributing to the overall decorative scheme of palaces.



Fig 1.3 - Gate of All Nations, Persepolis



Fig 1.4 - Persian Territory around 550 BC

### **Column capitals**

The state of “Pars”, located off the coast of the Persian Gulf to Iran’s south, was an important region ruled over by the powerful Achaemenid dynasty. The Achaemenids could benefit from skills of the artists and artisans of the countries under their governance. The artistic and cultural influence of other nations such as Assyria (conquered by Cyrus the Great, founder of the Achaemenid dynasty at about 550 BC) Anatolia (now Turkey, in Europe), and Egypt, can be seen in the architecture and industry of this specific period. Thus the art of the Achaemenid Empire reflected both the diversity of its subject states and the unifying ambition of its rulers.



The receptive quality of Achaemenid culture dates back to its Median ancestors and extending to Mesopotamia, Greece, and Egypt. These influences, effects, and connections were not absorbed passively, instead actively developed and managed by the skilled artisans. Mixing different styles of art adopted from Greece, Egypt, Asia Minor, and Mesopotamia, with their own taste resulted in a unique array of column designs. Capitals were often built in the form of lions, horses, bulls, and eagles, and featured enigmatic anatomical combinations from various animals such as Griffin and the fusion of a human head with eagle wings and bull ears.

Magnificent palaces and associated monuments were designed and combined in various ways, with diverse arrangements of columns in terms of their number, size, and form. The variety in heights and column capital figures as seen in the palace ruins of Susa and Persepolis are particularly indicative of the eclectic character of Achaemenid rulers.



Fig 1.5 - Persepolis stone griffin double protome column capital

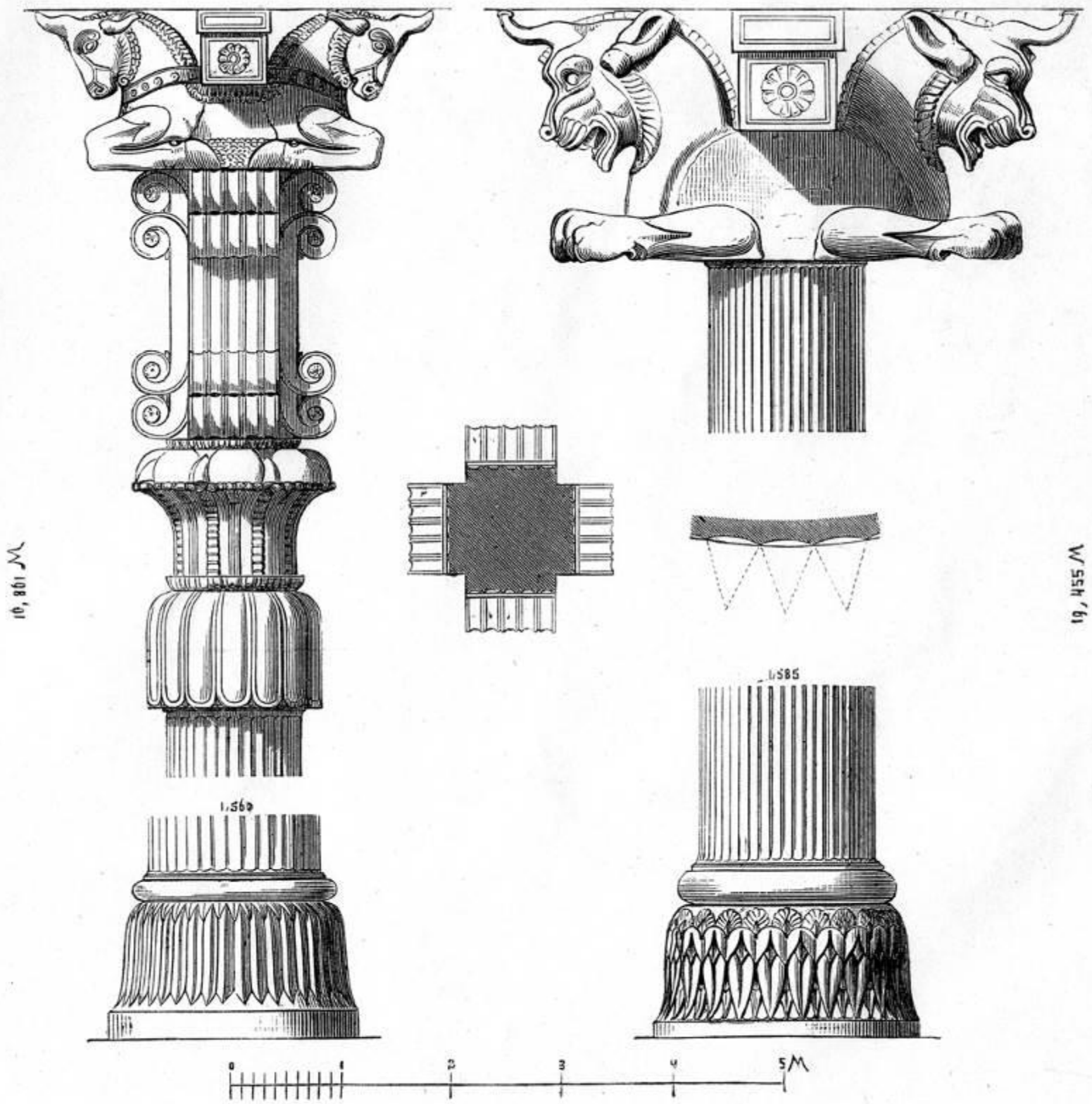
*“... Architectural ornamentation symbolizes the extent of the great king’s dominion from the royal winged discs of Egypt to the human-headed winged bulls of Assyria. Every one of the hundreds of columns was composed of different national elements- the fluted shaft and volute capital of the Ionian Greeks, foliage from the Nile, bulls and lions from Mesopotamia- all refashioned to reflect imperial unity. Although Persepolis is an impressive expression of Achaemenid imperial ambitions, it may very well have had an additional dimension of meaning.”*<sup>5</sup>

Animal and floral fragments used followed a specific logic. In the typical Median cella, capitals were carved on the walls in a similar fashion to Greek Ionic columns. Perhaps the reasoning behind this specific shape is to keep two transverse beams flanked, mounted, and held together on two sides of the column by tying them with rope and boarding them up for padding. Since assimilating with the Ionic column, twisting and fastening techniques for ropes around beams underwent gradual changes, and can be seen in places like Persepolis. <sup>6</sup>

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<sup>5</sup> Hugh Honour and John Fleming, *The Visual Arts: A History, 1919 – 2001*, (New York: H.N. Abrams, 2002), 102

<sup>6</sup> Mohammad K. Pirnia, *Iranian Architectural Styles, 1990*, (Tehran: Islamic Art, 2002), 58



9. Columns from the Hall of Xerxes at Persepolis.

Fig 1.6 - Columns from the Hall of Xerxes, Protome capitals details

This image is a good demonstration of how the combination of different types of figures from floral and animal species with their ornamental forms characterizes the so – called Persian column. At the top, the double protome capital is preceded by the floral part of the column, composed of several parts and ornamental fragments including leaves, buds with a dozen lotus flowers, scrolls, and palmettes. A large, transverse wooden beam was fitted between the necks of the bulls over the capital which, in turn, carried other joists supporting the roof. It can be assumed that during the Achaemenid capital was likely used with the interior columns but in the portico, which would have enveloped the central hall by its three sides, the half body of bull and other mythical creatures were generally mounted directly on the column. Since the columns carried beams of strong cedar wood - not stone lintels - they could be much taller, slimmer, and more widely spaced than Egyptian versions, making the interiors relatively lighter and airier.<sup>7</sup>

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<sup>7</sup> Honour and Fleming, *The Visual Arts*, 96



Fig 1.7- Persepolis stone bull double protome column capital

## **Bas – reliefs**

Bas – reliefs are prominent elements inherited from ancient Iranian art and culture, with a rich background of supporting ideas. Iranian kings have long wanted to record their thoughts and beliefs in reliefs. Reliefs were a medium by which they could display the image of their empire in both their palaces and tombs. Figures carved in relief were embedded in buildings for rituals and ceremonies of the court to reflect the spirit, essence, order, and laws of the empire beyond mankind. To embody the character of the empire in the royal architecture can be addressed to the carving of the twenty – eight supporters of the Darius throne on the tomb at Naqsh – e Rostam also referred to as the Necropolis in south Iran. Such depictions along with carvings embedded in the walls of palaces like Persepolis, may also find their origins in expressing cultural perceptions of the human and natural realms as figurative motifs which often portrayed state policies, a physical reality, or gave symbolic context to Iranian life. Religious subjects were rare, and the most prominent one was treated as the subject of religious tolerance which is observable from the remaining carvings in the archaeological site of Persepolis.

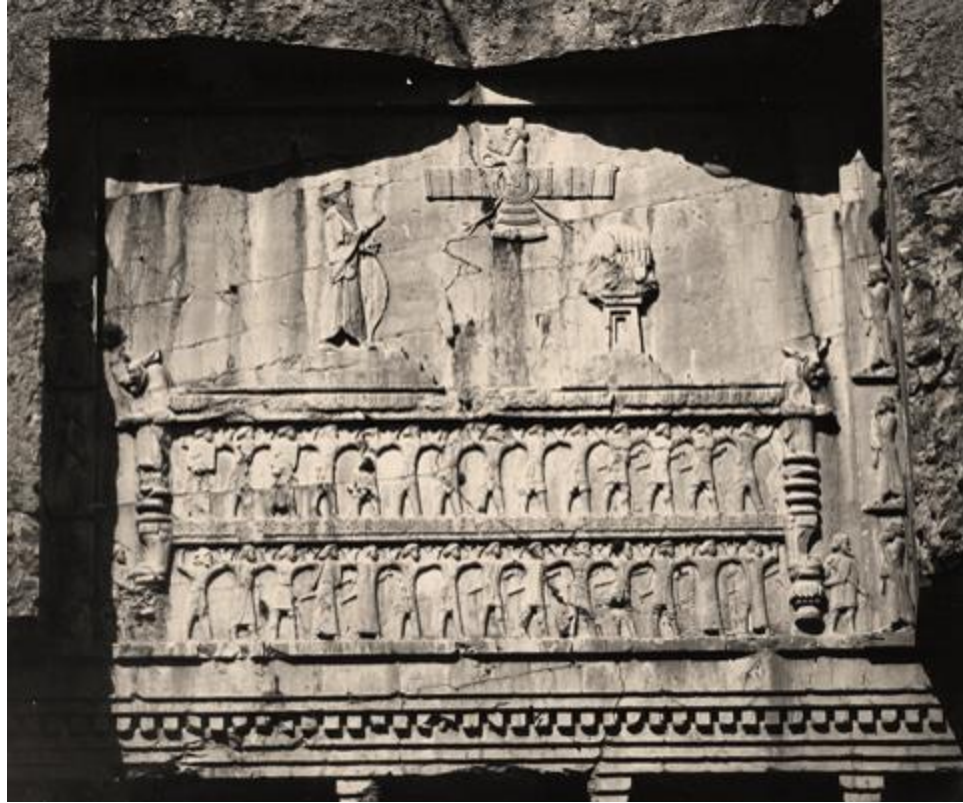


Fig 1.8 - the twenty-eight supporters of the Darius throne on the tomb at Naqsh - e Rostam



Fig 1.9 - Close up of the Tripylon Staircase, showing the alignment of the Immortals

The greatest achievement of the Achaemenids was their empire. The first global empire was built on a model of tolerance and respect for other cultures and religions that few great powers have ever matched. Professor Richard N. Frye at Harvard University reckons tolerance as the key word in religions in this vast Achaemenid Empire, but it was not only tolerance of other religions, it was actually encouraging them even though they were Zoroastrians. The Achaemenid kings did not seek to impose their will on other people; on the contrary they helped them. He mentions:

*“We all know how Cyrus freed the Jews from captivity in Babylonia so they can return to their homelands in Palestine but this was not the only case, it happened later in the time of Israel Nahmaya as officers of the king who came back to Jerusalem to rebuild the temple, they did the same thing in Egypt and in Babylonia and among the Greeks of Asia minor, in fact they are the first example of international religious freedom that we find in the history of mankind.”<sup>8</sup>*

The reliefs at Persepolis clearly depict this policy. The friendship between nations is masterfully shown here. This atmosphere of peace and harmony is portrayed especially at Tripylon where noblemen are depicted holding hands and chatting with one another. The Tripylon palace was probably used by Achaemenid kings to hold counsel with high ranking “Persian” and “Median noblemen” and state officials. It is therefore named by some experts as the counsel hall. Most of these noblemen carried lotus like blossoms or flowers while others hold round objects like apples or coloured eggs, all of which on to these days treasured and associated with the Nowruz on New Year festival.

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<sup>8</sup> Richard N.Frye, the Golden Age of Persia, 1920, (London: Butler and Tanner, 1989), 206





Fig 1.10 - Persepolis plan view

One of the earliest examples of the art of visual representation in Iranian history is the bas-reliefs in Persepolis (500 BC). Susa was the Achaemenid administrative capital, while Persepolis acted as an imperial symbol, a place to spectate ceremonies for when tribute from every part of empire was brought to the Great king. Various details of its sculptural decorations suggest that it was the ritual centre of the Achaemenid world, with the image of the lion slaying the bull figuring prominently throughout- a symbol associated with the conjunction of the zodiac signs of Leo and Taurus at the vernal equinox.<sup>9</sup>

*“Persepolis may have originally been conceived as a ‘drama or play in stone’ of sorts, re-enacting the rites of the Persian New Year in sculpted form.”*<sup>10</sup> Nowruz was the date the world was believed to be conquered and created a new, initially by a god and later symbolically by the King. The figurative relief carvings on the terrace walls, originally coloured like the glazed brickwork of Susa and Babylon, are probably intended to perpetuate the annual ceremonies performed here. Long formations of alternating Medes and Persians congregate with their distinctive headgear, soldiers form ranks, and bevvies of servants carry dishes to the banquet preceding the enthroning of the Great King. The festival ends with the long procession of representatives of subject peoples celebrating the auspicious beginning of a new year and the continuance of the Achaemenid world order. All move to the same slow, regimental march, bearing uniformly expressionless faces; all are carved in the same stylized, almost homogeneous, manner.<sup>11</sup>



Fig 1.11 - the lion and bull in combat at ancient Persepolis the site of Nowruz marking the New Year at the spring equinox (March 21)

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<sup>9</sup> Honour and Fleming, the Visual Arts, 96

<sup>10</sup> Ibid, 96

<sup>11</sup> Ibid, 97



Fig 1.12 - Darius' palace, Persepolis, Iran

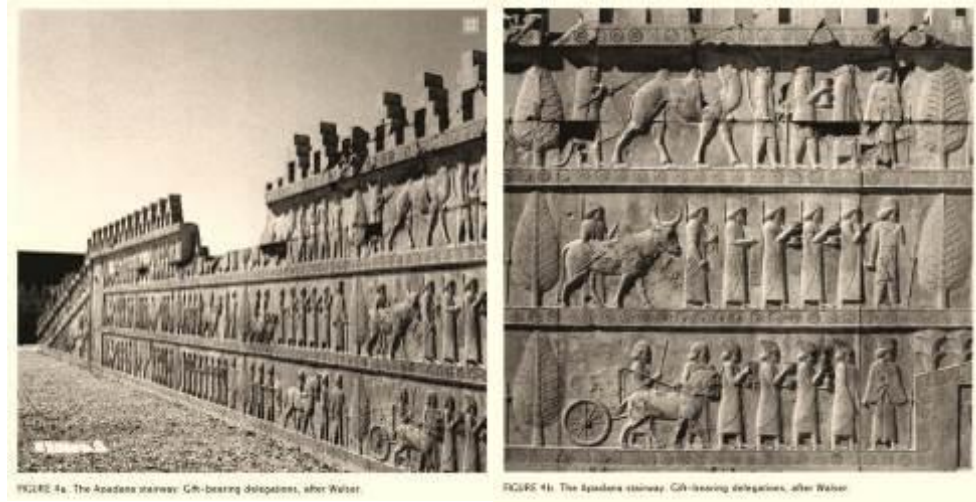


FIGURE 4a. The Apadana staircase: Gift-bearing delegations, after Walter.

FIGURE 4b. The Apadana staircase: Gift-bearing delegations, after Walter.

A sequence of several sections of relief may be intended to express an extended narrative. The geometric order enveloping figures who are delegates from provinces and patesis communities- delegates whose slow and solemn procession marches under the dominion of the royal dynasty.





Fig 1.13 - 26 - The Apadana Palace, northern stairway (detail) – an ancient Persian bas – relief, from the fifth century BC, shows guests and soldiers in traditional costume



Fig 1.27 - in pure profile or with their torsos twisted to the front

These figures follow artistic conventions established nearly 3000 years earlier in Sumer and Egypt. Whether they are shown in pure profile or with their torsos twisted to the front, their feet are always placed in a single plane and cemented to the inflexible ground line. Sometimes inspiration originates from Assyrian reliefs, though their dramatic intensity has been lost. Renderings of heads and heavily draped bodies with a fuller sense of three-dimensional form may have been influenced by Ionian Greek sculptors, who are known to have been present in Persian court. But there could hardly be a more striking contrast than between these regimented figures and the athletic horsemen in the Panathenaic procession carvings seen in the Parthenon in Athens, just two decades after Persepolis were completed. Each Greek is an independent being and moves freely in a logically conceived space beyond the frontal plane. The figures at Persepolis remained bounded by the rules of a visual syntax that the Mediterranean world had already begun to reject.<sup>12</sup>

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<sup>12</sup> Honour and Fleming, *The Visual Arts*, 98

## Rock – reliefs

The king is always presented very officially in Achaemenid art. One of the most valuable legacies of historical and literary works of the Achaemenid period in Iran is the engraved image of the king Darius in the reliefs at Behistun, signifying his power and greatness. After Darius became the shah, he depicted his victory over the Magi Guematte and the soldiers rebelling against his reign, on Mount Behistun. He immortalized his reign in the inscriptions to the three tabs of Elamite, Babylonian, and ancient Persian cuneiforms. The added epigraph contains five complete annotated records of Darius's titles and the reach of his empire, his battles and crushed revolts, state and civil activity, rites, and moral code. These records emphasize the importance of righteousness and integrity. In column four of the inscription, King Darius was quoted as saying:

*(56) This is what I have done, by the grace of Ahura Mazda have I always acted. Whosoever shall read this inscription hereafter, let that which I have done be believed. You must not hold it to be lies.*

*(57) I call Ahura Mazda to witness that is true and not lies; all of it has I done in a single year.*

*(58) By the grace of Ahura Mazda I did much more which is not graven in this inscription. On this account, it has not been inscribed lest he who shall read this inscription hereafter should then hold that which has been done by me to be excessive and not believe it and takes it to be lies.*

*(59) Those who were the former kings, as long as they lived, by them was not done thus as by the favour of Ahura Mazda was done by me in one and the same year.*

*(60) Now let what has been done by me convince you. For the sake of the people, do not conceal it. If you do not conceal this edict but if you publish it to the world, then may Ahura Mazda be your friend, may your family be numerous, and may you live long.*

*(61) If you conceal this edict and do not publish it to the world, may Ahura Mazda slay you and may your house cease.*

*(62) This is what I have done in one single year; by the grace of Ahura – Mazda have I always acted. Ahura Mazda brought me help, and the other gods, all that there are.<sup>13</sup>*

These quotations speak of the considerable emphasis Darius put on the importance of recording historical facts for both contemporaries and future generations.

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<sup>13</sup> L.W. King and R.C. Thompson, trans., the Behistoun Inscription, (London, 1907)

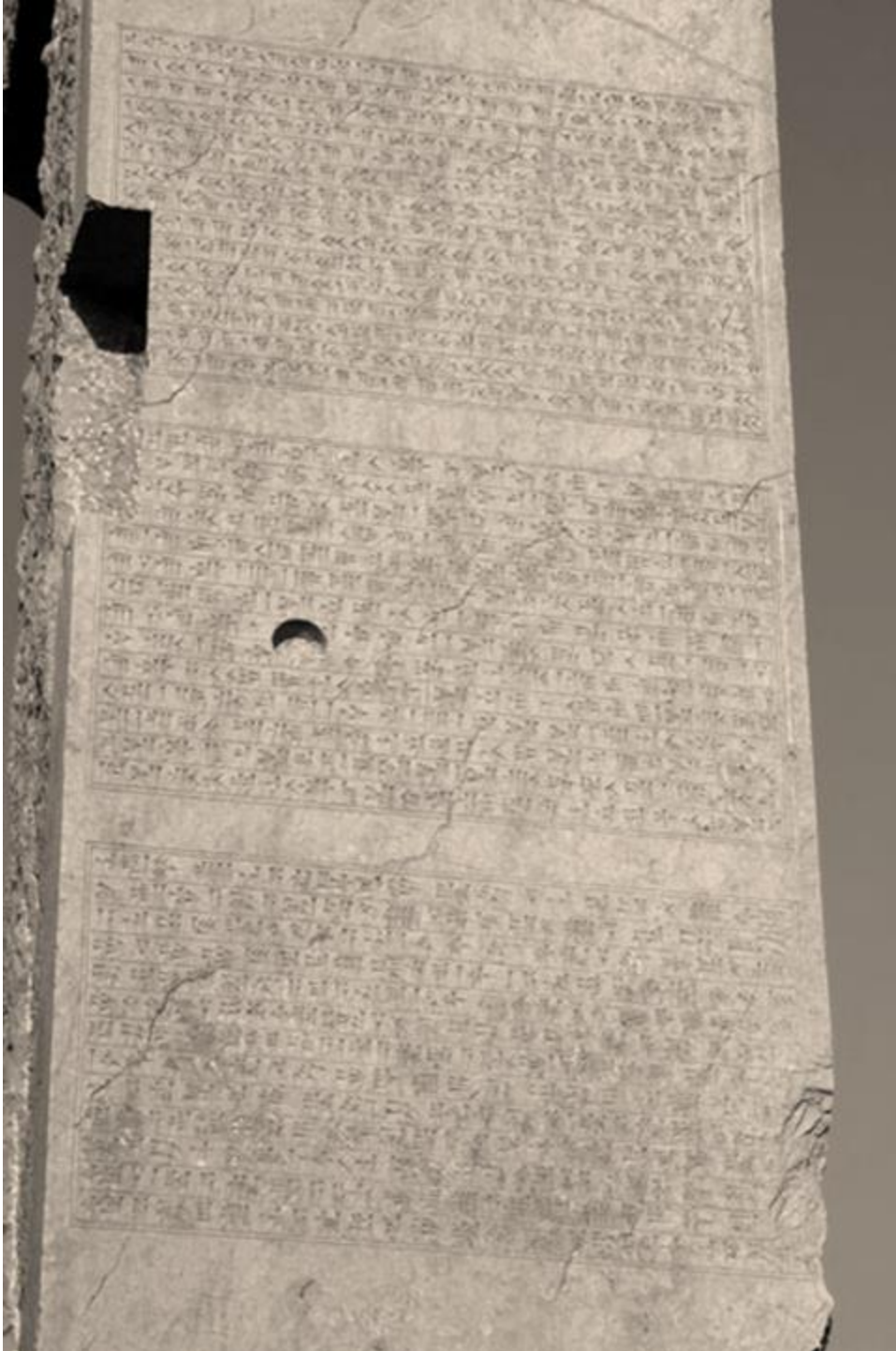


Fig 1.28 - Trilingual cuneiform inscriptions, Palace of Darius I



The formal and symbolic art of the Achaemenid era culminates in relief construction. Master carvers took inspiration from a wealth of knowledge regarding rock carving techniques from their predecessors, the Elamites, and other imperial tribes such as Egyptians and Assyrians. They deliberately selected from the arts of other nations, combining them in new ways to form their own creations. This art did not reach the level of complexity to be expressed in the third dimension; apparently, its artisans were content with simply depicting the figure profile alone. The whole combination also demonstrates par excellence the delicate proportions and balances in the carvings. The mastery of artists of this period is crystallized in the magnificent palaces, gracing the walls and pillars of Pasargadae and Persepolis. Apart from building inscriptions, Achaemenid stone and rock reliefs can be found on Mount Behistun and the external faces of tombs in Naqsh – e Rostam.

### **The Sassanids**

The Achaemenid style of figurative ornamentation was followed in a different way by their successors, the Sassanids. They came to power in Iran in 221 BC. During the Sassanid period, the Iranian element <sup>14</sup> found full expression in art, and factors which were hardly perceptible in the official art of previous dynasties, became predominant. An important feature of the Sassanian reliefs is emulating naturalism in giving shape to the limbs, capturing movement, and adding delicacy to figures. Subjects of the Sassanian rock carvings includes receiving the Imperial crown from Ahura Mazda, and Anahita's victory over her opponents, honouring the king, the court and the royal family, war veterans, and hunting scenes. The inclusion of gods' image in the composition legitimates the king's reign and asserts the glory of the monarchy. A large portrait of the King is included in all the scenes, which sometimes intrudes or interrupts the frame. Being granted the crown is parable of the Kingdom and honour of the King and is a sign confirmed by the Lord, which empowers and legitimizes him. It attests to the Sassanid kings' beliefs surrounding the Lord of the deity and the origins of their lineage.

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<sup>14</sup> Very likely when Darius came to the throne of Persia and swiftly became master of Mesopotamia and Egypt, native art was not sufficiently developed to be capable either of satisfying the king's desire for splendour or of adequately portraying his power. He had the opportunity to choose from the achievements of two great civilizations-that of Egypt and that of Mesopotamia either of which could easily have satisfied all his requirements. Instead of making a choice, he took various elements from each, mixed them and introduced Ionian and native details. The chief characteristic of this mixture was that the elements were not adapted to their milieu but were kept practically pure. It seems that the desire to preserve the purity of the architectonic and other details induced Darius to bring masons from Egypt and builders and carvers from Assyria.



Fig 1.29 - Naqsh – e Rostam, an archaeological site located about 12 km northwest of Persepolis, in Fars province, Iran



Fig 1.30 - the investiture of Bahram I (273 – 276 AD), on horseback on the right, by the supreme god of the Zoroastrian religion Ahura Mazda, who approaches on the left and gives Bahram the ring of power, the cydaris. The body of a defeated enemy lies under Bahram's horse.



Fig 1.31 - Taq – e Bostan: high – relief of Ardeshir II investiture; from left to right: Mithra, Shapur II, and Ahura Mazda; lying dead is the Roman emperor Julian.

## Realism



Fig 1.32 - Bishapur's Relief; the great quantity of horsemen firmly makes this an equestrian victory relief. Sassanid King Shapur I is depicted at the heart of the relief, roughly in the centre of the third register, on his horse and victorious over three Roman Emperors.

Realism<sup>15</sup>, which we could only mention previously as a probable native influence, came into full swing during this period and being expanded and in its proper setting acquired a clearer and somewhat different meaning. Unlike Achaemenids, Sassanians did not look upon nature as the *result* of intricate cosmological and ethical laws, but as the inexhaustible *source* of life, beauty, and abundance. The vestiges of Sassanian art frequently portray hunting scenes, and garden drinking parties – a natural preference of a race so proud of its gardens. Thus Sassanid artists attempted to express the richness of nature through visual art and poetry. Unlike the slaughter of animals displayed in Assyrian reliefs, Sassanian hunting scenes captured the majesty and pleasure of the moment. Rather than being portrayed as writhing in pain, animals act as vehicles for conveying the image's narrative. A tendency towards realism in rendering details within Sassanian decoration is a refinement of Achaemenid art – forms.<sup>16</sup>

A tendency toward realism was combined with a propensity for animal imagery in an effort to capture the grace of form and activity of animal life within the ornamentation process. Poetic metaphor took precedence over rigidity of form, design, and dimensions. Thus the image of a gazelle became less a portrait of a species and more a symbol of speed and grace.

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<sup>15</sup> Cosmopolitan synthesis of styles and contributed elements from their own traditions

<sup>16</sup> Sava Popovitch, "The Iranian Element in Persian Art", the Burlington Magazine for Connoisseurs 57 (1930): 193 – 198



Fig 1.33 - Susa, hunting scene, wall painting. Roman Ghirshman dated the paintings to the first half of the 4th century, but other archaeologists prefer a 2nd century date in the Parthian period.

The best example of this artistic attitude is illustrated by the famous Behar – i – Kizra carpet, whose 1,051 sq ft representation of spring in the garden of Khosrow I was particularly warming during the winter season. The carpet depicts a garden intersected by running streams and interlacing paths adorned with trees and spring flowers. Its wide borders feature flowerbeds rendered in hues of blue, yellow, red, white and green precious stones. The yellow of the soil is decorated in gold, which is also used for the streams and stalks, and compounded with silver rendering for the colour of twigs. Gravel paths are reproduced with gems the size of pearls and the rippling effects of water were represented using crystal. The leaves of the plants, flowers, and trees were rendered in silk, and fruits were done in many – coloured stones embedded within. The task imposed on the artist was not to portray the garden, but to embody and perpetuate the fleeting effects and luxuriant qualities of spring. The poetic attitude towards nature as reflected in the brilliance of her innumerable hues, associating with sensuality forms the basis of Sassanian art (224 – 651 AD) and endows Persian realism a characteristic distinction from realism portrayed in the art of any other race.<sup>17</sup>

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<sup>17</sup> Popovitch, "Persian Art", 193 – 198



Fig 1.34 - the 'Spring of Khosrow' carpet as a reminder to the king of beautiful compound gardens in the winter, it was seized in 635 AD by victorious Arabs after the fall of the Persian Empire, cut apart, and sections were sent to allies and friendly rulers. For the next 1,000 years, fragments of this rug were used as design models by weavers throughout the East. Examples such as the eighteenth Century North Persian 'Wagner' Garden Carpet above may have an undocumented lineage of motif in the spirit of the famous 'Spring of Khosrow' carpet.

In the late Sassanid era (600 AD), reliefs gradually evolved into a preeminent art-form. The arrangement of different figures in detail signifies the high degree of advancement Sassanian art had achieved. A bas-relief in Taq – e Bostan (western Iran) depicting a complex hunting scene with its animals arranged in rows or columns illustrates the highly innovative technique of Sassanians in portraying animate beings. This hunting scene describes stampeding boars arranged in both vertical and horizontal rows in such a way that the surface looks chequered. However, the rows and columns are often broken, and the details arranged in such a way as to place emphasis on the central figure.

In addition to those hunting scenes, elaborately embossed human figures in Taq – e Bostan clearly demonstrate the progression in Sassanian art of relief. Figures were rendered elaborately and handled delicately. Faces, which were previously depicted with generalized features, were now shown with distinguishing features and personal properties. Showing all the separate features and pieces of the cloths including gathers, creases, and pleats, in addition with the projected procession of combatants and their make – ups, caps, missiles, marks, and signs indicate that Sassanian artists were considering details far more than their predecessors. Inscriptions embossed with carved figures are usually bilingual (Parthian Pahlavi and Sassanid Pahlavi) and introduce the characters depicted in the scene.



Fig 1.35 - Taq - e Bostan, Kermanshah province, Iran





Fig 1.36 - Shapur II, shown with distinguishing features and personal properties

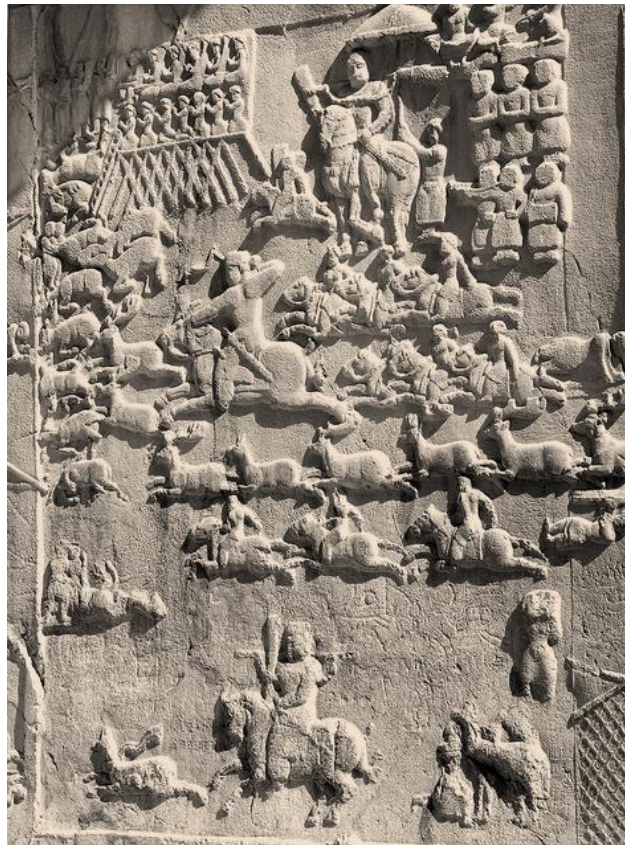


Fig 1.37 - Hunting scenes were cut in relief on the side walls of two alcove-grottoes in the fifth century AD, Sassanian period



Fig 1.38 - the Taq - e Boston Sassanian Royal Boar Hunt, fifth century AD

Comparing the later and earlier works of Sassanids, the earlier artists worked as an intermediary between nature and the artwork. Their role was to reproduce the observed figure – the existing form - with a limited amount of manipulation; however, this method of representation underwent a dramatic shift. The position of artist as an agent of production was promoted as the true determinant for transforming observations into an end-product. I am taking into account the broad definition of ornament proposed by John Ruskin, the twentieth century theorist on ornament, he describes how an artist would reflect the distinctive human nature through ornament: “*Ornament is the principal part of architecture because it contains the detail within which the human touch is found*“. *The value of every work of art is exactly in the ratio of the quantity of humanity which has been put into it.*”<sup>18</sup>

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<sup>18</sup> Debra Schafer, *The order of ornament, the structure of style*, 2003, (Cambridge: University Press, 2003), 18

Although artists were still committed to nature as their true source of inspiration, and the products of this process embodied natural forms, at the same time the artist's position found full expression with the conciliation of the eyes, the mind, and the hands. No longer restricted to duplicating the external world, artists ventured to internalize their observations, and through their art be able to both reflect its provenance and contain the character of its creator. The new generation of artists acknowledged that merely imitating nature was obscene. They were applying motifs in a liberal manner in a similar fashion to what is currently known as an abstract or subjective concept.

The figurative style of ornamentation was subject to a dramatic shift in its structural, functional, and perceptual aspects, experiencing distinct modes of representation with the fall of the Sassanid Empire on 651 AD and the advent of Islam in Iran. Post-Islamic ornamentation distanced itself from animal and human figures, associating more with abstract floral motifs and geometric patterns considered to be divine mediums for rendering the absolute beauty of God.

The Arab conquest of the Persian Empire during the first half of the seventh century CE spread the Islamic faith throughout the country, which had a transformative effect on Persian ornamental arts and its motifs. Ornamentation shifted from its interim status as an indulgent craft to a sacred art, where ornaments were considered a medium for transcending the limits of the material world. However, its sacred qualities also restricted evolution by limiting its development to religious institutions, which ultimately resulted in its diminishing presence in culture and in other works of architecture.

The abstract floral ornament emerged after the advent of Islam in Iran after a metamorphosis from protruding human figures to a sophisticated system of patterns and abstract geometrical motifs influenced by Islamic creative expression. This thesis attempts to scrutinize contrasting social and cultural impulses, whose intersection provided both impetus for dynamic transformation as well as conflict and stagnation, against the backdrop of the story of ornamentation and its re-emergence since the establishment of the first Persian civilization by the Achaemenids in 550 BCE until the late seventeenth century followed by modernity to date.

## Re – emergence of reliefs in Qajar period after eleven centuries

For about eleven centuries, native talent was eclipsed by foreign elements in official Persian art. During the Islamic period, the relief construction was restrained by religious obligations (i.e. based on Islamic ideas, the creation of any statue or relief sharing similarities with the human body in a religious setting is discouraged for fear of idolatry). Allusions to Iran's antiquity, including the reproduction of its stylistic motifs, found its way to Iran's politico – cultural elite at the turn of the eighteenth century. Considerable evidence is related to the Qajar era. Edifices bearing an explicit pre – Islamic visual vocabulary were erected by kings and aristocrats in Qajar urban centers since the beginning of the nineteenth century. The second Qajar king and the first to revive ancient Persian royal iconography, Fath Ali Shah (1797 – 1834), had ordered the carving of his portraits and those of his heirs in the grotto of Taq – e Bostan. Most of the raised images projecting Fath Ali Shah Qajar are dedicated to show the king, his courtesies, hunting and ceremonial scenes. Hunting was the favourite recreation of the Qajar kings, which became immortal with the reliefs rendering the royal hunts.<sup>19</sup>



Fig 1.39 - the carving of Fath Ali Shah's portraits and those of his heirs in the grotto of Taq – e Bostan, (1797 – 1834)

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<sup>19</sup> Talinn Grigor, "Orient oder Rom? Qajar "Aryan" Architecture and Strzygowski's Art History", *The Art Bulletin* 89 (2007): 562 – 590



## Transformation of Order, Non – Figurative Motifs

The Arab conquest of the Sassanian Empire in the first half of the seventh century CE marked a decisive turn in the political, religious, and cultural history of ancient Persia. Within a century after the conquest, a large portion of the urban elite in the formerly Sassanian territories had accepted Islam, and the Arab religion proliferated rapidly throughout the rest of the country. The Islamification of the Iranian world had a profound impact on its cultural life. The adoption of Islamic religious and cultural traditions distanced the populace from its Zoroastrian roots and national culture. So Zoroastrian realism and its symbolic mode of representation gradually disappeared among Muslim converts.<sup>20</sup>

However, the Islamicized Persian population retained a number of customs and folk traditions from its pre –Islamic past. The new style of ornamentation adopted Islamic faith as the driving force behind its design, but remained undeniably Persian in its basic grammatical structure and language of expression. Comparing the existing Illustrations of the Cypress tree and its old images found in historic resources gives us a fine example of figural motifs that in spite of their altered appearance, are preserved in their essence. According to the Persian faith, there was a clear preference for the cypress, a tree that because of its everlasting green leaves was used in Persian literature to symbolize eternity. The cypress at funerary monuments was interpreted as a celestial symbol – the tree of heaven – evoking notions of the hereafter and blessings for the afterlife. Although clearly decorative, it was also a symbolic reflection of re – emerging ideas about the Tree of Life that are still used in Persian folk art. In the course of time, naturalistic drawings of cypress trees became less common, though they nonetheless maintained their ovoid medallion shape.

In terms of arrangement, function, and ideology, ornamentation was subject to a deep transformation under Islam. We can distinguish three principle waves of transmission:

- 1 - Dramatic change in meaning
- 2 - Change in order and pattern
- 3 - Change in form and function

Under this transition, patterns transformed from natural figures to geometrical shapes. The preference for projected features shifted to mostly using ornaments as a means to cover surfaces as flat abstract patterns. Ideologically, it shifted from a focus on the body to spirit, from mundane to super-mundane, and from earthly to celestial.

Fig 1.40 - (previous page) these fantastic paintings are made on ceiling of round stairs of Ali Qapu building, a small castle located at Naqsh – e Jahan Square, Isfahan, Iran

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<sup>20</sup> "The Rise of the Persian Renaissance", Iran Heritage, accessed April 5, 2012, <http://www.iranheritage.org/persian-renaissance/abstracts.htm>

### **Dramatic change in meaning**

Pre – Islamic ornamental elements – it is specifically observable in reliefs – clearly symbolized the extent of the great king’s domination, and allegorically represented his values and ethics through metaphor. Religious subjects were rare and the inclusion of images of God in the composition was a sign that the king’s reign had been confirmed by the Lord; a sign that empowered and legitimized him. By contrast, God was the primary subject underlay the creation of ornament in Iran after Islam.

From Islam’s perspective, the divine principle is understood as enshrouded behind five successive envelopes while divinity itself is considered the whole. If we enumerate these five manifestations (or universal degrees, as they’re called in Sufism), we first have the human domain which is also a corporeal world of matter, followed by the domain of royalty, so named because of its immediate dominion over the human domain; then follows the domain of power, macrocosmically heaven and microcosmically human intellect, described as a natural celestial Paradise carried within us. The fourth degree is known as the ‘domain of the Divine’, pure being and unbegotten intellect, the logos. The fifth and final presence or degree is the infinite self, varying known as Aseity, existence derived from self (having no longer source), Ipseity (selfhood, individual identity, individuality) or Quiddity.<sup>21</sup>

From another perspective, the Quranic premise of doctrine is as follows: the first presence is the absolute unity of God; the second is God the creator, revealer and saviour, the divine qualities; the third is the throne, supra forma manifestation, identified as the world in its entirety; the fourth is the footstool, on which God’s feet rest; the fifth and most distant presence is the Earth and the human realm.

Islamic sentiments were centered round divine wisdom; Muslims believed that all true beauty emanated from God, Nature’s divine creator. Islamic typology attempted to project onto the work of art and architecture symbolic relationships between the visible (material) and invisible (spiritual) world centred round the God’s word. Ornamentation served as a medium through which a material body was liberated from the worldliness of the inferior earthly realm and would ascend towards a high degree of spirituality in proximity to the superior divine realm.

Muslim artists sought to literally prefigure heaven in the Quran on earth whereas Sassanians sought to figuratively depict the physical universe. Motifs derived from animals and plants, effigies of soldiers, ordinary people, and kings carved on walls with Ahura Mazda, were showing the importance of the human soul as an exquisite creation among others including God, not inferior to him. However, the prevailing Islamic attitudes of the day sought to manifest the hidden truth as transcending the physical forms. As a result figural representation became subordinate to other forms. Time – honoured principles and architectural conventions of the Iranians were subjugated to the newly hegemonic Islam.

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<sup>21</sup> Keith Critchlow, *Islamic Patterns: An Analytical and Cosmological Approach*, (Rochester: Inner Traditions, 1999), 70

## **Change in order and pattern**

### **Plant ornamentation**

Decorations on religious artifacts after the advent of Islam attest to an increasing interest in floral motifs at the time. The plant ornament was considered of vital importance to the evolution of Islamic – Persian style. Post – Islamic Persian artists popularized the heterogeneous combinations of motifs, particularly of vine scrolls and palmettes. Indeed, Islamic ornamentation developed from a successful fusion of the decorative elements of late Classical Antiquity, such as naturalistic acanthus leaves and vine scrolls, and of the ancient Near East, such as formal palmettes, pine cones, and pomegranates from the late seventh century onwards. Palmettes, which replaced the vine leaves, were derived from Sassanian art, and played a significant role in the formation of early Islamic art.

Indeed, Sassanian art must be credited with the creation of a new style of abstract pseudo – floral ornament based on traditions of Achaemenian art in which tendencies towards naturalism were gradually replaced by rhythmic repetition and symmetry. Sassanian artists developed the split palmette enclosing some motif, either a pomegranate or occasionally a rosette, arranged in several rows into unit patterns. The half palmettes were combined with vine leaves or ‘lotus’ motifs, appearing prominently in Sassanian ornamentation either arranged in a row or as part of a wavy scroll. A characteristic feature of the scrolls was that the half palmettes did not form a final motif but were an integral part of the scroll itself, with their ends reforming into other palmettes.<sup>22</sup>

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<sup>22</sup> Maurice S. Dimand, “Studies in Islamic Ornament: I. Some Aspects of Omayyad and Early ‘Abbāsid Ornament”, *Ars Islamica* 4 (1937): 293 – 337





Fig 1.41 - Tree of Life, Taq - e Bostan, Sassanid era



*Fig 1.42 - 47 - Sassanid Floral motif, Ctesiphon, sixth century AD*

Taking inspiration from Sassanian elements, the artists of the early Islamic era developed a more intricate, vivid, and organically growing floral patterns deriving from the palmette. Full and half Palmettes again became the principle motif, connected in a purely decorative fashion by arched stems or bands. The sequence of full palmettes and half palmettes forming a continuous scroll was a characteristic feature of the Islamic arabesque.

The fully developed arabesque was composed of basic units of repeating pattern with a clearly defined axis of symmetry. The infinite character of the arabesque created by constantly merging and separating stalks, palmettes, and other plant elements was further enhanced in patterns which combined vegetal motifs with different types of arches, arcades or linked star – medallions. These geometric motifs formed a basic matrix of sorts, which interwove with the arabesque, enriched its character, and stressed its fluidity.<sup>23</sup>

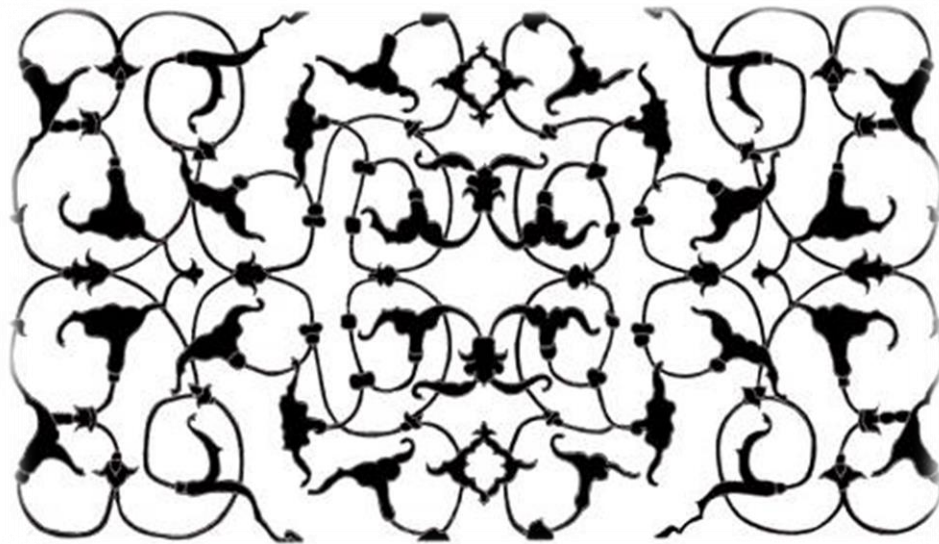


Fig 1.48 - by Author, the Arabesque

Due arabesque's tentative form, it does not seem to follow a rigid order for its spread. Then there is a question that how arabesque or other motifs with similar configurations could cover complicated surfaces such as domes and arches? Next topic identifies geometry as a basis for arrangement of motifs, pattern configuration and surface covering. In the following section different geometrical arrangements are described. Also the strategy devised for clothing flat and curved surfaces with arabesque and other vegetal motifs are explained through illustrations of the Sheikh Lotf Allah mosque – an exquisite sixteenth century Safavid mosque in Isfahan. The full realization of arabesque can be found in tile revetments of domes and walls of this exceptional mosque.

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<sup>23</sup> Dimand, Maurice S., "Islamic Ornament", 293 – 337

## Emerging geometry

The essential feature of Islamic ornament was a love of organised symmetrical structure most notably articulated by the transformation of ornaments into surface coverings as their primary role. Persian Muslim architects worked in terms of modular systems of geometric design in which arithmetic and measurement played a rather insignificant role. Building plans were relatively standardized and, as a result, architects increasingly turned their energies towards decorative embellishment and refining of canonical forms.

*“Instead of using measured drawings, Iranian builders learned how to project three-dimensional forms from two-dimensional templates. Indeed, the drawings were not being accompanied by numerical notation, instead, were meant to be understood as ideal patterns, to be proportionally adapted to buildings and local materials at the construction site, where they were transferred to the floor of the workroom, that is to the space within the building in progress, where, in turn, full-size details were worked by empirical, geometrical methods, plaster being laid out on the floor, carved and greased, and slabs of plaster, in turn, being cast from such moulds in full size.”<sup>24</sup>*

Since the ninth century onward, the preoccupation with geometrical forms placed them closely beside and/or against one another in order to eliminate the background to achieve a complete looking surface decoration. Geometric patterns could serve two opposing artistic intentions. One was to form a closed design confined to its own borders. Since it did not automatically lead to a repetitive pattern, it functioned as a decorative motif. The other aim was to establish an open design primarily based on interlacing geometric motifs, favouring repetition and functioning as the main ornament of a given surface or as its background design.<sup>25</sup>

The rigid geometrical sets following this discipline are categorized by Oleg Grabar as Regular Geometry. The patterns were based upon a reciprocating repetition of basic designs which cohered with larger surfaces as well as closed panels and frames. Painted on flat surfaces or covering smooth contours, these ornaments both remained in vogue as an expression of the Islamic tendency to saturate an available space as much as possible. In frames or borders constructed through this method, the reciprocating or positive and negative shapes were frequently differentiated by colour in the form of dark and light stone, faience, or other materials.

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<sup>24</sup> Oleg Grabar, *the Mediation of Ornament*, 1992, (Princeton: Princeton University Press, 1992), 110.

<sup>25</sup> Grabar, *the Mediation of Ornament*, 79

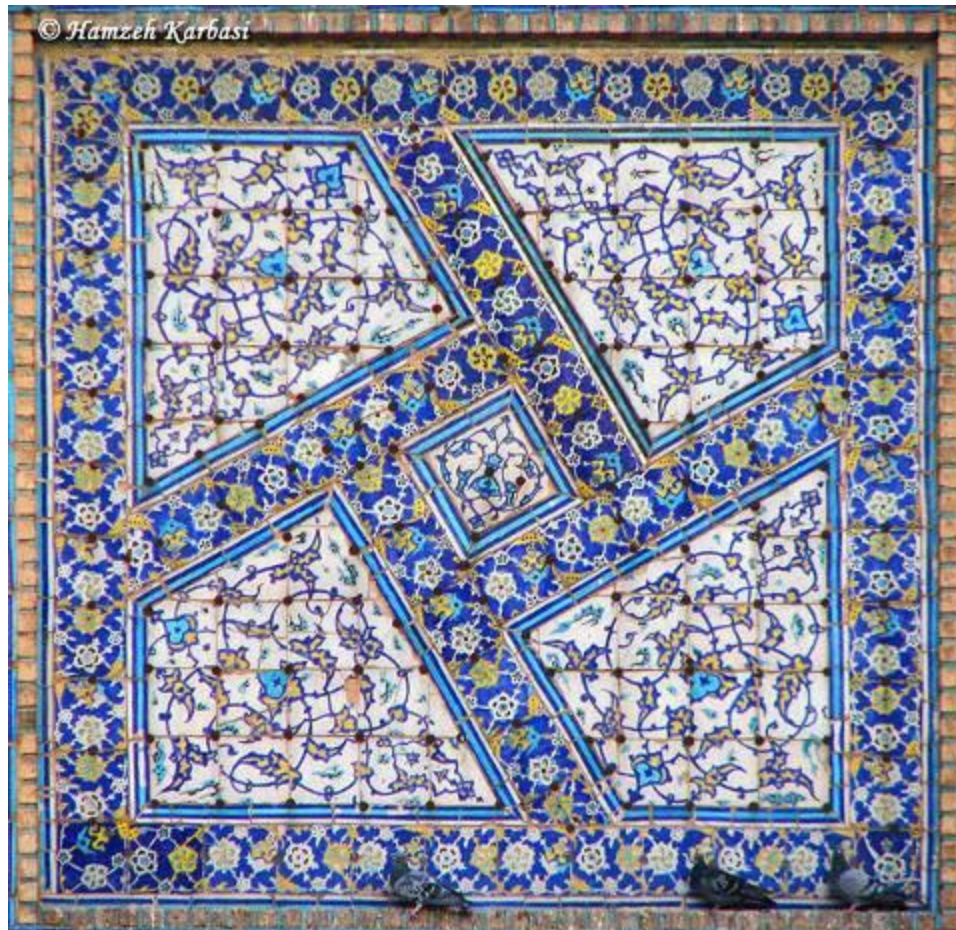


Fig 1.49 - tile works with geometric patterns, Shah Mosque, 1611 AD Safavid Era, Isfahan, Iran

Tile revetment was also adopted as another method for filling empty space and creating a coherent overall design. In this scheme, identical or different geometric forms with straight linear outlines were closely placed adjacent to each other so as to hardly leave any of the background exposed.



Fig 1.50 - the dome of the congregational mosque of Yazd, twelfth century, Yazd, Iran

Among the most simple and commonplace geometric motifs were squares and lozenges which were either divided diagonally or embedded within one another. A similar linear impression was obtained from Iranian brick buildings on which a pattern of lozenges was either formed by raised or recessed bricks. On tiles, ceramics, and metal objects, these simple designs often constituted the main decorative motif. Squares and lozenges lent themselves relatively well to perforation or piercing and were frequently used for wooden screens and window grilles.



Fig 1.51 - (left) Vakil Fortress, Zand dynasty, 1766, Shiraz Iran,  
 Fig 1.52 - (right) Nushabad congregational Mosque Minaret, Isfahan, Iran

In order to enrich these basic grids with square, diamond, and cross patterns, artisans further subdivided these geometric units by combining squares and lozenges of different sizes, interlocking them in a variety of ways, or interlacing additional bands into the basic networks. As a result, the lucidity of the square or lozenge patterns further receded, replaced by new forms like stars, hexagons and the like.<sup>26</sup> In due course, the complexity of these basic patterns and designs co-evolved, including not only more composite polygons and star motifs but also more intricately structured compositions.

The rigid geometrical style, with its linear structures covering entire surfaces ‘purifies’ the eye, removing impressions of the bodily world. This form of ornamentation is compared by some authors with soap, which removes stain from clothing; thus by means of geometry was human sight supposed to be purified of too much sensuality and lust.<sup>27</sup> This trend of imageless representation emerges in the tile ornamentation of congregational mosque in Yazd built in the twelfth century. The dome’s magnificent interior is adorned with a converging pattern of interlocking squares, lozenges, stars and hexagons of different sizes.

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<sup>26</sup> Grabar, *the Mediation of Ornament*, 43

<sup>27</sup> Hans Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 2011, (Cambridge, Mass.: Belknap Press of Harvard University Press, 2011), 61



Fig 1.53 - Central Dome of the congregational Mosque, Yazd, Iran. One of the principal components of Islamic architecture was to draw the eye up towards heaven; the intricacy and complexity of the geometric designs paradoxically allowed the mind to concentrate on God.

*"The idea conveyed by these ornaments alludes to the stellar firmament. In other words, over the inner surface of the dome are spread angular or round configurations, which from below look like luminary bodies. They transform, as it were, the semicircular cupola into what would appear to the eyes of the beholder as the vault of heaven. The notion that these ornaments would have reflected the vault of heaven in the eyes of the beholder is further enforced by Persian poems in which the Vault of Heaven is called tas - i negun, 'upturned bowl', or tas - i sepehr, 'bowl of heaven'."*<sup>28</sup>

The God's name in the form of inscriptions is observable everywhere, it proclaims an agenda; the place is saturated with the Holy Spirit. One must have stood in this empty interior flooded with light and tiled at the enormous surfaces it covers, to grasp how the seemingly infinite repetition demolishes all boundaries.

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<sup>28</sup> Eva Baer, *Islamic Ornament*, 1998, (New York: New York University Press, 1998), 103



The second category of geometrical setting is much less rigid, and due to its implicit character is termed by Oleg Grabar as Implied Geometry. As opposed to the first type of geometrical design with its rigid assembly and units of polygons, this type of arrangement is far more difficult to define. There is a latent framework that underlies and holds units similar to *“the vine or ivy grown or displayed on the trellis. It is a unit that by the absolute regularity of its outline can best be defined geometrically. Its evaluation is less a matter of matching with a mathematical formula than of deciding whether it served as a strait jacket, almost drowning whatever it carried, or as a silent or, more exactly, invisible support for a statement that would be collapse without implied geometry.”*<sup>29</sup> I have illustrated the implied geometrical arrangements with examples of interior features of the surface articulation of the Sheik Lotfollah Mosque (1618) in Esfahan, Iran; one of the surviving gems of the Safavid dynasty.

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<sup>29</sup> Grabar, *the Mediation of Ornament*, 54

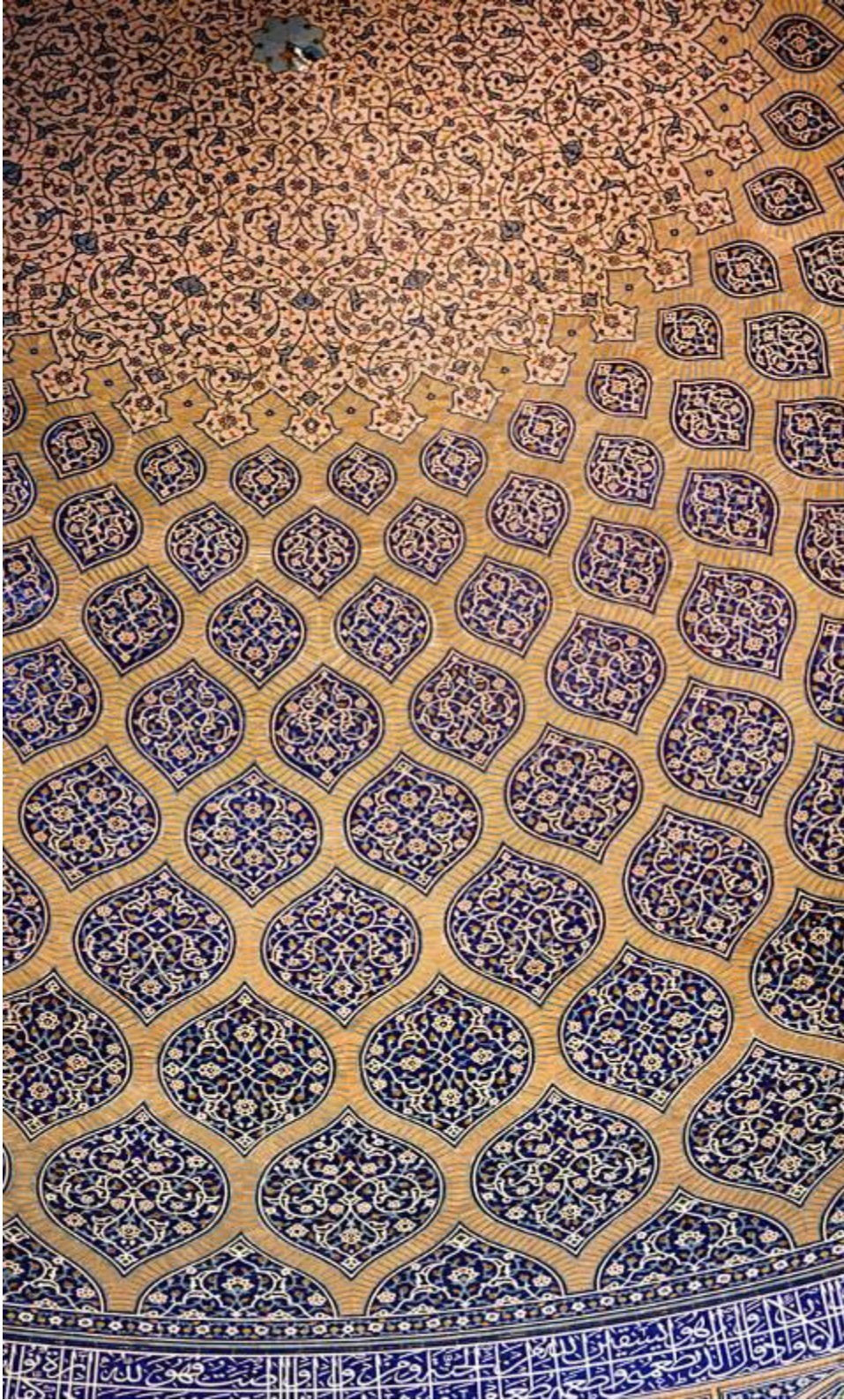


Fig 1.54 - Features of the surface articulation of the Sheikh - Lotfollah Mosque, it is a good example of architecture of religious spaces after Islam in Iran which perfectly manifests its avoidance of representational iconography in favour of highly sophisticated geometry and pattern.

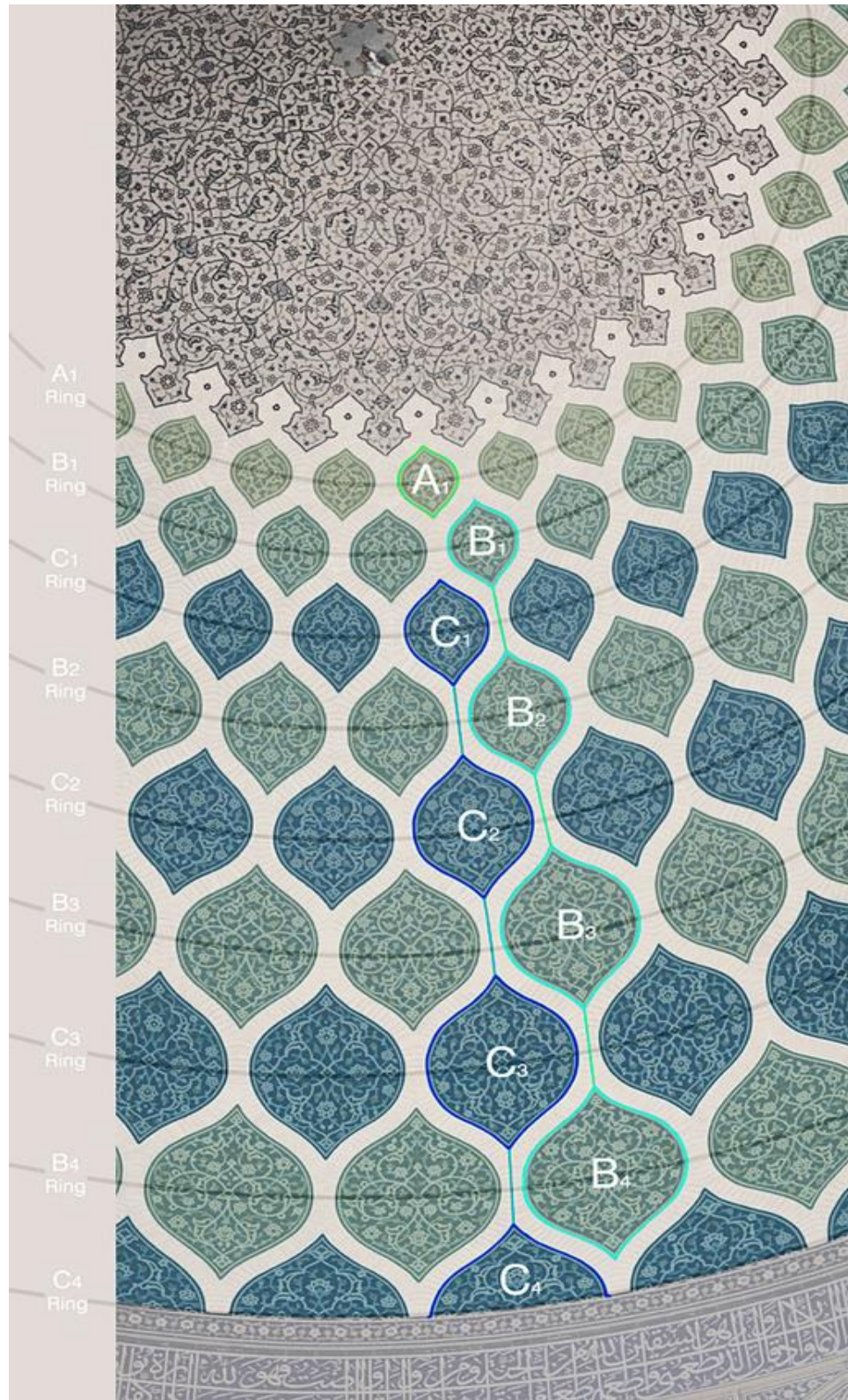


Fig 1.55 - Diagram shows the similar units with different scale, units are enlarging from apex on top to the area bordered by the calligraphic frame which is the crucial locus where the square of the nave meets the circle of the dome.

The pattern is composed of radial arrays, concentrically staggered around a central densely patterned core. As shown in the diagram above, the “pods” increase in size as they move away from the central core, increasing in scale in sync with the pointed dome on which they are mapped, enveloping the viewer below. There are three basic types: A, B, and C. The A ring is closest to the central core, and a compelling case can be made for interpreting it as having nascent features of the other two types. After the initial A ring, the B series and the C series are set in play alternating ring after ring. Each of the concentric iterations develops the type from the previous iteration, further articulating pattern details while maintaining the general structure, as seen in the comparison diagram further down.



Starting from the generally floral theme of all the surface ornamentation of the ceiling, the line weights and the scale of the design features within each pod are kept constant, such that as each iteration increases in size as it descends, there is more space left to be filled due to the line thickness not scaling up.

Fig 1.56 - Diagram shows how patterns are covering the curve host surface of the dome

The extra space that is opened up this way is then filled by further developing the detail and extension of the pattern – stems are extended, buds appear, the flowers grow, flourishes project outward, etc. Depending on if you read the movement inward or outward, this design could feed any number of interpretations, but to take one narration that jumped out at me as an example: If we take the nebulous region centered on the highest point as God, moving out from this center a threshold is crossed, on the other side of which discreet beings emerge, moments of creation originating from God. Starting with type A, the sequence differentiates to types B and C, and from there through successive iterations becomes a poetized model of emergence, pattern growth, and escalating complexity – the world evolving, emanating in waves. Here, far pre-dating any form of scientific discourse to express concepts of complexity – even in primitive form- they are incorporated into an elaborately articulated representation of god as the origin of the complexity of the world.<sup>30</sup>

<sup>30</sup> “Safavid Surfaces and Parametricism”, Arcinet, accessed December 2, 2011, <http://archinect.com/features/article/29553480/safavid-surfaces-and-parametricism>

## Muqarnas

In addition to ideology as an underlying reason for change, scientific innovation also affected the production of new forms of ornaments. Abstract modes of representation appeared to have developed in specific historical and intellectual circumstances, growing out of the popularization of theoretical mathematics and the empirical connection between architecture and practical geometry. Islam was a multidisciplinary culture and had given the geometry a universal validity that allowed it to cross the boundaries between architecture and decorative arts. Geometry as the aesthetic and spiritual creed of this culture was associated to other knowledge; the most striking among them was optics.

### The emergence of eternal truth by light in Islamic architecture

As I explained earlier the ancient Persian mythology, foundation of Zoroastrians ideology was based on conflict of goodness with evil that finally resulted in the victory of Ahura Mazda's power over the devil army. Later on after the advent of Islam, new concepts emerged by meaning of light and darkness, which these two words were termed as existence and essence.

According to the mystical point of view, the world is like a prison that confines light particles that came from the upper natural world. There is a powerful connection between Persian mysticism and divine light which culminates in the "illuminationist philosophy" of Suhrawardi (a twelfth century Persian philosopher and Sufi). Based on his philosophy of illumination, existence directly connects with essence of light and whatever is true about the existence of light is also correct about the essence of light. Suhrawardi's life was a continuous attempt to approach divine light; he addressed God as absolute light then concluded that life on the earth is a result of continuous radiation of light that makes universe alive; In other words, the nature of light is apparent so it causes emergence of the unseen.<sup>31</sup>

Due to this ideology, material and conception are created just to show the reflection of God, and the only material image of God that the Koran offers is that of light; "*God is the light of the heavens and earth*", it proclaims. It is embodied on the shimmering walls of a thirteenth century shrine in the east of Iran, (*figure 59*), which uses filtering and reflecting light many times to increase its effect, so that the reflected light overwhelms and almost obliterates the material substance of structure. "*In fact the interior walls reflect the light differently as the sun progresses overhead. Beams of light serve as an organizing principle in interiors in the same way that patterns of lines function on the walls. Such disembodied arrangements seem to make the walls and limits of the space disappear, an effect brought about by the dominance of light and pattern over all material substances.*"<sup>32</sup>

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<sup>31</sup> Mohamad S. Falahat and Mohamad Zare, "The emergence of eternal truth by light in Islamic Architecture", Canadian Journal on Environmental, Construction and Civil Engineering 4 (2011): 37 – 42

<sup>32</sup> Ibid

The reflection of light practiced in the shrine is to concentrate on the essence of the divine world; Light in this sort of architecture is a sign of sacred intelligence which penetrates into the substance's density and upgrades it into divine matter.

Light also has a significant role to reduce the hardness and coldness of a building, and changes it into a place as a shelter for our spirits which has been involved in materialism. This idea of divine light is manifested in the architecture of mosque. The most pivotal part of a mosque is the altar, which returns to a place the meaning for battle and fight with the devil. From the physical point of view, the altar is heart of mosque, but in public opinion it's considered the gate of heaven. The most ornamental part of altar is the muqarnas, which actually is the output of a combination of light and colours on an architectural base, and it is a reflection of the sky. In total, muqarnas is an allegory of the diffraction of creatures and an out spread blessing for prayers.<sup>33</sup>

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<sup>33</sup> Falahat and Zare, "the emergence of eternal truth", 37 – 42



Fig 1.57 - Shrine of Imam Reza, c. 1621, Mashhad, Iran



Fig 1.58 - Muqarnas music hall, Aali Qapou Palace, Safavid dynasty, Isfahan Iran



## The geometry of Muqarnas

Muqarnas is an architectural feature that emerged in the eleventh century. It has offered to Islamic architecture a highly visible form in which to elaborate the omnipresent geometric patterns. It is a form of vaulted ceiling and appears as a niche on the exterior of buildings; it is also surface decoration, and sometimes functions as both of them at same time. To cover the surface, single elements of muqarnas combine with each other and make a complex that projects into space. They are made up of tiny cells that refract or deflect light as it enters a room.

A muqarnas primarily occurs in two dimensions in knot style, to be translated into an infinite variety of three-dimensional forms over which light can play. The third dimension, whether expressed in terms of a projecting body or an empty space intensifies the effect of light entering the space. The complex forms of muqarnas occupy the threshold between space and surfaces, dividing them into various layers or steps, so surfaces become permeable, admitting space without delimiting it. When light touches different facets of muqarnas from opposite angles, the reflections on the floor and walls of a room create a pattern of bright and shaded shapes that act as both contrast and complementary forms. This specific geometry qualifies muqarnas to act as a joint between ornamentation and space.<sup>34</sup>

According to Oleg Grabar in his book *Mediation of Ornament*, in knot patterns, surfaces are recognized with rays, circles, and polygons so that the geometrical figures, primarily as lines, extend outwards or their sides meet, neatly filling the surface area. In muqarnas, light is caught in strict patterns and reflected, and the different colors become subordinate to the geometrical order. All this presents itself as order of an abstract kind not limited to the interplay of lines and fields. It seems that it inspires silent contemplation, and turns an observer's thought inward.<sup>35</sup> [ ... ] So the muqarnas compound becomes in a manner of speaking almost sacred.<sup>36</sup>

We can also speak of the cosmic spectacle that is presented in the muqarnas form and endorse its geometrical symbolism. In this manner one of the entrance portals in the Shah mosque in Isfahan (*figure 61*) symbolizes the daily path of sunlight and the changing picture of the stars. The surface of the vault, consisting of many layers of muqarnas with their enamelled skin, is a medium and a filter for the entering sunlight, which changes from hour to hour. The vibration simulated by the fixed and unmoving surface of the wall creates an impression of movement that symbolizes the motion of cosmos. The beauty of ornamentation is not meant for the eyes, since it has additional appeal as carrying spiritual meanings.

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<sup>34</sup> Belting, Florence and Baghdad, 205

<sup>35</sup> Ibid, 118

<sup>36</sup> Ibid, 210

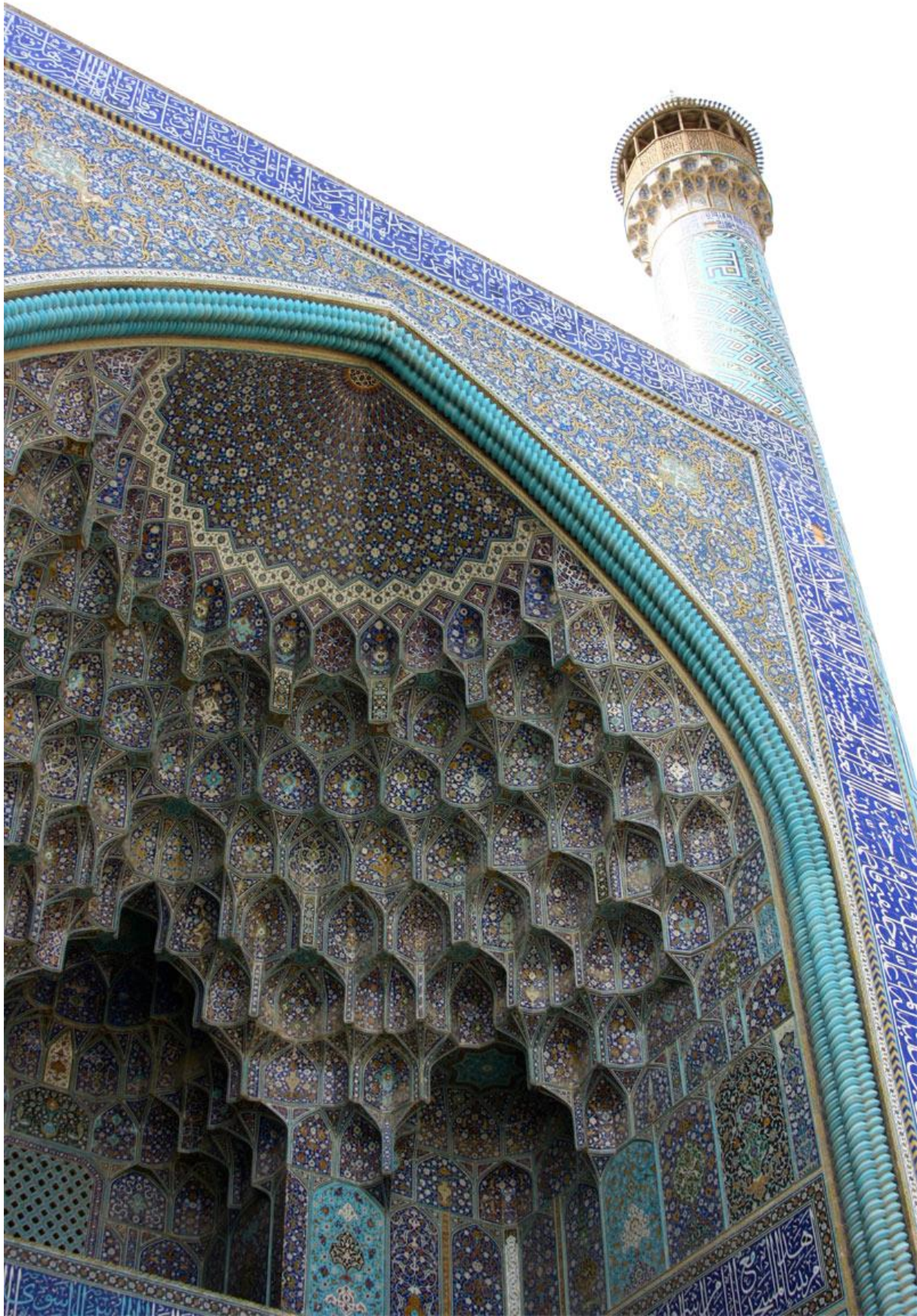


Fig 1.59 - Imam Mosque Entrance Portal Muqarnas, Safavid dynasty, Isfahan, Iran

The art of ornamentation after Islam is in fact a religious art and is regarded as sacred. It is occult and enigmatic. Worldly concepts, illustrations, prototypes, and paradigms in Islamic art refer to the realm of unknown. As Eva Baer, an expert in Islamic art and architecture in her writings on Islamic ornament, confirms, *“However these designs were interpreted, they were signs or symbols to the observer, inspired his imagination, and caused his mind to wander into another world. Metaphorically speaking, they marked an important transition between the mundane and remarkable, and therefore served as important junctures for conveying messages.”*<sup>37</sup>

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<sup>37</sup> Baer, *Islamic Ornament*, 105

### **Change in form and function**

One of the main functions of ornament, be it on buildings or portable objects of art, was to embellish surfaces. It expressed contemporary ideas of beauty and aesthetic concepts, using forms, materials, and techniques fashionable at the time. In this regard, geometric patterns as the most appealing forms since the seventh century were applied as the central motif in architectural decoration, and to a lesser degree of object decoration. Basic geometric motifs and even many of intricate interlacing combinations were employed for brick revetments to cloak surrounding walls of fortresses and embellish interior arches of mosques. Not limited to architecture, geometry, either alone or as the visually dominant theme on textiles, was a significant part of the transformation of a woven fabric into a work of higher or more expressive quality.



Fig 1.60 - Floral Pattern, Ceramic Bowl, sixteenth century

On portable objects of art, Persian ceramics instance, arabesques were the main theme of the decoration. On over-glaze-painted ceramics, designs were painted in olive green and light turquoise-blue with azure bordering against a white background, and joined with an arabesque network to create an illusion of depth. Feathery leaves and fairy wings were folded over and plastically rendered instead of being flattened out. Despite the abstract character of the ornaments in this category, their form rarely betrayed their natural origin – they followed clearly definable principles in their arrangement.



Fig 1.61 - An Arabesque design rug, Safavid period, Metropolitan Museum of Art, New York  
For carpets, flowers were often seen as a reference to Paradise, their blooms and color a testament to the abundant waters and fruitful nature of the Garden of Eden. In many Safavid rugs, geometric patterns and well - proportioned designs were also seen as an indication of divine harmony and peace

Eva Baer has characterized this style of ornamentation as decorative in function. *"This non – structural ornament was a dress that covered up the body of architecture."* She has rightly stressed the *"independent self – contained character of a decorative system, which enfolds and wraps the object and is not integral to its structure."*<sup>38</sup>

*"This exuberant delight in surface pattern, which fuses abstract and foliate motifs within a geometrical frame – work, means that decorative schemes can be transferred between such contrasting media as a rigid wall surface and a softly draped textile."*<sup>39</sup>

Lisa Golombek, professor and art historian, in her contribution to theories and principles of Design in Islamic Architecture, has tried to connect the recurrent transmission of ornament with an Islamic fascination with textiles. This inclination, she proposes, *"finds expression in the application of textile patterns for decorating artifacts, which, independent from object's character, imitate the texture of woven fabric that wraps around their body."* By the same token, she suggested that *"buildings - particularly those covered with coloured tile mosaics or glazed bricks - look as if they were encased in textiles."* This textile metaphor, as she calls it, was indeed *"in the mind of the people she found, corroborated by the inscription bands that ran along buildings."*<sup>40</sup>

*"We witness the profusion of textiles all over the Islamic world, and a metaphor of this kind would agree with the medieval mentality."*<sup>41</sup>

In her essay "the Draped Universe of Islam" Lisa Golombek compared architectural decoration to *"a piece of cloth that, like a free – flowing Mediterranean draped robe, was thrown over a building."* She also observed that in other cases *"it was like a fitted or tailored garment which was adapted to the building and, like a dress designed to set off the shape of the human body, used to underline its structure."*<sup>42</sup>

The textile metaphor also worked in the opposite direction. In this mode, an architectural ornament was translated into a carpet and textile pattern or a woven fabric, reflected or imitated a tile or mosaic or any other wall decoration. In parallel, the interplay of shapes, line, and colour of wall decoration was transferred to textile.

The textile metaphor may be explained as using fashionable designs for a multitude of purposes. The independence of ornament from the body, to which it was applied, may have been influenced by two main factors: The yearning for ornamental embellishment whose character depended on contemporary taste and fashion; and the Islamic enthusiasm for textiles. This last factor seems to have become the most culturally characteristic one.

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<sup>38</sup> Baer, Islamic Ornament, 115

<sup>39</sup> Ibid, 112

<sup>40</sup> Ibid, 113

<sup>41</sup> Ibid

<sup>42</sup> Ibid



Fig 1.62 - Leaning Tower and Wall – Karim Khan Citadel, 18th century Shiraz, Western Iran



Fig 1.63 - Qashqai kilim



### **Progress in Persian ornament, Conceptual Differences**

As a part of this thesis, I have tried to delineate the major changes which ornaments underwent over a long period of time in Iran. The differences between early and later methods of ornamentation are not, it would seem, a question of changing motifs or concepts. It is more a question of orders and the underlying ideology. *“The use of the script as a decorative element; the love for structures based on a geometric framework; the urge to fill any empty space with ornaments; or the notion of ornament as an independent art – form; these are concepts recognisable in different periods”* which – to differing degrees – were developed throughout Iran. *“The elements that did change were the individual motifs, their abstract, naturalistic or realistic character, the prominence given to one or the other, and the spirit in which they were interpreted.”*<sup>43</sup>

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<sup>43</sup> Baer, *Islamic Ornament*, 40



Fig 1.64 - Azadi Tower, Designed by Hossein Amanat, 1971, Tehran, Iran

## The Change of Taste, the Emergence of Style

The downfall of the Safavids and subsequent rise of the Qajars in the late eighteenth century coincided with the dawn of new styles of artistic expression in Iran. The traditional style of architecture was replaced with a hybrid form combining long-established Iranian motifs and their corresponding European prototypes. Similar to architecture, traditional ornament was not safe from Iran's wind of change during the late eighteenth century, a fundamental change in past aesthetic conventions which formed the new hybrid modern style. Ornament gradually became something which belonged to the past. Late Safavid kings regarded ornament as an object of beauty which, in their point of view, was a concept pertinent to taste and not necessity or function. Thus, the application of architectural ornamentation was limited to mere applied decoration, lacking either its metaphorical meaning, or reference to the structure it covered.

As the newly established Qajar government (1785 – 1925 AD) developed its communication with other countries – especially Europe and Russia – subsequently the traditional art was influenced by the older and more contemporary European styles of art. Buildings constructed at the end of the eighteenth century were catalogues of conventional motifs and figures borrowed from other art traditions. Ornamental elements occupied a large portion of their facades, though; they were devoid of any symbolic meaning.

The new political capital of Iran, Tehran, was the locus of all change. In some public buildings composed with the hybrid style; plans and spatial arrangements were designed according to fashion but façades were still traditional and embroidered with decorative motifs.

The twentieth century for Iran was marked by a number of revolutions<sup>44</sup> and reforms, which contributed to an aesthetic 'turning away' from the realities of

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<sup>44</sup> The Persian Constitutional Revolution took place between 1905 and 1907. It led to the establishment of a parliament in Persia. Weakness and extravagance of the Qajar kings continued during the brief reign of Mozaffar al - Din Shah (1896 – 1907). He often relied on his chancellor to manage his decentralized state. His dire financial situation caused him to sign many concessions to foreign powers, on an expanding list of trade items ranging from weapons to tobacco. The established noble classes, religious authorities, and educated elite began to demand a curb on royal authority and the establishment of the rule of law as their concern over foreign, and especially Russian, influence grew. Consequently, the old order, which Nasser-al-Din Shah Qajar had struggled for so long to sustain, finally died, to be replaced by new institutions, new forms of expression, and a new social and political order. The Revolution opened the way for cataclysmic change in Persia, heralding the modern era. It saw a period of unprecedented debate in a burgeoning press. Many different groups fought to shape the course of the Revolution, and all sections of society were ultimately to be in some way changed by it. The system of constitutional monarchy created by the decree of Mozaffar-al-Din Shah that was established in Persia as a result of the Revolution ultimately came to an end in 1925 with the dissolution of the Qajar dynasty and the ascension of Reza Shah Pahlavi to the throne.

Iranian Islamic Revolution refers to events involving the overthrow of Iran's monarchy (Pahlavi dynasty) under Shah Mohammad Reza Pahlavi and its replacement with an Islamic republic of Ayatollah Khomeini, the leader of the revolution. The revolution produced profound change at great speed and replaced a monarchy with a Theocracy based on Guardianship of the Islamic Jurists. Its outcome the so-called Islamic Republic was actually another sultanate, this time under the guidance of an extraordinary religious scholar which caused a long period of lapse and regression started with the war between Iran

political and social fragmentation, and movement towards national revivalism and modernism. The early twentieth century revealed certain emerging trends in Iranian architecture; a kind of remedy that from the past that was often considered the national style. The trend formed following a kind of nationalism in Iran, and its reflection in architecture was seen as a way in which elements of ancient Iranian architecture could be reintroduced. A group of intellectuals, mostly educated in Europe, established a society to move Iran forward and keep pace with Western European countries. At the same time they wanted to preserve the cultural and artistic heritage of the past. Hence Modernism and Nationalism were the main approaches taken and developed by authorities and 'the Society of architects' under the king's sway. Due to Pahlavi's nationalist tendencies, ornamentation was reintroduced through public building projects and edifices celebrating key historical characters. Within such buildings ornament was treated as a medium to conjure up images of the past and was no longer an essential element integral to structure, neither a cloth to cover its body.

In spite of Pahlavi, his authorities, and the Society's attempt to revive and continue ancient motifs and figures, ornament could not reach its previous high point; its eminence was demoted to inferiority, and as it remained as a 'surplus' added to merely decorate the body of architecture, it was relegated to being merely a decorative feature. By the end of the twentieth century and the rise of the Islamic regime, the function of ornament was confined to commemorating the spirit of certain periods in the past, and to symbolizing specific Islamic values imposed by the authorities the public, irrespective of collective taste.

For the following chapter, due to the very notion of transition which happened both in idea and practice in Iran over the last two centuries, I will be focusing more on the movements and ideologies which revolutionized the earlier definition of ornament and effected a change in society's taste. I introduce this section of my research by presenting an overview of modern Iranian society and the politics of its birth, and then offering a critical analysis of its political underpinnings and aesthetic ends in hopes of revealing certain aspects of the larger cultural context from the late eighteenth century onwards. Moreover, I have tried to lay bare the intrinsic ties between the conception of "high" culture and manufacture of political legitimacy, between the definition of "good" taste and the claims of ideological discourses, and ultimately, between Iran's modern architecture and Iranian struggle with modernization.

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and Iraq and ended in the current critical situation and its disastrous consequences the Iranian society suffers.

## Qajar

Primarily in the early Qajar period (1794 – 1925 AD), like other arts and social phenomena in Iran, architecture was affected by impulses and trends within the community; its evolution was endogenous and enjoyed a slow but steady progression in accordance with other arts and disciplines in society. The development of contemporary architecture in Iran can be traced back to the Safavid era (1301 – 1736 AD). The Safavids fostered closer diplomatic ties with the European powers in order to cement an alliance against the Ottomans, resulting in European cultural influences penetrating the country. In the late seventeenth century, the imprint of European painting, such as the use of perspective, the thick-foliaged trees, and the shaded hills appeared in the style of certain Persian artists such as *Muhammad Zaman*.<sup>45</sup>



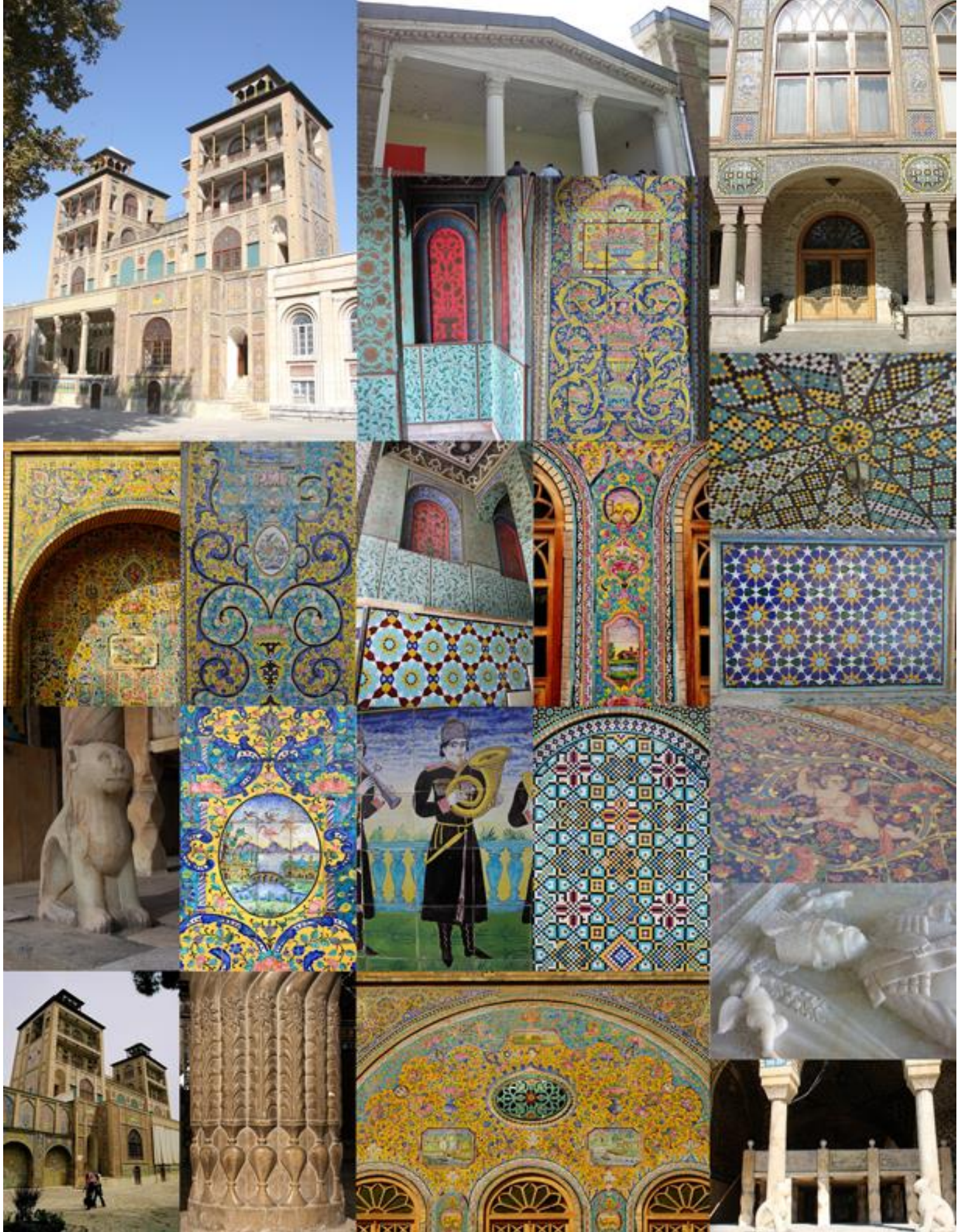
Fig 1.65 - (right) Playing Chess in a Persian miniature painting of Bayasanghori Shahnameh made in 1430 AD. Perspective emerged and Persian miniature transmuted in a way that depicting distance and depth superseded the different plots and sub – plots within the same space of the picture.

Fig 1.66 - (left) Leaf from a Shahnama, 1696 AD; Safavid Attributed to Muhammad Zaman, in this painting he has practiced the use of perspective.

<sup>45</sup> Safavid calligrapher and painter, died 1700 AD

By the mid – seventeenth century, gradually other visual arts such as tile and plaster work adopted the artistic practice and tastes of Europe, and as their usage became more common in architecture and ornamentation. Later in the same century, following the very presence of ambassadors, diplomats, and in special cases, assignments from Russian and Ottoman religious commissioners, some elements of Persian architecture and its features were subject to transformation due to an unquestioning imitation of work from territories.

The rapid and widespread adoption of European architectural influences proceeded into the eighteenth century and was encouraged by Qajar kings, especially *Naser Aldin Shah*. As more decorative elements and motifs were borrowed from the West, a growing awareness of the country's technical and social backwardness was the cause of the social frustration that lay behind movements to pull the country out of its state of underdevelopment. Some people offered alternatives through a comprehensive emulation of the Western culture. This trend, along with the variety – seeking and pride of grandees and courtiers, encouraged the import of architectural elements from the West, such as decorative pediments, column capitals, window frames, portals, and in later stages, combinations of masses and architectural plans.



## The Hybrid Style

Imitation of European architecture continued until the fall of the Qajars and several buildings with foreign designs were built in Tehran, the contemporary capital of Iran. During its period of rapid growth between the end of the nineteenth century and the beginning of the twentieth century, the image of Tehran was changed by increasing Western influence. Lord George Curzon wrote in 1892, "*in a word, we are in a city which was born and nurtured in the East, but is beginning to clothe itself at a West End tailor's,*" an observation of its gradually corroding oriental character. The architectural image of the new types emerging from contemporary representation was defined by returning to the traditional language, revealing the ambiguity of a city hovering between East and West.<sup>46</sup>

Between the 1896 assassination of Naser al – Din Shah and Reza Shah's 1926 coronation, select monumental structures emerged in Tehran that displayed a stylistic and morphological synthesis of Achaemenid, Sassanian, imperial Roman, Italian Renaissance, and Islamic artistic traditions. Most Qajar structures in Tehran emphasized the street facade.<sup>47</sup> Buildings designed and erected during this period are indicating the variety of choices in combination in the decorative programs, and the use of a range of construction materials such as brick, tile, marble, and wood.

The three architectural examples presented here capitalized on the political potency of architectural declarations in the characteristically personalized Qajar society to express an ideological message of change. The plea for political reform was often signalled by these strategically located buildings with their rich facades and interiors, for their patrons were well aware of the fact that in Qajar Iran the private taste of the king and aristocrats often dictated the taste and style of the general public.<sup>48</sup>

Fig 1.67 - (previous page) by Author, fragments of the Golestan Palace the official residence of the royal Qajar family, 1865, During the Pahlavi era (1925 – 1979) Golestan Palace was used for formal royal receptions.

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<sup>46</sup> Ludovico Micara, "Contemporary Iranian Architecture in Search for a New Identity", *Environmental Design: Journal of the Islamic Environmental Design Research Centre* 1 (1996): 52 – 91

<sup>47</sup> Application of new technologies and using some of its manifestations had an important role in the development of architecture and urbanism during the late 19th and early 20th century. Advent of automobiles, the City Planning Map, and dividing urban lands into smaller lots and patches in a way that often a piece of the front was along the main street or an alley, are reckoned to be causes of transformation of architecture and urban planning.

<sup>48</sup> Grigor "Orient oder Rom?", 562 – 590



## Hassan Abad Square

To the northwest of Naser Khosraw Avenue are located the four commercial buildings forming Hasan Abad Square, popularly known as Eight Domes Square. These mixed a use of local materials and artisanship with distinct Neoclassical features typical of Italian Renaissance architecture that reveals a finely tuned appreciation of local and imported artistic ideas, symbolizing a new kind of upper-class taste, prominently displayed at the heart of the capital city. Construction of the four structures, designed by the Armenian-Iranian architect Galich Baghlian, probably began before World War I. These identical, curved buildings encircled Hassan Abad Square, novel for their eight cupolas and roof treatment and their balustrades, as well as the circular urban space that they formed.

Two tiers of large windows and a continuous succession of arches run along the facades of all four buildings, punctuated by main entrances at the center, which lead to the shops and offices on the upper levels. The arches on the lower level link to each other and are flanked by engaged Ionic columns. Unlike their Italian models, these were assembled from multicolored local brick instead of stone. On each facade, the two storeys are distinctly marked by string-courses, terminating in eight discernible corners. Each corner is flanked by four pilasters, while the inner facades are decorated with thirty-two Palladian windows, also known as Venetian windows, or *serliana*, composed of a central arch flanked by two narrow rectangular openings. This Iranian appropriation of the *serliana*, however, was not applied without minor modifications, including: replacement of the human head with a keystone, ornamentation of the Ionic column capitals, simplification of the balustrades, and highly innovative and skillful use of brick as both construction and decorative material.

Hasan Abad Square, neglected during most of the Pahlavi era, was in a terrible state by the time of the Islamic Republic. While today the ensemble is considered one of the best examples of (European) influence on Iranian architecture, it is also one of the most refined cases of the type of architecture whose adoption challenged and shifted the very terms and meaning of the loan.<sup>49</sup>

Fig 1.68, 69 – (next page) Panorama view showing four structures surround the square

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<sup>49</sup> Grigor "Orient oder Rom?", 562 – 590





Fig 1.70,71 - Details of the facade

### **Narenjestan and Afif – Abad Palaces**

By the turn of the 18th century, the artistic expression of a new historical consciousness surfaced more clearly in Qajar aristocratic residential houses outside the historic city of Shiraz. A popular example in Shiraz is the Narenjestan, which borrows its decorative program from Persepolis and its general morphology from Achaemenid palaces with an amalgam of Islamic craftsmanship, tile work, and landscape design. Similarly, the Afifabad Palace was inspired by Achaemenid palace typology, with a blend of Sassanian and Achaemenid royal icons.

The Afifabad reproduction was copied at a site much closer to home with a procession of archers on the stairway of the Palace of Darius at Persepolis, only a few miles from Shiraz. The interior Achaemenid and the exterior Italian Renaissance replicas were in turn incorporated into a rich blend of Islamic architectural elements: decorative stucco squinches, wood inlay work for which the city of Shiraz is renowned, and Safavid-style mirror work.

While novel in their composition, vocabulary, and social meaning, these two cases all reveal a commitment to the continuity of Qajar architectural constants, such as emphasis on exterior facades, employment of familiar architectural elements, embellishment of "overpowering richness", and urban setting as a signifier of power and class. These reproductions do not qualify as simple, imitations; their effectiveness in synthesizing pre-Islamic, Western, and Islamic traditions has rendered them original works of the late Qajar era.



Fig 1.72, 73 - Narenjestan palace, Shiraz, Iran





Fig 1.74, 75 - Afif Abad palace, Shiraz, Iran





## Pahlavi

The fall of the Qajar dynasty in 1921 and the rise to power of Reza Khan, who founded the Pahlavi dynasty in 1925, marked a radical turning point in Iran. The complacency of the late Qajar rulers was replaced by rapid acceleration towards modernization and secularization similar in many respects to Ataturk's reforms in Turkey. It can be said that modern architecture was imported to Iran during the reign of Reza Shah and was carried out using two different approaches. The first involved the shah's pursuit of modernization and grandeur expressed in buildings and important institutions, reflecting the forms of Achaemenid and Sassanid architecture. *"The noticeable associations with the pre-Islamic culture of Iran epitomized the revivalist vision of the early Pahlavi elite, who were implementing a program of inventing imagined historic links and generating collective nostalgia of pre-Islamic Iran."*<sup>50</sup> The second approach was represented by a group of architects who had been trained in Paris, Vienna, Brussels, and London and imported into Iran a new language that broke all links and continuity with the past.

## Modernity and the Rise of Nationalism in Iran

Looking at Western practice in modern architecture reveals the extent of a dominant ideology rooted in a succession of cultural and social events, but when we examine modern architecture in Iran, we find that Iran's modern architectural production was promoted and financed by the local aristocracy and intelligentsia in practice. The first spark of modern architecture was ignited by the group of Iranian architects educated in the West, who were indifferent to Islam and diverged in their social and religious concerns. Vartan Hovanesyan and Gregorian are known for such practices. Another group are the graduates of the French École Nationale Supérieure des Beaux-Arts, people like Foroughi, Simon Ayvazian, and Abd al Aziz Farman Farmayan who participated in the development of modern architecture already created by the first group.

*"This architectural investigation brings to the fore the now-lost ties between Europe's struggle to define and shape a universal architectural canon and the outcome of such undertakings on Iran's architectural eclecticism from the 1900s to the 1920s, which was eventually co-opted into a purified national style from the 1930s onward."*<sup>51</sup>

Fig 1.76,77, 78, 79, 80 - (previous page) Afif Abad palace, interior details

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<sup>50</sup> Ludovico, "Contemporary Iranian Architecture", 52 - 91

<sup>51</sup> Grigor, "Orient oder Rom?", 562 - 590



Under the orders from Reza Shah a group of political elites and Iranian architects educated in the west gathered at some point in 1921, and later spontaneously formed a cultural assembly called *'the Society of National Heritage'*<sup>52</sup>. Their method of cultivating and naturalizing the new characteristics of modernity persistently intersected with their concern over collective memory, public space, and the cultivation of cultural taste – all of which were formulated along western lines.

In lectures and writings, the concept of 'zawq' – translated as the mixture of 'taste,' 'elegance,' or 'verve' – was to be 'rediscovered' and 'reclaimed' through a national artistic 'spirit'; intrinsically 'pure' and 'authentic'. In this 'spirit' of revivalism and modernization, public landmarks were the most potent signifiers of 'good taste,' at the same time the symbols and products of the dynamics of political power in modern Iran.

The series of landmarks erected by the SNH would serve as a platform to implement radical reforms. Their vision of a cultural revival of ancient Iran was to be fulfilled by the use of pre – Islamic prototypes and icons in new landmarks. Reza Khan was also instated as the honorary director of the SNH; The Shahanshah paid particular attention to the protection and care of ancient Iranian heritage because it reminded him of the glorious periods of Iran. By 1926, the Society was fully prepared to begin its civilizing mission of cultivating 'good taste.'

*"Yet, art is a vital necessity of life for the nation....The government and people together must do everything possible to bring art again to life in Persia. The heights reached by Iranians in the past must be scaled again...."*<sup>53</sup>

By 1932 the neo – Achaemenid and neo – Sassanian styles had reached full maturity, with increasingly accurately proportional and decorative details. Architects were mostly inspired by Persepolis and Ctesiphon. Columns, capitals, portals, carvings, inscriptions, and arches were of interest to architects as a resource for traditional detailing. The Iran Archaeological Museum built in 1937 signifies the unique oval arch of the great porch of Ctesiphon and features some of the ornamental elements the great old building displays on its facade. It also is noticeable that contemporary buildings which were inspired by ancient architecture also advertised specific features of traditional Iranian architecture. Using a variety of ribbed arches in buildings such as the Police Headquarter and the Central Post Office created an Islamic – Iranian identity in the simplest form possible, so that many of the citizens did not feel alienated by these buildings.

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<sup>52</sup> The cooperation of the political elite and founders of the SNH dated back to before Reza Khan's 1921 coup, their zeal for modernization having been shaped by the Constitutional Revolution of 1906 in their formative years. Its aim was to preserve, protect and promote Iran's patrimony. During the ensuing fifty eight year, until the dawn of the Islamic Revolution, the SNH erected approximately forty mausoleum complexes, carried out over sixty preservation projects, and created a National Museum as well as a public library in Tehran. Its artistic and ideological scope was, no doubt, unprecedented in the cultural history of Iran and was bolstered by its publications, lectures, exhibitions, and contribution to the tourist trade. Each of its undertakings represented the general project of Iran's modernity, identified by political historians as the "New Order" or the "New Iran."

<sup>53</sup> Arthur U. Pope, *Introducing Persian Architecture*, (Oxford: Oxford University Press, 1972), 56



Fig 1.81 - complete view of the Ctesiphon



Fig 1.82 - Built in the 1930s, the National Archaeological Museum in Tehran



Fig 1.83 - the great porch of Ctesiphon

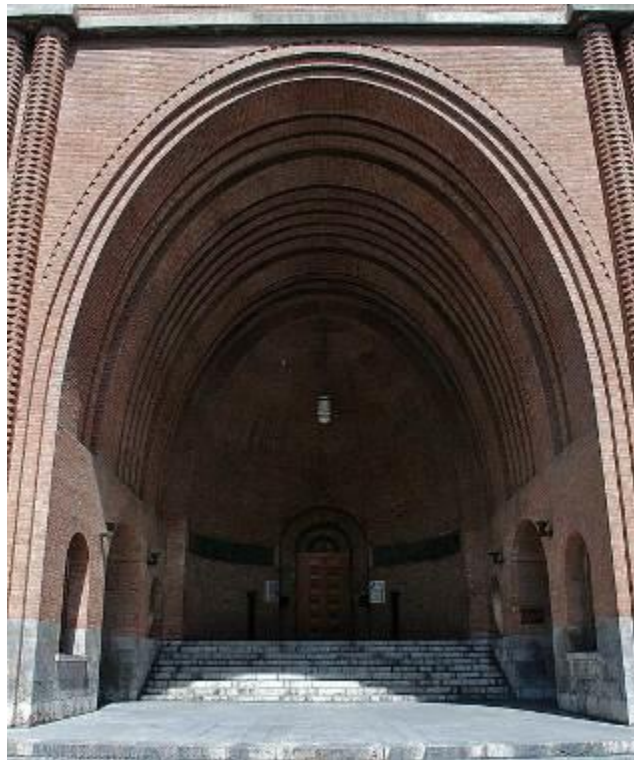


Fig 1.84 - the unique oval arch of the archaeological museum of Iran adopted from the great porch of Ctesiphon



Fig 1.85 - Iran Police Headquarters (Shahrbani) in Tehran, Pahlavi era



Fig 1.86 - The Central Post Office in Tehran, Pahlavi era

Beside their aesthetics, architectural icons were pivotal to the larger task of reminding and reviving the nation. Therefore, the continual process of depicting the past was not only projected as sets of forms that could be renewed, but also as a vivid collective memory that must be reawakened. This course of awakening was manufactured through material mimicking of past objects with conspicuous reference to prominent influential figures such as Persian scientists and poets.<sup>54</sup> Dead poets and scientists like Ferdowsi, Hafiz, Avicenna, Saadi, and Omar Khayyam were promoted amongst modern Iranians, telling them what they 'really' wished both for themselves and the nation. The contemporary discourse of reawakening set a trend of the destruction and reconstruction of graves for subsequent historical figures (as in modern history) – all of them had something to say about the form of their resting place. Architecture conditioned the revival of historical impossibilities. Mausoleums served the Pahlavi's political aims well. They implied presence of a 'great hero' – if there was a tomb, therein must rest a hero. This habit of talking to dead people and being 'spoken back to' became an institutionalized practice, inherent within the production and meaning of the SNH's new mausoleum complexes.

Fig 1.87, 88 - (next page) Tomb of Hafez, Shiraz, Iran

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<sup>54</sup> Talinn Grigor, *Building Iran: Modernism, Architecture, and National Heritage under the Pahlavi Monarchs*, (New York: Periscope Publishing Ltd, 2009), 35





## Tomb of Ferdowsi

*"To plunge the depths of modernization by turning to architecture might come as no surprise, but to do so by circumambulation of the tombs of the great Persian poets was an ingenious twist."<sup>55</sup>*

While dividing the stages of Iranian cultural development between the Achaemenids, Sassanids, and Safavids, the historic narrative of the SNH, nonetheless, revolved around one man, the highly revered tenth to eleventh century Persian poet, Ferdowsi. All the SNH members as well as the king recognized that national buildings and monuments were not limited to old buildings, inscriptions, and sculptures. For example, the true symbol of Iranian heritage is the Shahnameh, Ferdowsi's masterpiece, the country's greatest poet. The historic figure had *"toiled to revive these nationalistic aspirations"* and deserved a resting place *"worthy of his greatness"*<sup>56</sup>.

Ferdowsi's resting house was designed based on the Tomb of Cyrus, the great Achaemenid king at Pasargadae. The idea of linking Cyrus, a ruler with an empty tomb-chamber, to Ferdowsi, a poet with a forgotten tombstone was remarkable. The tomb was a stepped hollow cube clothed in pure white marble and engraved with poems from Shahnameh. The plausible explanation for the use of the white stone was the evocation of Ferdowsi's 'extremely pure' language because *"Arabic loan words are less than five percent"*<sup>57</sup> of the words used in Shahnameh. The architectural language was novel and characterized the Persian rhetoric with pure and 'uncontaminated' white stone, with its revivalist Achaemenian and Zoroastrian ornamentations and prototypes, and its selected inscriptions from Shahnameh. The Tomb of Ferdowsi was indeed a cultural expression and material encapsulation of ancient history and modern progress as well as taste and civilization based on the amalgam of archaeological fragments. In SNH's staging of the modern, modernity was represented as literary, secular, and monumental; turning *"folklore into history"*<sup>58</sup> and reorienting the popular storytelling rituals surrounding Ferdowsi's Shahnameh into a masterpiece made for exhibition in the modern world.

Fig 1.89, 90- (previous page) Tomb of Khayyam, Nishabour, Iran

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<sup>55</sup> Grigor, Building Iran, 34

<sup>56</sup> Ibid, 35

<sup>57</sup> Ibid, 36

<sup>58</sup> Ibid, 37





Fig 1.91 - Tomb of Ferdowsi, Tous, Iran



Fig 1.92 - Tomb of Cyrus (Pasargadae), Shiraz, Iran

Fig 1.93 - (next page) the opening verses from Shahnameh engraved on a wall of Ferdowsi's tomb



بنام خسته او ندبان و نرد  
کزین برتر اندیشم برنگد زده  
نهادم کسبان کردان سپر  
فرزنده ناه و ناپید و مسنه  
ز نام دشمن دکان برتر است  
نخترنده بر شد و گوهر است  
یکی نامیده از که باستان  
فراوان و اندرون آستان  
پراکنده در دست هر موبدی  
از او جسمه و بر او هر بزرگی  
یکی سپه بان و دستان شاد  
دیو و بزرگ و فرزند مستم شاد  
پروین است روزگار خفت  
گدازه سخت است بر با خفت  
زهر کشی موبدی سپه نورد  
سپه در دو این نیکه اگر کرد  
پس سپه نشان از راه کمان  
وزان نام از آن مستنج کمان  
گرستی با ناز چون آشفته  
که ایرون با نوا برنگد آشفته  
چو سپه آمد بر نیک آفری  
برایشان بره و رنگد آوری  
بخت پیشین یکا یکت ملان  
شاهی شاهان نگشت جان

Modern historical monument reconstruction projects not only initiated a new set of aesthetics, but also a novel definition and function given to public symbols, spaces, and practices in contemporary Iran. The revival of material traces (restoration) of Pre-Islamic dynasties laid the ground for the much broader project of collective memory. Moreover, the systematic, state – sponsored use of ‘memory’ was imposed by the elite as an integral part of the modernization process. The SNH’s various attempts at reviving selected decorative and morphological elements from Achaemenid and Sassanid artistic repertoires underpinned the ideological assumption that an existing collective memory had been forgotten by the modern masses. It was also presumed that the secular elite carried the responsibility to reanimate that memory. The resulting architecture could be read as the official visual vocabulary of the nation-state; it was stripped of its Renaissance and Islamic elements, while the Achaemenid and Sassanid features were refined and perfected. Until the dawn of the Iranian Revolution of 1979, the official architectural vocabulary of the Pahlavi state was deeply affected by these early models of visual hybridity and revivalism.<sup>59</sup>

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<sup>59</sup> Grigor, “Orient oder Rom?“, 562 – 590

### **Prevalence of “good taste”**

The Persian learned milieu had a propensity to master the Western modern architectural language and inflect it with their variations. The style established by the foundational architects behind the Society of National Heritage (1948) showed an unconstrained capacity for blending elements of the modern architectural lexicon with materials and forms taken from the Persian architectural tradition. Their tomb designs dedicated to Avicenna and Khayyam reveal the delicateness of the Persian spirit. The same genre of mausoleum dedicated to great Persian poets and thinkers – Ferdowsi, Hafez and Saadi – also provided the opportunity for an abstract reinterpretation of archetypes, producing timeless symbols and vivid imagery.

Beginning in the second half of the twentieth century, the intuitive approach towards history, which drew on images derived from important monuments, was replaced by a more expressive and liberated interpretation of historical spaces in an urban context. Designers did not hesitate to inflect the models of the past in order to make them expressive in contemporary cities. This inflection allowed for delicate structures and forms to be adapted to requirements of the present while preserving precious historical images.

The Persian pavilion at Expo 67 in Montreal and the Azadi tower are two of the most influential contemporary figures in Iranian architectural practice which reflect a subtle and genuine approach toward tradition. It can be similarly understood for the two monuments that, the primary values of architecture rather than the forms are brought into evidence, defining a more intellectual and abstract idea of tradition. In their design, aesthetic concepts and procedures typical of instances of past architecture are reverted. Their creators nevertheless have produced original solutions that reveal a great attention to detail for organizing spatial sequences, geometrical relations, and traditional elements between different spaces. The outcome is again a suspended and crystallized atmosphere with echoes of a distant, bygone era.

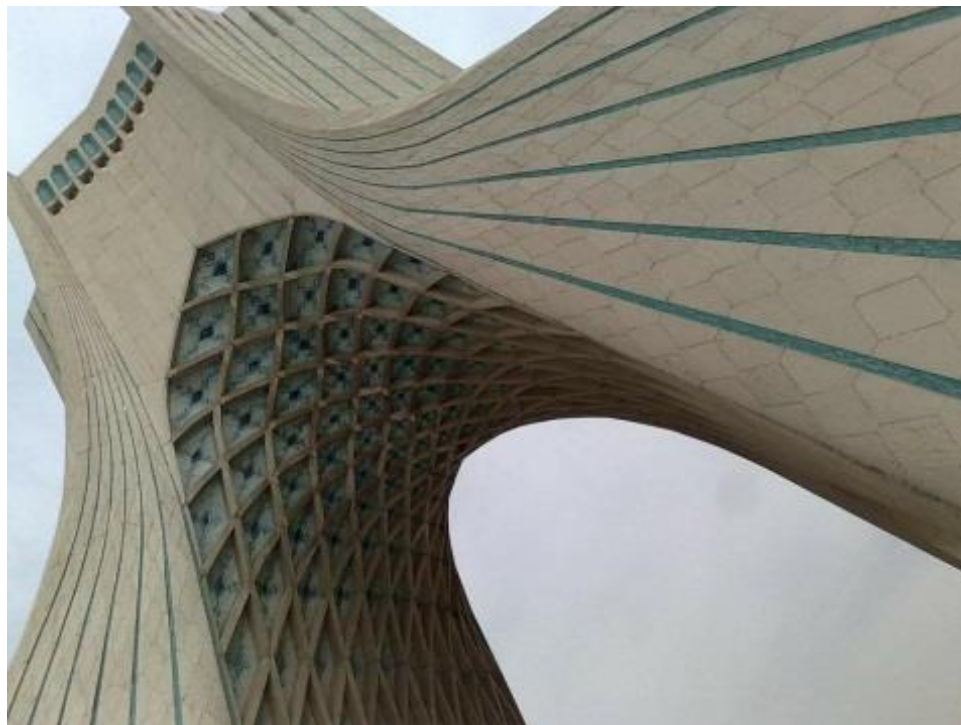


Fig 1.94, 95 - Azadi Square, Tehran, Iran

Azadi square is the symbol of Tehran. It was the site of many of the demonstrations leading to the Iranian Revolution on 12 December 1979 also the recent demonstrations against the current clerical and absolute religious leadership of Iran. The architect, Hossein Amanat, won a competition to design the monument, which combines elements of Sassanid and Islamic architecture.



Fig 1.96 - Persian Pavilion, Expo 1967 Montreal  
Despite its simple rectangular shape, the Iranian pavilion still endures as very pleasant and refined.



Fig 1.97 - Detail of the columns clothed with azure ties with arabesque pattern

This approach was new to the Persian panorama. The reflection on architecture of the past went through a metaphysical equilibrium between past and present attaining a remarkable originality and intensity. Searching for freedom of interpretation of historical spaces in an urban context, the designers did not hesitate to inflect the models of the past in order to make them expressive in the contemporary city.

Reviewing the main stream of architectural changes and its direct influence on the category of ornament in Iran for the past two decades, I certainly came to the conclusion that traditional ornament cannot be used in a similar way to the past. Social and cultural patterns have been transformed in a way that nobody thinks that remodeling past conventions would be simple and straightforward. Instead, we need an unavoidable search for strategies in design that allows the adaptation of delicate structures and forms to current requirements while preserving the precious image surviving from the distant past.

Analysis of architectural practices in Iran shows that despite the multiplicity, diversity and complexity of buildings, principles and patterns of a relatively limited set of forms have been used over time. Additionally, further development of ornamentation has been based on the evolution of these principles and patterns through the course of subtle, intelligent, and skillful action rather than consecutive re – creation.

Although these elements and patterns were each created in a certain period of history, but with continuous presence in the next period which culminated in their development and refinement, they have achieved an identity independent of time. Thus, capable of generalizing the concept of a pattern or element, ornament possesses the property of abstraction and carries heavy emotional content. If we accept that this quality is not time-independent, we are again allowed to use their method of abstraction today.

Hadi Mirmiran (1945 – 2006), an influential architect in practicing the intellectual and abstract idea of tradition explained this quality that could be achieved as soon as the given material is liberated from time and place by the process of abstraction.

*“The chosen models derived from traditional archetypes should be refined through a process of abstraction to the point where they assume a metaphysical aura and timeless quality. The composition of the elements does not draw on a precise historical period, but refers to the collective memory of Persian architectural tradition.”*<sup>60</sup>

Should the above quality be achieved, the cultural themes and concepts are not directly exposed to an atmosphere of creativity to become a work of art, but in a course of creative action, they may pass through a stage of abstraction so to become an artistic expression or idea. Then conscious efforts should go into substantiating that idea.

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<sup>60</sup> Shahrzad Mahdavi, “History and Memory Vanish from the Face of Tehran” *Memar* 73 (2012): 58 – 60

It is also important to note that the models typically used through the history of ornament (not only in Iran but globally) were not born from wit, nor from necessity, need, or logical function but arose from the considerable variety of cultural and intellectual products in different lands. Thus, by filtering concepts and cultural developments through a mental abstraction and transforming them into an ideal representation, new types of ornamental patterns would emerge.

In this regard, translating cultural models, concepts or artifacts into architectural language for the sake of ornamentation would be the inevitable corollary of this research. The use of architectural heritage is not restricted to principles and prototypes of traditional architecture, but can address culture on a broader scale with its concepts, myths, cultural content, and memories. These works of architecture benefit from other artistic fields such as poetry and literature for intellectual innovation in architecture. Concepts, myths, themes and other intellectual products share common meanings and connotations in many different cultures. Concepts dealing with general modes of living have been communicated in language as diverse as images in different lands. Thus, once we exploit our architecture to give effect to their embodiment; the artifact inevitably will attain a universal quality, particularly if the concept that forms a context for the work is related to human emotions.

The art of Persian poetry shared close ties with ornamentation. Classic Iranian literature in the framework of poetry tells the story of its culture. Literature has various dimensions, since it is affected by the time, location, and where it is imagined, told, and created. Literature may tell the stories as they happen, or try to explain through allegory the truths of its time which are not always told for fear of reprisals. An author may choose to express his understanding of the truth beyond the appearance of the events of his time and describe the cyclical story in a template that affects everything in his world.

The story of ornament is not an exception. After a period of research about the history of ornament in Iran, I found it to be closely linked with Nezami's story of Shirin and Farhad. Affecting forces that changed ornamentation in Iran was a result of the same story that was retold over thousands of years and Nezami has made that repeating story, a masterpiece that beautifully captured this history. The legendary story articulates historical events and also helps me to narrate them more eloquently.



## **CHAPTER TWO – THE STORY**



The romantic epic of Khosrow and Shirin is marked by the life and fortune of Khosrow, the Sassanid king, and an Armenian princess, Shirin. Khosrow Parviz was crowned in 590 AD and officially became the Shah of Iran. Whereas this love story is originally the ancient story of the Achaemenid prince Smerdis and Atoosa, daughter of Cyrus the Great, by error it was attributed to the time of the Sassanid King Khosrow Parviz. Chares of Mytilene<sup>61</sup>, Alexander's representative in Iran's court procedures, recognized Atoosa and Smerdis's story as the most popular romance fiction narrative among Iranians in the Achaemenid Era.

Smerdis was the son – in – law and adopted son of Cyrus whose rich political and cultural life came to an abrupt end with his assassination by Darius and his six governors' accomplices. Darius was considered the bearer of immortality, the character trait for which Khosrow Parviz the Sassanid King was celebrated. The character Shirin represents Atoosa, Cyrus' daughter, who became Darius' wife after her husband, Smerdis, was assassinated.

Smerdis is mirrored by Farhad (from Farahvartish, meaning angel) of Mount Behistoun, Shirin's Median rebel lover. The real Farhad, whose image is engraved on Mount Behistoun, did not commit love suicide, as was thought at the time, but was murdered by the hand of Darius.

Nezami Ganjavi (1141 – 1209) – born in the Azerbaijani city of Ganja – Persian poetry's great poets, preserved his poems about this epic love story for the benefits of future generations. He established a solid foundation in the narrating of love stories in the language of poetry and is considered the greatest romantic epic poet to have brought a colloquial and realistic style to the story of Shirin and Farhad.

Nezami is the one who first expressed love stories in poetry and in the Masnavi <sup>62</sup> form. He wrote his collection of poems about Khosrow and Shirin by tying theology, monotheism, and wisdom together with romance, fascination, and longing.

The following piece is part of the longer story of Khosrow and Shirin that narrates the encounter between Farhad and Shirin. It is divided into three episodes of Love, Longing, and Loss, each of which articulates the emotional dispositions of Shirin, Farhad, and Khosrow.

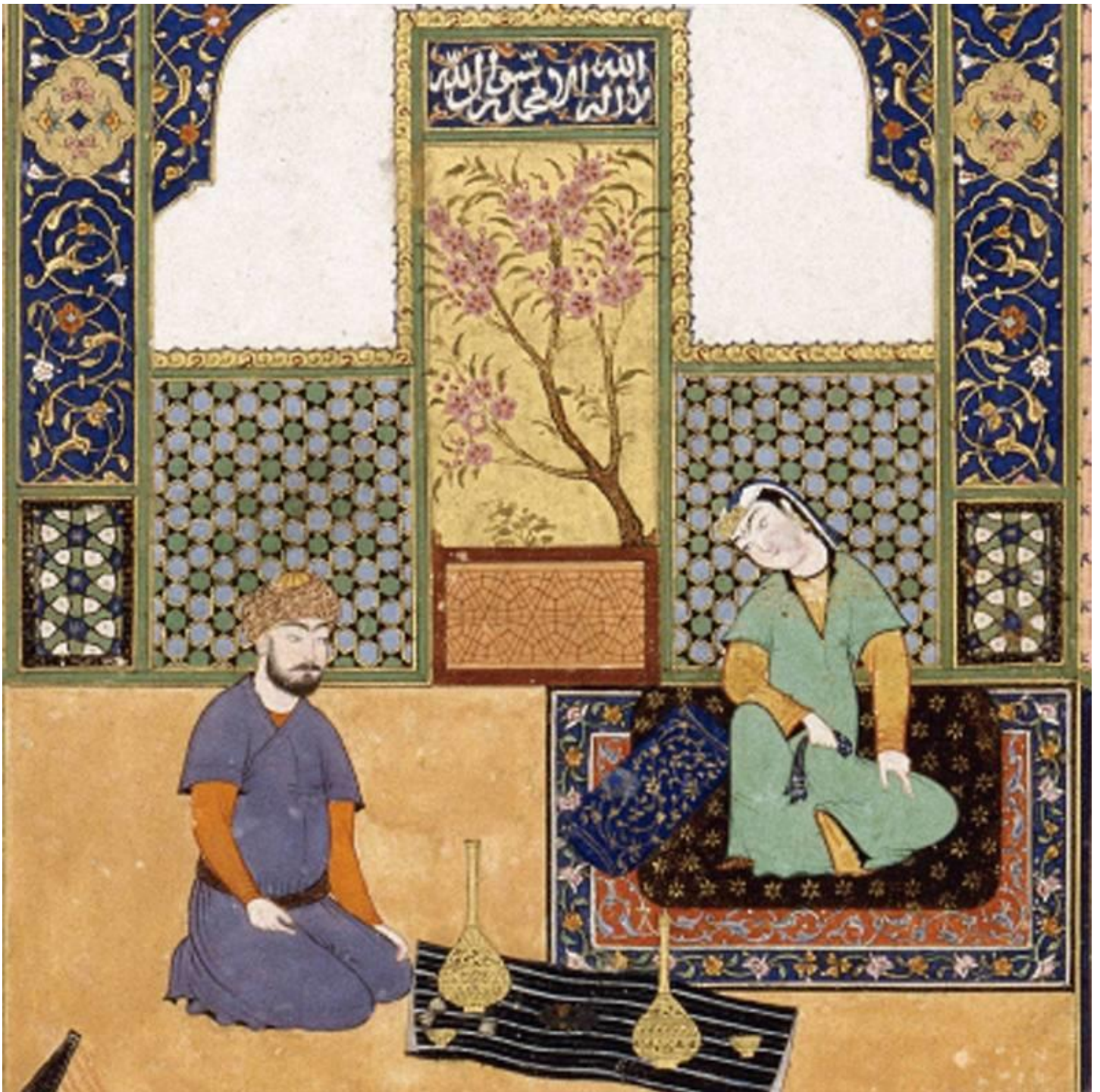
Fig 2.1 - (next page) Farhad meets Shirin

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<sup>61</sup> Chares of Mytilene was a Greek belonging to the suite of Alexander the Great. He was appointed court-marshal or introducer of strangers to the king, an office borrowed from the Persian court. He wrote a history of Alexander in ten books, dealing mainly with the private life of the king

<sup>62</sup> The title Masnavi-I Ma'navi means "Rhyming Couplets of Profound Spiritual Meaning." The Masnavi is a poetic collection of rambling anecdotes and stories derived from the Quran, hadith sources, and everyday tales. Stories are told to illustrate a point and each moral is discussed in detail. It incorporates a variety of Islamic wisdom but primarily focuses on emphasizing the introspective personal Sufi interpretation. This work by Rumi is referred to as a "sober" Sufi text. It reasonably presents the various dimensions of Sufi spiritual life and advises disciples on their spiritual path. "More generally, it is aimed at anyone who has time to sit down and ponder the meaning of life and existence."

Love



The story begins with the legendary Farhad, a humble stonemason and a lover who falls in love at the first sight of Shirin, the queen of the Armenians.

Farhad, a man celebrated throughout the East for his great genius was a man of modest social position; he was also an accomplished master in carving. He chiseled away at the hard rock of the mountain to engrave a magnificent palace on mount Behistoun. The Queen searched for the creator of this exquisite piece of subtle craftsmanship, and finally invited Farhad to her palace. A herald headed for the mountain from Shirin's palace asking for the master Farhad to invite him to her court.

Shirin's true love is Khosrow, the Shah of Iran, but they cannot join together officially as Khosrow has been married to the princess of Rome, Maria. Shapour, the current vizier of the shah of Iran and an old colleague of Farhad from the early years of scholarship amplified Farhad's genius and craftsmanship. Farhad and Shapour studied in the same school, as young scholars. Farhad pursued craftsmanship and became a sculptor while Shapour devoted himself to the court. Farhad chose to live austere and study mathematics and geometry in austerity while Shapour chose to serve the king.

Farhad presented himself to the court that evening. He suddenly felt overwhelmed from the moment that the Queen swept gracefully into the hall. He found himself confronted with an unbearable rush of emotions; all colour drained from his face; his Infatuation with the queen was evident in his look.

Farhad's feelings for Shirin were unrequited at first; she was only passionate about Farhad for his generosity and character. Yet unaware of Farhad's emotions, the queen proceeded to indulge the man by expressing her admiration for his artistry and complimenting his strong physique. His hands were big and rough, toughened by years of hard labour, trembled in response to her attention, revealing his true feelings.

Upon discovering this, Shirin implored Farhad to remain, a request which overwhelmed him and caused him to faint. The sturdy man was too much exhausted to prop his hefty body up on his wobbly knees. He collapsed at one look at the queen; that glance resulted in his subsequent longing.

Fig 2.2 - (next page) Folio from a Khusraw and Shirin by Nezami; Shirin visits the sculptor Farhad at work the picture shows Farhad's happiness after Shirin's visit, early fifteenth century



مهر را که در دلم نهاده بود  
آن خورشیدم بی غمتم آید  
بهری که گشت از آن من جانم  
بهر نودان گشتوانم در کجا  
بهر خورشیدم از آن که آمد  
بهر نودان که گشتانم از آن  
بهر نودان که گشتانم از آن

در خوشی و در غم و در دوری  
و در غمتم در نودانم  
بهر نودان که گشتانم از آن

## Longing

Farhad loved Shirin earnestly, but did not dare to reveal his love directly. Shirin would not respond to Farhad's deep, pure love – he knew that as an immutable fact. Farhad could not proclaim his undying love for Shirin, so he expressed his feelings through his hands. The hardest stone was a means of transferring the most delicate sensation, conveying the grandeur of his love through his sculptures. The warmth of his love warmed cold metal; his firm hands softened the hardest of stones. The great mass of rocks healed his agitated soul, and he suppressed his desires by hammering the stones and the hammer's sound when striking stone was an echo of his silent cry. He cut away pieces of the rock to carve the figure of his beloved Shirin.

*On lofty Behistoun the lingering sun  
looks down on ceaseless labours, long begun:  
The Mountain trembles to the echoing sound  
of falling rocks that from her sides rebound.  
Each day all respite, all repose denied.  
No truce, no pause, the thundering strokes are plied;  
The mist of night around her summit coils,  
But still Farhad, the lover-artist, toils,  
And still the flashes of his axe between.  
He sighs to every wind, "Alas! Shirin!  
Alas! Shirin! My task is well-nigh done,  
the goal in view for which I strive alone.  
Love grants me powers that Nature might deny;  
and, whatsoever my doom, the world shall tell,  
Thy lover gave to immortality  
Her name he loved---so fatally---so well!"<sup>63</sup>*

Inevitably, Khosrow's informants bring his attention to the presence of a stranger with Shirin whom people called 'the Master'. He is overcome with jealousy, and raves on about the betrayal of having Shapour's close friend pledge allegiance to love instead of to him. "How dared he love Shirin?"

The king plots to prevent Farhad from rising in the eyes of the public, summoning him to his court. He would not be appeased until Farhad was punished. Khosrow waits at Mount Damavand in northern Iran to ambush his rival. When Farhad finally arrives, Khosrow threatens to cut off his hands. He intimidates Farhad by retelling the tale of a young disobedient sculptor who has his hands cut off as punishment, left to resort to sculpting with his feet in order to survive. "It is a pity the artist's hands will be cut and fed to the dogs."

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<sup>63</sup> Charles F. Horne, ed., *The Sacred Books and Early Literature of the East* (New York: Parke, Austin, & Lipscomb, 1917), Vol. VIII: *Medieval Persia*, 105.

The king's intimidation does not frighten him. He confesses to carving Mount Behistoun to be ruled by the heart and not by the hands. "Hands are docile – nothing but serfs to carry out the heart's commands - and the heart is in total submission to the beloved, Shirin."

*Love is the altar of the vault<sup>64</sup>,  
Love gifts honour to the cult,  
World devoid of a Lover/honour is a land deprived of water,  
Who's deprived of love is withered,  
If one is still alive, but he is dead,  
Nothing is better than the passion of love in the world,  
Without love, no flowers came in to bud;  
No water/drops fell from clouds.*

Khosrow despised Farhad's affection for Shirin, calling his love a peasant's stale love story. Farhad insists his love is genuine; he is deeply devoted to Shirin. Khosrow wants an end to this game of love, dictating to Farhad that "you, liberate yourself from this love", a decree to which Farhad cannot abide.

"I am greatly enamoured by her," the king confessed. Farhad was not surprised by this confession, but merely perplexed the whole world hadn't been overtaken by her love yet. The king seethed with anger as his attempts to demoralize the stubborn man were fruitless. "What would you do if I look at her standing in the nude?" Khosrow uttered with barely disguised contempt.

Farhad sank into deep melancholy, responding despondently: "Your look burns as my grief does; this grief would finally smoulder the world." He went back to the mountains, surrendering to his love even more than before.

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<sup>64</sup>The throne of Khosrow II, the Takht – I Taghdis, that it was surmounted by a canopy made of gold and lapis lazuli, on which were represented the sky and the stars, the signs of the zodiac and the seven climates ... it also had a mechanism that indicated the hours of the day ... it is also surely not indicated that in the Persian language the term of the heavenly sphere – charkh – is tantamount to dome and to everything revolving in an orbit. It is the celestial wheel. By the same token, the dome (qubba) is in literature compared to the celestial sphere, and competes with it.



*A hundred arms were weak one block to move  
of thousands, moulded by the hand of Love  
Into fantastic shapes and forms of grace,  
which crowd each nook of that majestic place.  
The piles give way, the rocky peaks divide,  
the stream comes gushing on---a foaming tide!  
A mighty work, for ages to remain,  
The token of his passion and his pain.  
As flows the milky flood from Allah's throne  
Rushes the torrent from the yielding stone;  
And sculptured there, amazed, stern Khosrow stands,  
And sees, with frowns, obeyed his harsh commands:  
While she, the fair beloved, with being rife,  
Awakes the glowing marble into life.  
Ah! Hapless youth; ah! Toil repaid by woe  
a king thy rival and the world thy foe!  
Will she wealth, splendour, pomp for thee resign---  
And only genius, truth, and passion thine!  
Around the pair, lo! Groups of courtiers wait,  
And slaves and pages crowd in solemn state;  
From columns imaged wreaths their garlands throw,  
And fretted roofs with stars appear to glow!  
Fresh leaves and blossoms seem around to spring,  
And feathered throngs their loves are murmuring;  
The hands of Peris might have wrought those stems,  
Where dewdrops hang their fragile diadems;  
And strings of pearl and sharp-cut diamonds shine,  
New from the wave, or recent from the mine.  
"Alas! Shirin!" at every stroke he cries;  
At every stroke fresh miracles arise:  
"For thee these glories and these wonders all,  
For thee I triumph, or for thee I fall;  
For thee my life one ceaseless toil has been,  
Inspire my soul anew: Alas! Shirin!"<sup>65</sup>*

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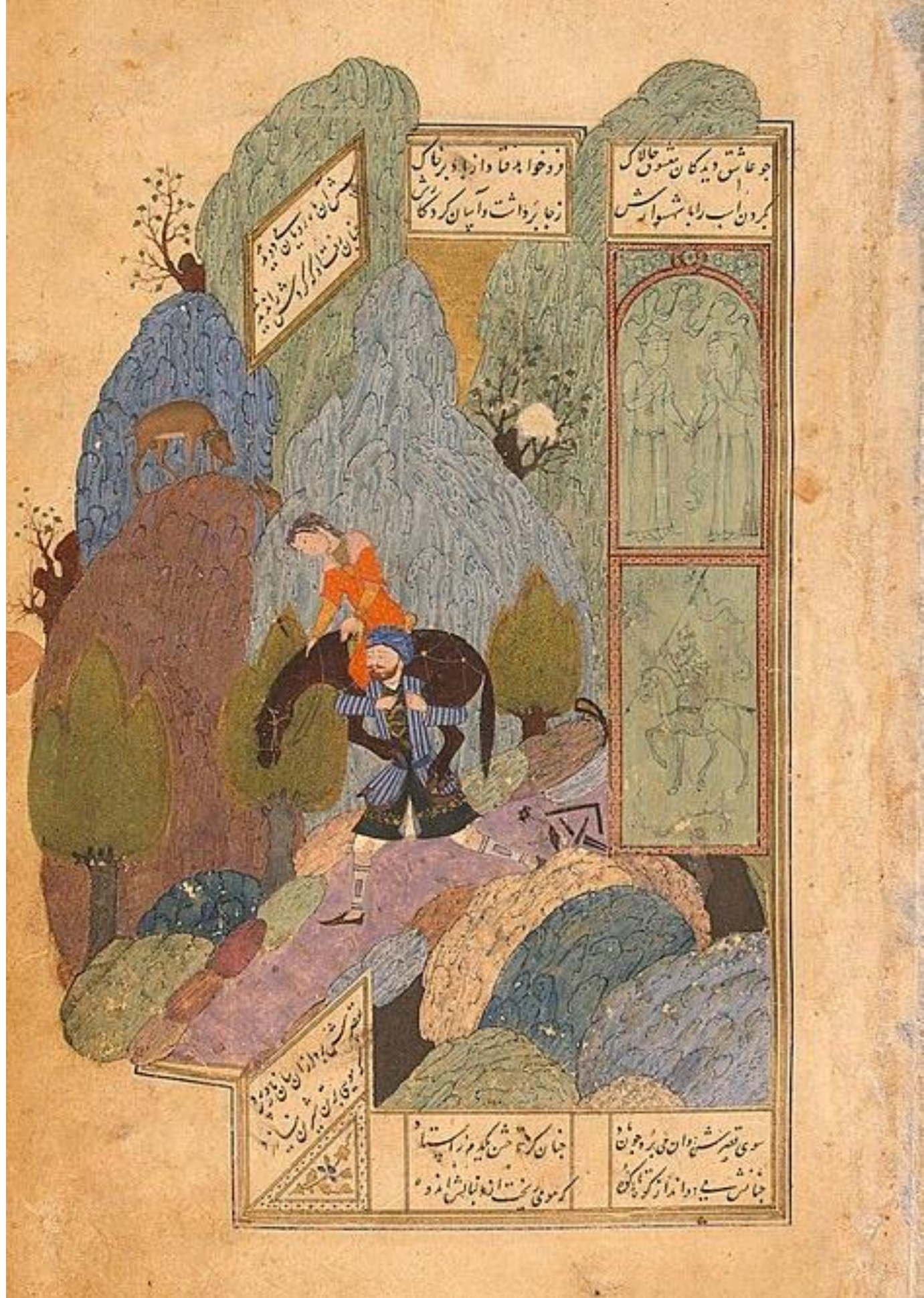
<sup>65</sup> Horne, the Sacred Books and Early Literature of the East, 106

Shirin would not forget the decent, kind, and velvet look of Farhad. His look was never bestowed on any other man at the time. She headed for the mountain, away from prying eyes, and encountered Farhad in solitude. The queen's thirst to know how his arm could battle hard rock and cold steel compelled her to approach Farhad. Farhad revealed his secret. "Enormous yearning for you has fired my imagination. In my mind's eye I picture you, and the iron gets warm; stone becomes softer than mud." She finds her statue in stone, looking back at her as she if she was looking in a mirror. Shirin is astonished by Farhad's magnificent artistry. Bewildered by her stone replica, all her facial features were elegantly captured by the carving, although the subject had only been seen once by its creator. "Eyes are blameless in this venture; your image is imprinted on my heart."

Suddenly the queen's horse grew restless; Farhad carried both the horse and Shirin on his back. Shirin was awed by the enormous strength of the man. "Sit tight on your own steed, the great *Bisotoun*<sup>66</sup> is anchored by your name; being devoid of you, *Behistoun* is not but ruins to the eyes of Farhad."

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<sup>66</sup>Local people call the mount Behistoun, Bisotoun; "bi" means without and "sotoun" means column in Farsi



جو عاشق و یگان مشوق خالاک  
 گردن آب رباب شسوار شش

زودخوا پر قفا و از یاد بر ناک  
 ز جا برداشت و آسین کرد گش

سختی آن در بیان دور  
 نماند آوارگی در کشتی



تیمش به از آن جان دور  
 که بوی برین نماند

جان کشته شن کیم در آستان  
 که موی برین نماند

سوی تیمش نه ان بی بر جان  
 جانش بی در انداز کرد بکن

## Loss

Impatient and worried of this love, Khosrow regarded Farhad as a threat to his greatness. He feared admiration for Farhad's talent; but Farhad's infelicitous love for Shirin and his aberrant behaviour of carrying her with her horse on his shoulders from the mountain to the city were to be unforgivable sins to Khosrow. Farhad's conduct was viewed as seditious by the King.

So the war loomed large between the king's heart and Farhad's axe. However, Khosrow's heart was harder than even the rocks Farhad would break with his axe. Khosrow approached Farhad this time; found him so lost in his own.

"I was sea dew drowning, asleep on the ground with plenty of shade; I began to fade when the sun appeared."

Enraged by Farhad's audacity, Khosrow schemed to drain him of any desire for Shirin by occupying his time with the construction of royal monuments. Farhad was summoned to the presence of the king, and commissioned by him to execute a work which would immortalize Khosrow's name. However, such a feat required almost superhuman powers. Any obstructions in the passage through the great mountain of Damavand were to be cleared- an impossible task due to the hardness of the mountain. Should Farhad successfully dig a flight of steps from the base of Mount Damavand's summit, Shirin was his.

Farhad countered that he would remove the very heart of the rock from the King's path; but on condition that the king keeps his word, Khosrow, certain the artist would fail consented to his terms.<sup>67</sup> While Farhad carved in Damavand, the highest peak in Iran's north, Khosrow ruled in Zagros, the Mountains in the west. Despite the difficulty of the task, Farhad's love for Shirin affords him the strength to complete it. Dismayed upon hearing of his success, Khosrow hatches a new ruse, plotted to eliminate his rival. This time, Khosrow captures a messenger and confidant of Farhad and convinces him to carry false tidings to Farhad of Shirin's death.

The messenger approaches Farhad from Mount of Ararat to the northwest of Iran, informing him of the death of the Armenians queen. Farhad collapses from grief over her death, "*Great Lady of the Armenians abandoned her throne to Iran, alas, and that Iran which was once the land of her dreams became her tomb.*"

Fig 2.3 - (previous page) Farhad carries Shirin on horse back

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<sup>67</sup> Horne, *the Sacred Books and Early Literature of the East*, 107

*What raven note disturbs his musing mood?  
 What form comes stealing on his solitude?  
 Ungentle messenger, whose word of ill  
 all the warm feelings of his soul can chill!  
 "Cease, idle youth, to waste thy days", he said,  
 "By empty hopes a visionary made;  
 why in vain toil thy fleeting life consume  
 to frame a palace? Rather hew a tomb.  
 Even like sere leaves that autumn winds have shed,  
 Perish thy labours, for Shirin is dead!"  
 He heard the fatal news no word, no groan;  
 He spoke not, moved not, and stood transfixed to stone.  
 Then, with a frenzied start, he raised on high  
 His arms, and wildly tossed them toward the sky;  
 far in the wide expanse his axe he flung  
 and from the precipice at once he sprung.  
 The rocks, the sculptured caves, the valleys green,  
 sent back his dying cry "Alas! Shirin!"<sup>68</sup>*

A false rumour of Shirin's death destroys Farhad's will to live; the mountain man of solitude eventually dies from the pain of the shah's deceit. "*Dies enamoured Farhad, Love dies forever.*"

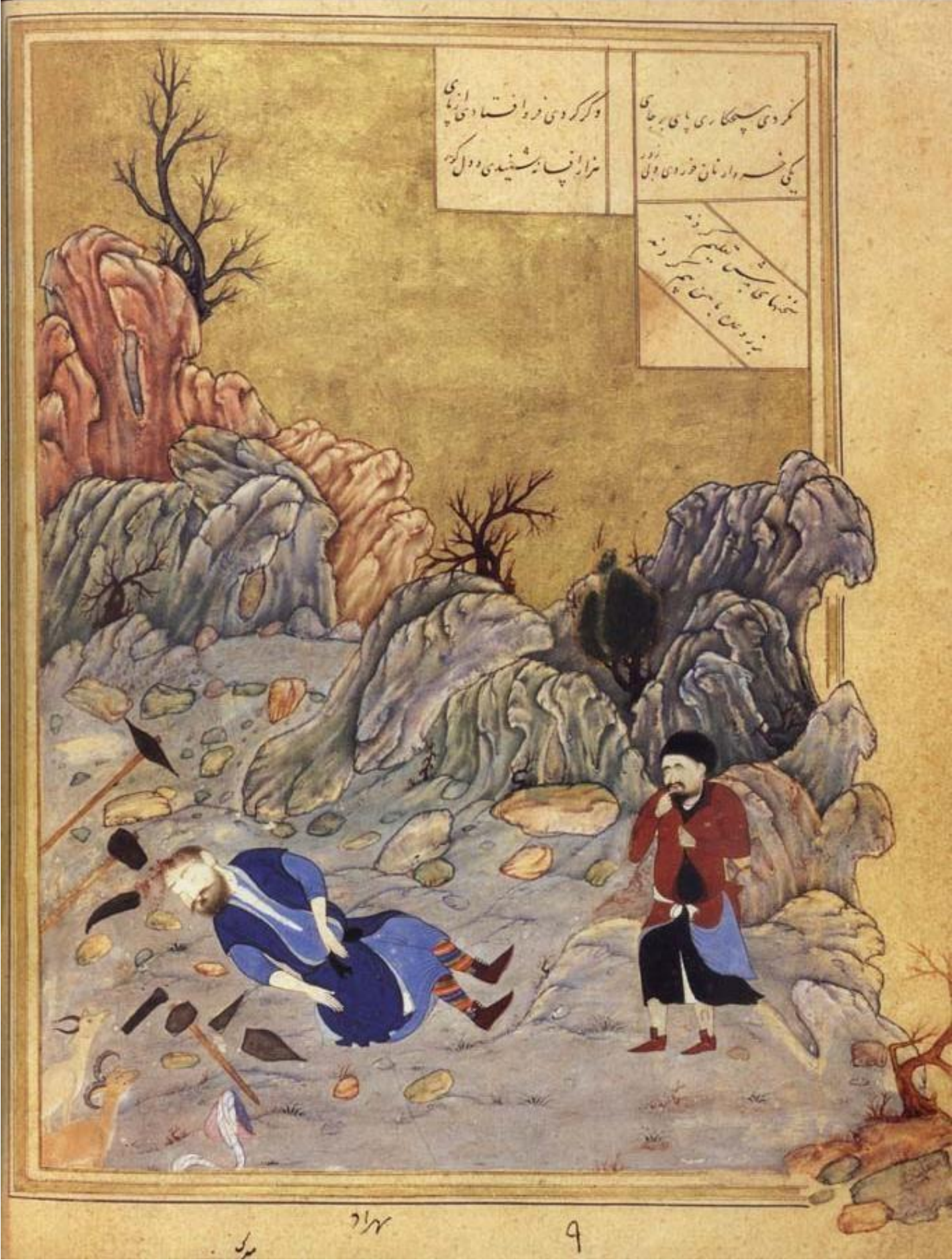
Farhad's axe handle is flung from his hand, and being made of pomegranate wood, takes root where it falls to become a flourishing tree possessing healing powers, believers would use it to cure their illnesses for a long time afterward. The famed sculptor's labour of love has left a timeless monument as a testament to his devotion to Shirin, with figures carved into caverns which inspire the admiration of tourists to this day.

Fig 2.4 - (next page) the suicide of Farhad by Kaml Al – din Bihzad

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<sup>68</sup> Horne, the Sacred Books and Early Literature of the East, 107

کوردی سچکاری پای بر جای  
 یکی خسته وار نامان خردی دولت  
 و گر کردی فرو افتادنی پای  
 هزار نوبت بشنیدی دولت کردی  
 سخنهای بسیار تعلیم کرده  
 نیز درین باب من چو کرده



هزار

۹

## Analysis

Years ago when I first encountered the poem "Khosrow and Shirin" by Nezami, I wondered why it was known as "Khosrow and Shirin" and not "Farhad and Shirin". I had read in school history books of "Khosrow Parviz", his banquet halls and ceremonies but I did not know that Shirin was his beloved instead of Farhad. Returning to the poem years later, I realized Khosrow and Farhad were both in love with Shirin with the difference being that Khosrow lived 'happily ever after' while Farhad committed suicide from a broken heart.

Though I didn't entirely miss the mark; what has been etched in our collective memory is Farhad's spiritual longing for Shirin – not the earthly love between Khosrow and Shirin. In our oral and written literature, Farhad the sculptor is described as an excellent symbol of stability and purity in love in contrast to Khosrow who is considered jealous and capricious. I presume this way of thinking lies at the root of a culture dominated by the belief that physical love is a sin, while imaginary love in return is celebrated.

My impression is to agree with Nezami himself, who does not hesitate to say Khosrow and Shirin's love arises out of sensuality. He also stresses in the following couplet how earthly love can propel a man to bliss.

*Who was devoid of love has faded  
If could live hundred lives without love, is dead*

On the other hand, Nezami was the first one who wrote about celestial love in his poetry. He treats Farhad's fascination for Shirin as transcending the physical desire of Khosrow for Shirin. Farhad's apathy towards Shirin's feminine flesh in light of her charisma can be interpreted to be a form of divine love. His love to Shirin is transcendental. He avoids any form of sexual arousal when interacting with Shirin, going as far as marking the mountain rock with the force of the purity of his love.

Farhad never dares to express his love directly to Shirin and instead settles on a deal over Shirin, with his rival. He can rip rock out of a mountain but cannot bring himself to share his emotions with the woman he is doing it for. Indeed, Farhad prays for days in front of her inanimate rock figure on Mount Behistoun but does not have the courage to face her in person. Love for Farhad is not a relationship between two individuals alive, but the concern of a failed lover with himself.

Farhad is the manifestation of unrequited love, captive to his own secret desire for Shirin. His love is based more in myth than reality. The love between Khosrow and Shirin, on the other hand, is sensual and real. In the beginning, Khosrow falls in love through the stories he's heard about Shirin, but unlike Farhad, he strives to actually realize his love. Khosrow gallops towards Armenia, as Shirin draws near Iran.

Their love is physical and exultant. They both enjoy meeting each other, each describes the others beauty. They canter the horses; bathe in springs and gushing fountains, pick flowers, get drunk. In this way not only one changes the other but does oneself as well.

An open environment leads to a more open mind while a closed environment causes narrow- mindedness. Nezami is well aware of this notion when creating a female character. An open and safe environment is constructed around Shirin's character to convey innocence and fertility. Interestingly, Nezami departs from traditional Islamic attitudes to pay tribute to the Christianity found in the Caucasus in his day.

Shirin has a dynamic personality and her character changes through the course of the story. In the beginning, she acts like a simple girl, easily falling in love with Khosrow after only seeing his image on a tree trunk. In encounters between the two lovers, she is portrayed as a flirtatious siren, and does not realize her more pure and spiritual form until she becomes acquainted with Farhad. In Farhad's presence, she becomes virtuous and chaste. The more Khosrow pleads with her, the more she refrains from his temptation. Shirin, who at first was jovial and placid, converts to a modest mystic upon encountering Farhad. Nezami explicitly contrasts Shirin's desire for Khosrow with her genuine affection and respect for Farhad in order to highlight Shirin's metamorphosis as the love triangle unfolds.

While reading the story of Shirin and Farhad, I got the impression that their transformation seemed to parallel the history of the art of ornamentation and its evolution in terms of its relationship with the culture and the state. Similar to the different kinds of love Shirin shared with Khosrow and then Farhad, ornament enjoyed different modes of representation before and after Islam. In the first half of the seventh century, the Arab conquest of Iran influenced the Persian art of ornamentation as Islam proliferated throughout the country. In the eyes of the population, the applications of ornaments shifted from simply being an element of beauty to that of a sacred entity, transcending the material world.

Through the ancient style of adornment in Iran we understand that at the time architects were trying to reflect social power, public activities such as festivals, and rituals, by depicting the moments and substantiating them via the medium of stone. They also were reflecting the incidents of real life to educate contemporary people and their heirs. Although their figurative style of representation was rooted in their perception of material world, they rendered the material realm allegorical and poetic. On the contrary, after Islam, architects clung more to divine rules and to the realm of the incorporeal rather than the material world. They were trying to render the spiritual world by means of physical substances. To render the corporeal world entailed a balance between body and spirit, presence and essence; it was done by dematerialization, decreasing the mass and quantity of the matter to make it lighter and give it the chance to be liberated from its body so it can ascend to its origin. It gets lighter and lighter, so brighter and brighter until it ultimately reaches its essential source, the light.



The process of dematerialization also takes place by mutation. This occurs when a figure or shape – such as square, triangle, diamond, rectangle or circle ‘shrink’ into smaller figures. As the mutation continues, so the new figures become slighter, which denotes the superior stage of materiality, dematerialization and then transfiguration into light.

The tension between life – like representations of natural figures in the Persian style and the abstract manifestation of figures in the Islamic style is seen in the emotional disposition between Shirin and Farhad. Shirin and her love to Khosrow which involves bodily love between two human beings, represents the figurative representation of Persian ornament.

However Farhad’s feeling towards Shirin resembles the abstract style of ornamentation. I conceive it as dematerialization which happens both to motifs and also occurs to Farhad, love detaches him from the world of body, and the love he is saturated with causes him to transcend the boundaries of the mundane and reach the highest level of humanity, which is sacrificing himself for the beloved. The story culminates with Farhad’s suicide and his annihilation; however, his inanimate body is metaphorically transformed into the pomegranate tree, the fruits’ of which cures the lovers’ pain.

According to the story, there are two types of love, erotic or physical love and spiritual love. Perhaps the shift from the direct forms of representation to the abstract reflects deeper thinking about the ideal behind sensuality.

Another reason for selecting this tragic story is its correspondence to the art of ornamentation and its relationship with the ancient Persian court. The conflict between Farhad and Khosrow and Khosrow’s treatment of Farhad is an allegory for the way artists and art were dominated by the ruling powers. In the story, Farhad does not dare reveal his love without permission from the King. Even when Farhad obeys the King and achieves the impossible to appease him, he is not given what was promised.

The state and artists have always shared close ties; the state has been the only patron of artists, although the artists were employed for the benefit of the state and not their creativity.

From the Achaemenid, Sassanid and Islamic periods to the first sparks of modernity in Iran in the nineteenth century, ornament and the art of illustration were meant to satisfy the king’s or the state’s appetite. Ornament was the art of the state; it was served the state’s aspirations and demonstrated its power. In addition to its functional and lingual purposes, ornament dealt with adornment. In order to adorn a plain structure or surface, details were built by hand at the site itself, then integrated into the structure or laid on its surface, which took a long time to complete.

Creating elaborate designs on a plain surface required an enormous amount of work, patience, talent, and verve, which made it very expensive. The public could not afford the expenses of artistic workmanship, which is why ornament is mostly found in palaces, mansions, religious spaces and mosques commissioned by the king, the royal court, or religious leaders. As art enjoyed royal patronage, it also became royalty's good servant. Artists sold both their talent and their freedom for the sake of the king's patronage so their art would survive and be remembered. It was not until Pahlavi that art became independent, and it was somewhat liberated from the state's yoke.

There are links between Farhad's death and the temporary disappearance of ornament for decades in Iran after the seventeenth century, which was due to the state's discontinuation of patronage of the art of ornamentation; ornament became more a matter of taste rather than necessity. Farhad's death also happened after the king's plot. In both circumstances the state's influence is noticeable. Once through its ignorance, the state caused a decline in the development of ornament, and once its deliberate will it caused the dramatic end of Farhad's life. However both ornament and real love survived; Farhad's breath re-emerged in the pomegranate tree, and ornament survived the decades of oblivion to be enlivened once again by the Society of National Heritage in the twentieth century in Iran. Traditional ornamental patterns and figures were re-sampled in a backdrop of modern buildings to acknowledge national identity and commemorate older traditions.

## **CHAPTER THREE - THE STATION**



Fig 3.1 - by Author, Pol – e Rumi Subway station, Scale 1:10000

### **Tehran Metro**

The initial plans of the Tehran Metro, which was to be Iran's first metro system, were laid out before the Iranian revolution in the 1970s. In 1978 a French company started construction on the line in northern Tehran; however, this development was short-lived with the advent of the Iranian Revolution and Iran – Iraq War in 1979 and 1980 respectively. In 1985, Iran Parliament re-approved the "Tehran Metro Execution Plan" and the construction was resumed in the same year. The Tehran Metro became operational in 1999. It is now transporting about 2.5 million passengers daily through its 4 operational lines (1,2,4,5) with two lines (1 and 4) are still being developed by Tehran Metro Company with another two lines (Lines 3,7) under construction and the other two (Lines 6 and 8) in engineering phase. Line one runs mostly north-south. It is coloured red on maps and is currently 28.1 km long. There are 26 stations along this line, of which 18 stations are located underground and 8 above ground.<sup>69</sup>

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<sup>69</sup> As of 2005, the total capacity of line 1 is 650,000 passengers per day, with trains stopping at each station for 20–30 seconds History and Status of Tehran Metro (Expenses, Future Projects), Tarabaran: Economic and Transportation Monthly of Iran, 9, (1999), 57 – 60

Pol – e Rumi is the second station from end of Line One. The construction of the Pol – e Rumi Station was completed in 2011. Because of engineering and topographic constraints, this station has a unique footprint, 3531 m<sup>2</sup> of its area is underground comprising of ticket hall and concourse, corridors, and tunnel, and 787 m<sup>2</sup> are above – ground entrances. An enormous proportion of the enclosed area is taken up by the ticket hall and concourse which is the exclusive feature of this station. The large size of the ticket hall entails thick structural walls for support on the exterior and makes an abundance of interior surrounding wall surfaces inevitable.



Fig 3.2 - Shariati Street



Fig 3.3 - Existing Pol – e Rumi Subway station

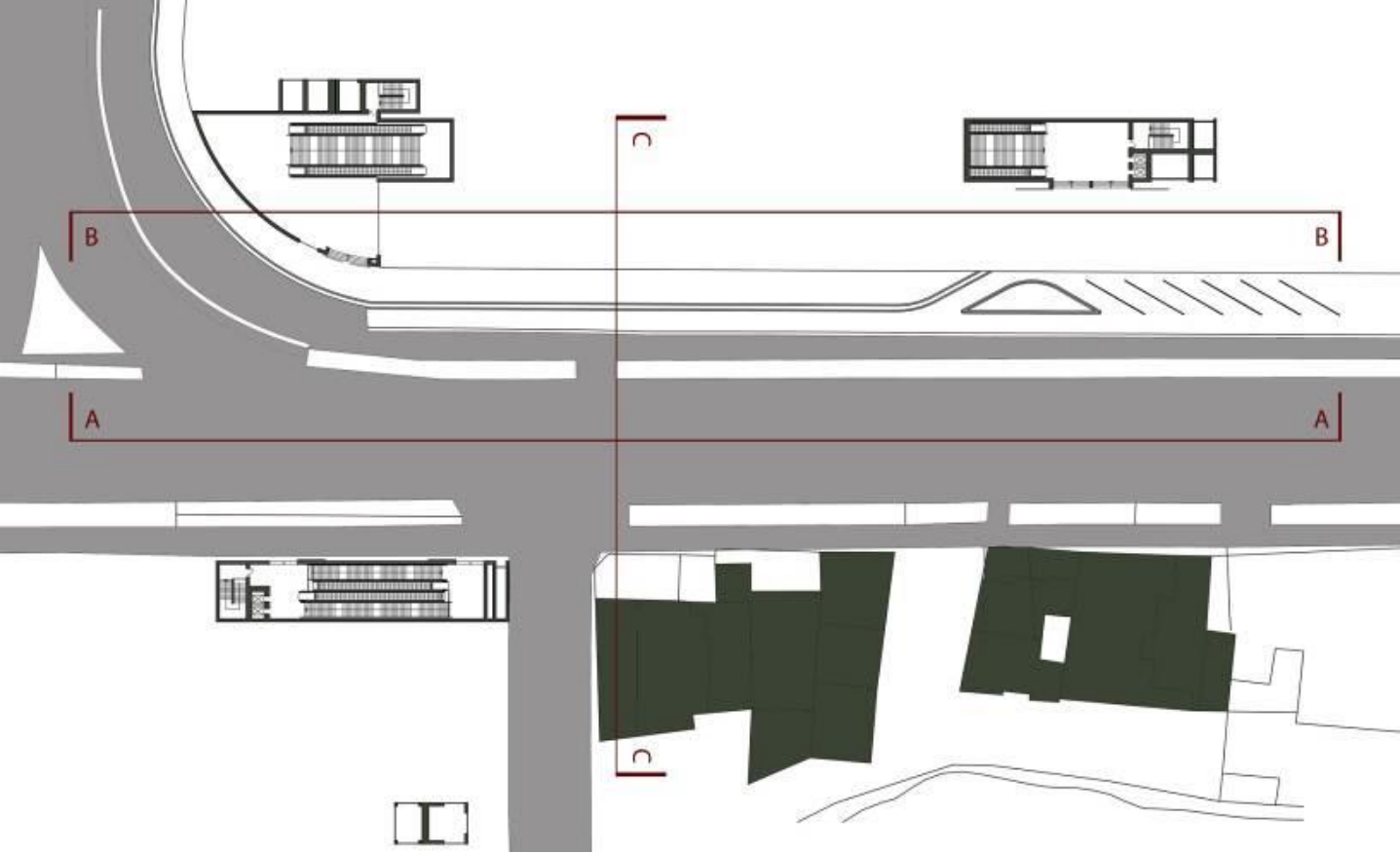
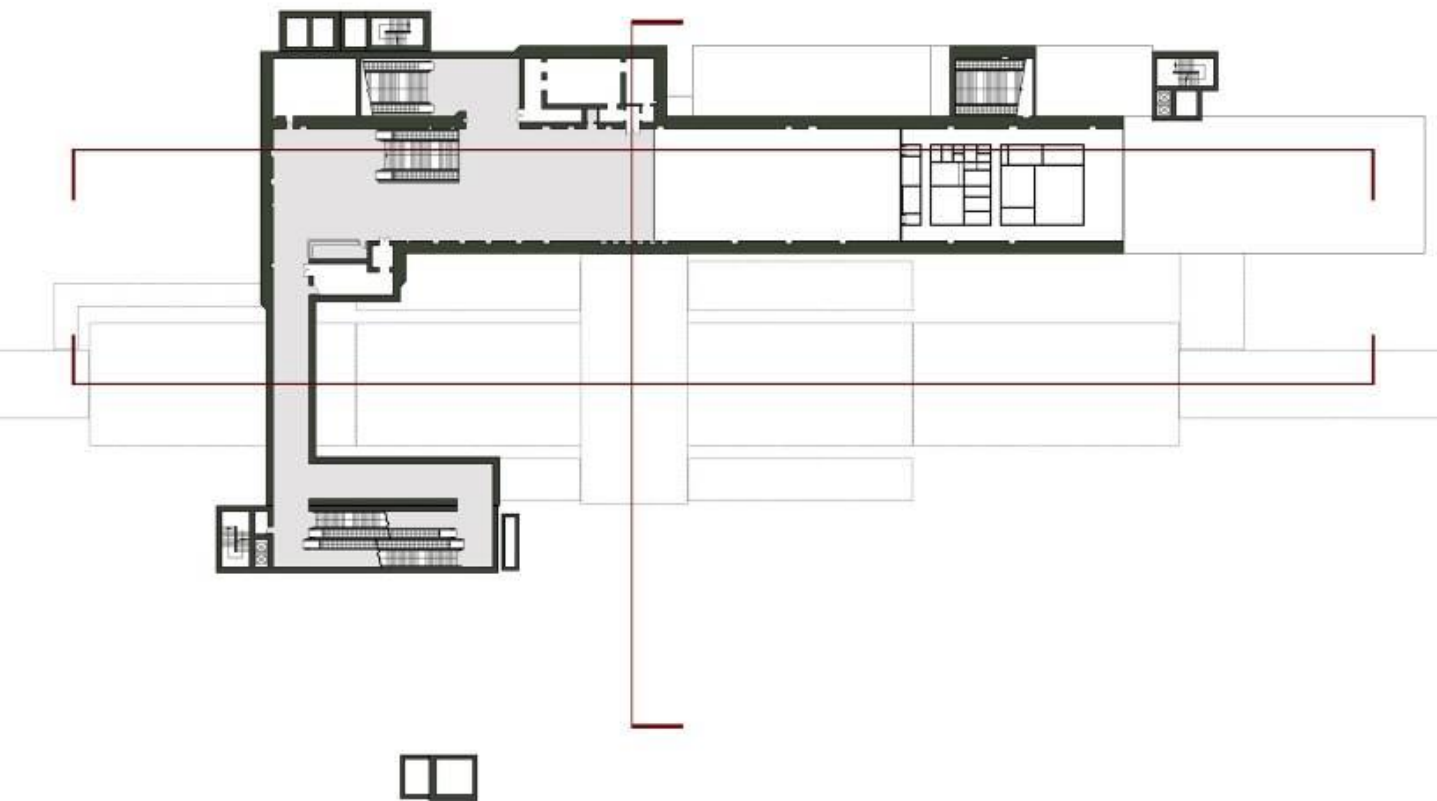


Fig 3.4 - (above) by Author, Site Plan, Scale 1:1000  
Fig 3.5 - (below) by Author, Mezzanine Floor Plan



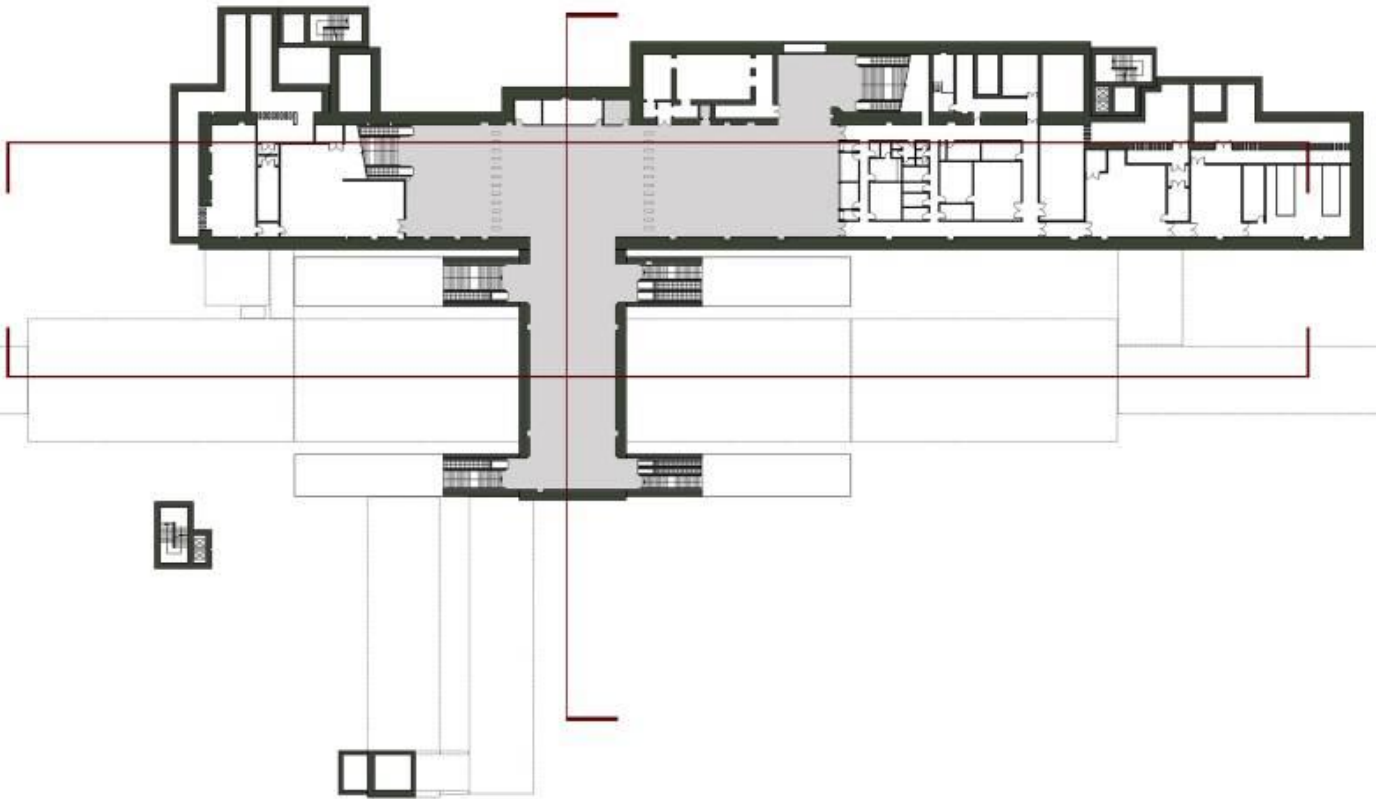
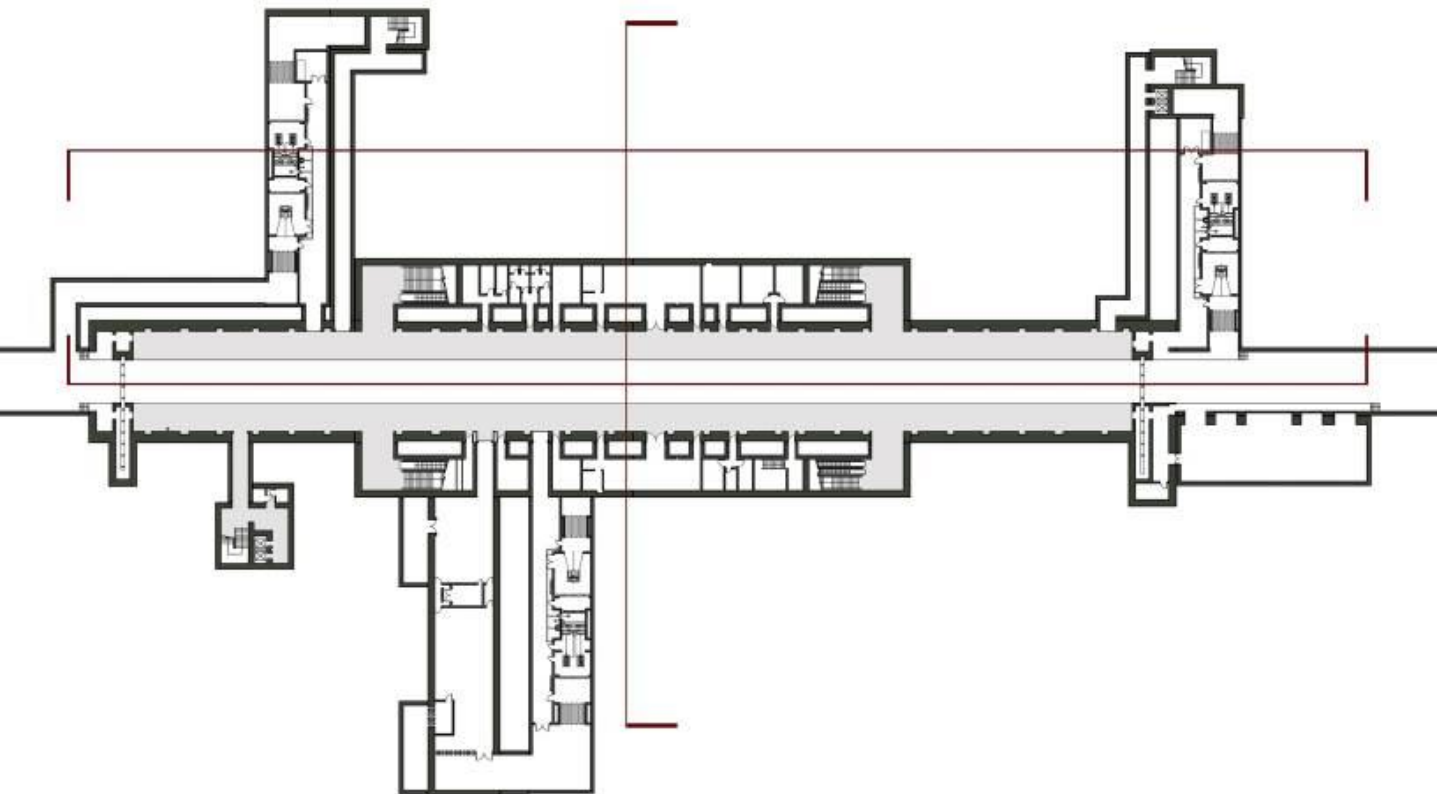


Fig 3.6 - (above) by Author, Concourse Floor Plan, Scale 1:100  
Fig 3.7 - (below) by Author, Tunnel Floor Plan, Scale 1:1000





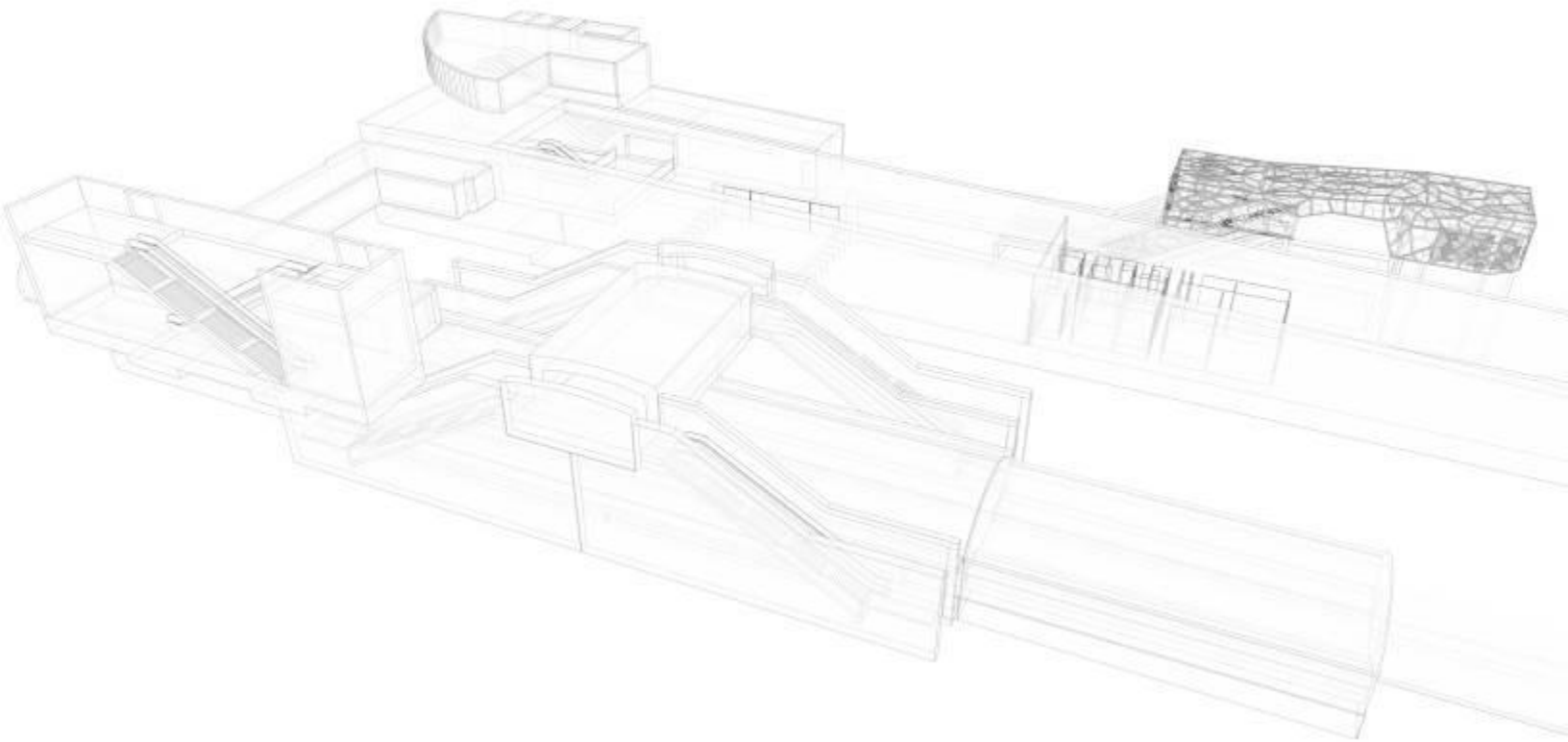


Fig 3.8 - by Author, Axonometric view of the station

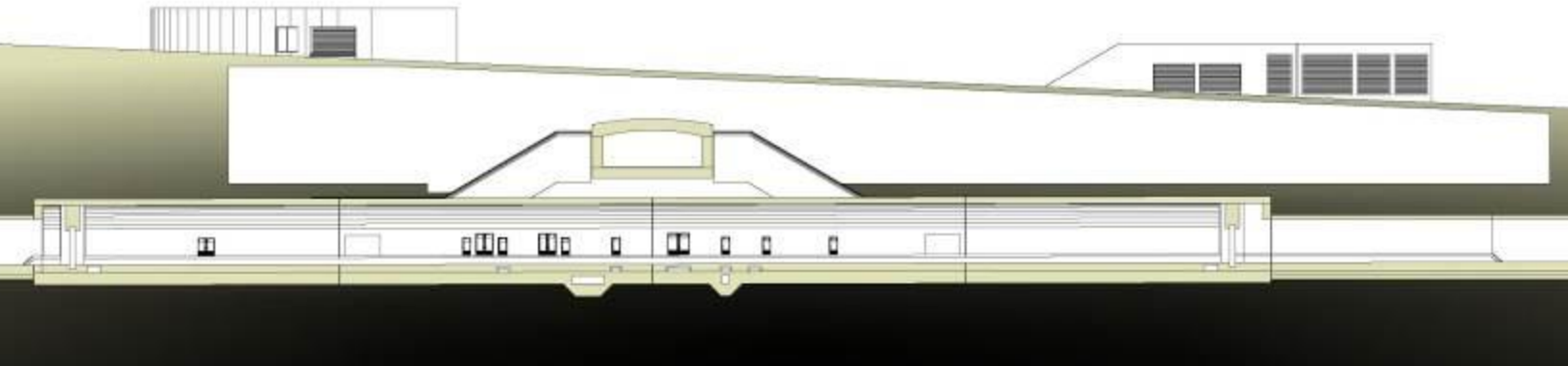
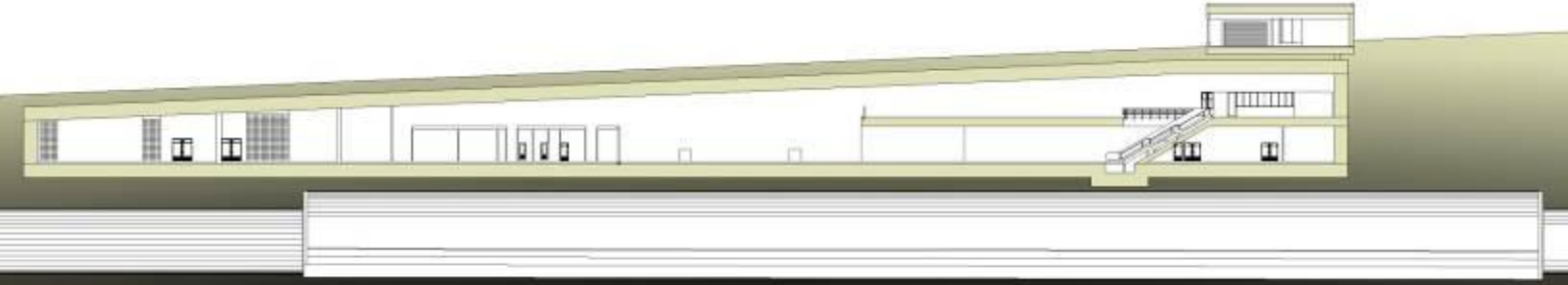


Fig 3.9 - (above) by Author, Section A-A, Scale 1:1000

Fig 3.10 - (below) by Author, Section B-B, Scale 1:1000



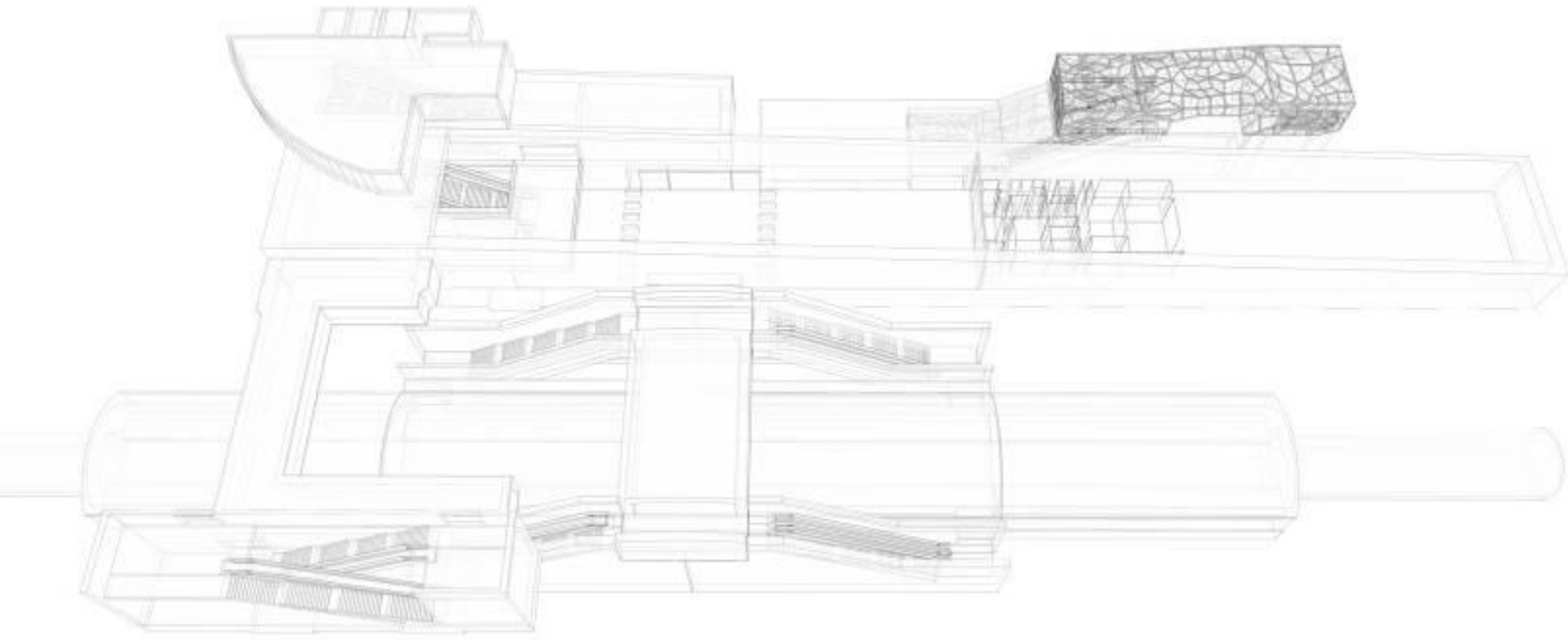


Fig 3.11 - by Author, Axonometric view of the station

Generally in all stations, and Pol – e Rumi is not an exception, the architects' design utilizes certain repeating elements to create an overall identity. The tunnel, the platform's interior wall cladding system, furniture and signage are among the repeated elements. The tunnel is a combination of two curvilinear structures on top and bottom, and a rectangular structure rests in between the two curves. (See figures 12 to 16) Polished granite slabs are used to cover the wall surfaces. Stone slabs are laid without following any pre-designed pattern; they are ordered merely based on their width; wider strips are laid on bottom and narrower ones are laid on top of the wall where the top curve meets the wall. This method has been executed in the whole station which gives an observer a consistent and somehow boring view. The colour of the granite finishes changes in each station which brings slightly a variety to the whole image of the metro. In spite of similar type of finishes used in Tehran subway stations, diversity of artworks decorated the granite walls, makes them distinguishable.



Fig 3.12 - by Author, Section C-C, Scale 1:750

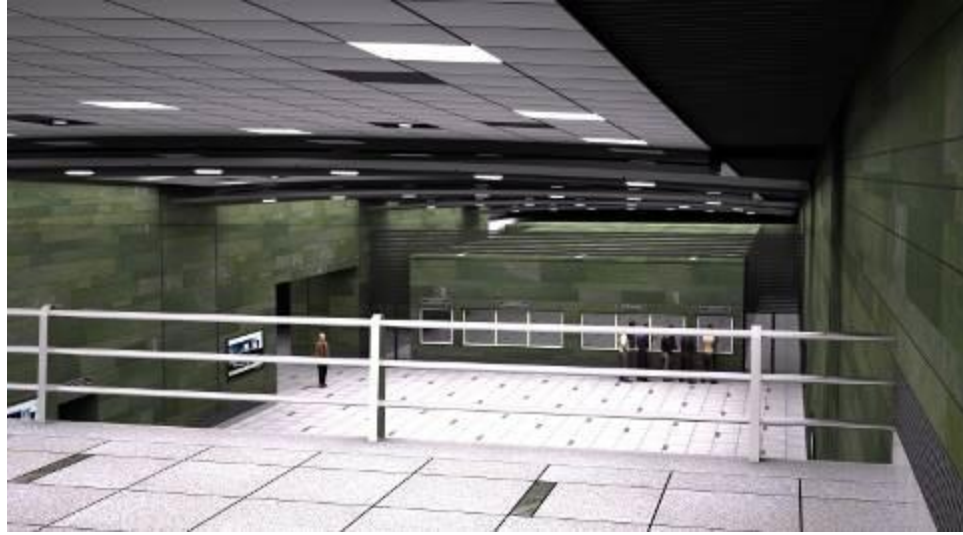


Fig 3.13, 14, 15 - Mezzanine to concourse, Stairs provide access from mezzanine to concourse, gates and the ticket both, green granite covering the walls all around the station

Currently in many cities, the necessity for transforming the dull structure of the metro to an eloquent artistic place is recognized by urban design professionals. See below which subway system is a UNESCO World Heritage site, which subway lines double as the world's longest art galleries, or in which networks you can find stunning baroque – style underground palaces (examples: Moscow, Saint Petersburg, Tashkent), museums, aquariums, comical statues, (examples: Brussels, Montreal, Stockholm) grand architecture from art-deco to modernist to futuristic (examples: Munich, Prague) or just passenger-friendly and beautiful underground stations (examples: Bilbao, Washington).



Athens, Acropolis



Athens, Acropolis



Berlin, Heidelberger



Brussels, Comte – de – Flandre



Hanover, Kroepck



Tashkent, Mustaqilik, Mirdoni



Tashkent, Navoiy



Kiev, Pecherskay



Komsomolskaya station



Lille, Montebello



Lisbon, Cabo – Ruivo



Lisbon, Olaias



London, Notting hill gate



Moscow Metro



Munich subway station



Munich, duelferstr, 400



New York, 14st



Stockholm, Tunnelbana



Vienna, Volkstheater



Toronto, Museum station by Diamond +Schmitt architects



Toronto, Bayview-stair



Toronto, Dupont

Fig 3.16- by Author, Subway Stations around the world

London is said to be the site of the first metropolitan underground railway, operational from 1863, and Moscow's subway system is considered to be practically a museum of socialist realist art of the 20th Century, whilst Tehran's Metro which became operational in 1999 showcases a mix of art styles. To catch a taste of its art, a set of various artworks installed in Tehran Metro are shown.





Fig 3.17 - by Author, Tehran Subway Stations photo gallery

Parviz Tanavoli, sculptor, who had studied some of the embossed and sculpted work, said the following:

*"It's not the very highest quality work but more decorative; whether or not to have real art or just keep to decorative work is an issue in its right. Many metropolitan subways have no first rate art, it's ornamental, something that people can glimpse whilst on their way, producing a pleasant, nice feeling in passing without being deep and profound."*<sup>70</sup>

Kourosh Golnari, another sculptor had a different opinion which shared:

*"the Tehran metro, in comparison to some underground railway systems I have seen in other countries and from the point of view of its design, interior decoration and materials used, is worthy of praise. Both finances and thought have been invested in it; however, if a particular work is supposed to last many years or even a century or two in the subway, the piece should bear the signature of the creating artist, and more artistic work should be found there. They themselves should be historic artefacts, rather than rushed creations finished just in time for the opening ceremonies. The construction of the new metro stations will come to an end soon, whereas the art could remain for many long years, so more care should be taken in their creation."*<sup>71</sup>

The Metro in Tehran is a public space with interesting embossing, engravings and sculptures on the walls, yet it is not a gallery, museum or exhibition centre, but full of people wanting to pass through in as little time as possible. In the case of Pol – e Rumi station, I believe that a story and a set of connected scenes can be more effective for embellishing the space rather than separated and unrelated subjects in various spots.

I have used the Pol – e Rumi Station, as a site for conceptual design of the selected story. The story is realized through the language of ornament; it is analysed, and its main synopses are depicted for the design. The existing open space above the station was left un-built; thereon I proposed a pomegranate garden. The garden evokes good memories of the old city of Tehran also corresponds to the story's ending scene with the symbolic pomegranate tree which enlivens the hope of love in the world. I also looked at the garden as a source of identification in an urban landscape. It is absolutely vital that public open space once again be anchored in the everyday culture of those living in cities. The very concept of love inherent in the story is symbolized by the pomegranate tree; it is portrayed on the wall in the concourse and also planted atop the station. Featuring extracted clues from the story in a fictitious and factual form, I intended to fuse the garden with the station.

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<sup>70</sup> "Art in the Tehran Metro", JadidOnline, accessed January 29, 2012, [http://www.jadidonline.com/story/29012009/frnk/art\\_in\\_metro\\_eng](http://www.jadidonline.com/story/29012009/frnk/art_in_metro_eng)

<sup>71</sup> "Art in the Tehran Metro"



## **Analysis and Analogy**

### **Climactic Moments of the Story**

Love, longing, and loss are the major episodes of the story. Each scene is composed of key characters, an action, and a locus. In the following, the climaxes of the story in each of the episodes are listed, and a scene would be depicted for the conceptual design.

### **Selecting key scenes**

For passengers, details don't make sense, especially when they are in a hurry; all they want is information at a glance, so scenes should be as simple as possible with key objects. Poetic scenes might be beautiful for design but they need more attention and might be used where people pause for some time. Since one of the main ideas for using a story was helping the spectators to follow a path or perceive a location, the selected scenes of the story are the ones that happen in a location or demonstrate a trip or path. For example the love scene in which Farhad carries Shirin on her horse from the mountain to the city shows a journey. What makes this scene remarkable is the peculiar act of Farhad of carrying the horse and the rider. Other key objects that can be easily depicted in this scene are "Mountain" as the origin, and "City" as the destination. A subway station starts with stairs that can be mapped into a descent from the mountain, something that we have in love scenes in the beginning of the story. The next phase of the story is longing of Farhad and carving Shirin's picture on the mountain or carving the stairs on the Mount Behistoun. There are few icons such as the Mount Damavand that also symbolizes the city of Tehran. Finally is the loss scene that depicts Shirin and the pomegranate tree.



Farhad meets Shirin, Early 15th century, Timurid Era



Farhad carries Shirin on his Shoulders, Khamasa, Tabriz, 1481



Farhad Brought before the throne of Khosrow, AD 1563



The suicide of Farhad, forbidden union with the lovely Shirin.

Fig 3.18 - miniature paintings illustrate selected scenes of the story

### **Selecting key Elements**

The Mount Behistoun and the city of Ctesiphon are two specific locations that are the locus of all incidents in the love, longing, and loss episodes. Farhad residing in the mountain as a stonemason and sculptor, and Khosrow in Ctesiphon as the king, is a metaphor for the position of nature opposite the city, and their rivalry indicates the contrast between art and power. However there is a strong link that connects them together which is Shirin. Shabdiz, the horse of Shirin, is a significant figure in the story, which can symbolize the train.

The pomegranate is a symbol of heaven and the pomegranate tree symbolizes the undying life as it has expanded its roots to the depth of the ground. This belief has an ancient origin in the Iranian culture. The story is concluded with a pomegranate tree grown from the dead body of Farhad. Since Farhad is known as the true lover, growing a symbolic tree on the dead body of the legendary Farhad indicates the continuity and perpetuity of his soul in spite of his inanimate body.

All these selected elements, locations and figures are cultural signifiers and familiar to the eyes of the passengers. The mount Behistoun and the city of Ctesiphon are monumental figures and pomegranate tree is symbolic. Depicting such elements in the public realm would evoke collective memory, and conjuring up the public memory, in return, would legitimate their depiction.

### **The Illustrated Wall**

The most engaging part of the design was to depict the selected scenes of the story in five plates. The five illustrations were fused in order to form an uninterrupted visual narrative and ultimately cover the wall surface of the concourse. The alphabetic letters of Farhad's name forms the underlying pattern. Natural and geometrical figures are employed to illustrate the selected synopses from the story of Shirin and Farhad on a backdrop of an ornamental composition/set. By changing the mood of the two characters, patterns, materials and colours transform to also indicate the shifting mode of ornament.



Fig 3.19 - by Author, Sequence of letters of Farhad's name, Letter F

On the background of the first plate, letter F is imprinted. The stone texture dominates in this plate, which clearly identifies mountain as the locus of the incident. The stone texture also represents the character of Farhad. The hardness of stone, its brittleness and its plain surface signifies his nature. The story starts with the plan view of the mount Behistoun. The twisting form of letter F represents the steps Farhad carved in the mountain. The plan view reflects simple, consistent and passive nature of Farhad, but suddenly there is a line that cuts through the background and the view shifts from plan to elevation or section which denotes the emotional transformation he experienced.



Fig 3.20 - by Author, Sequence of letters of Farhad's name, Letter R

The letter R is a decisive one, as it is repeated in the names of Farhad, his rival Khosrow, and Shirin. So R represents the common feeling of love that happens to all the three characters but emerges differently. The dominant message illustrated in this plate is love. R cuts the stone background and changes the view into a miniature picture of the mount Behistoun with Shirin's face in front of the face of Farhad both carved in the stone. The combination of stone background and miniature foreground with distinctive figures highlights the historical correlation between the art of inscription and the miniature painting. Figure representation was prohibited in the seventh century and the taboo continued until the thirteenth century when representing human figures was revived with miniature paintings. From this point of view miniature paintings are linked to the ancient inscriptions. Showing figures embedded in the stone which is drawn in a miniature style indicates that miniature figures are the new emergence of inscriptions after six centuries of restriction in figurative manifestation.

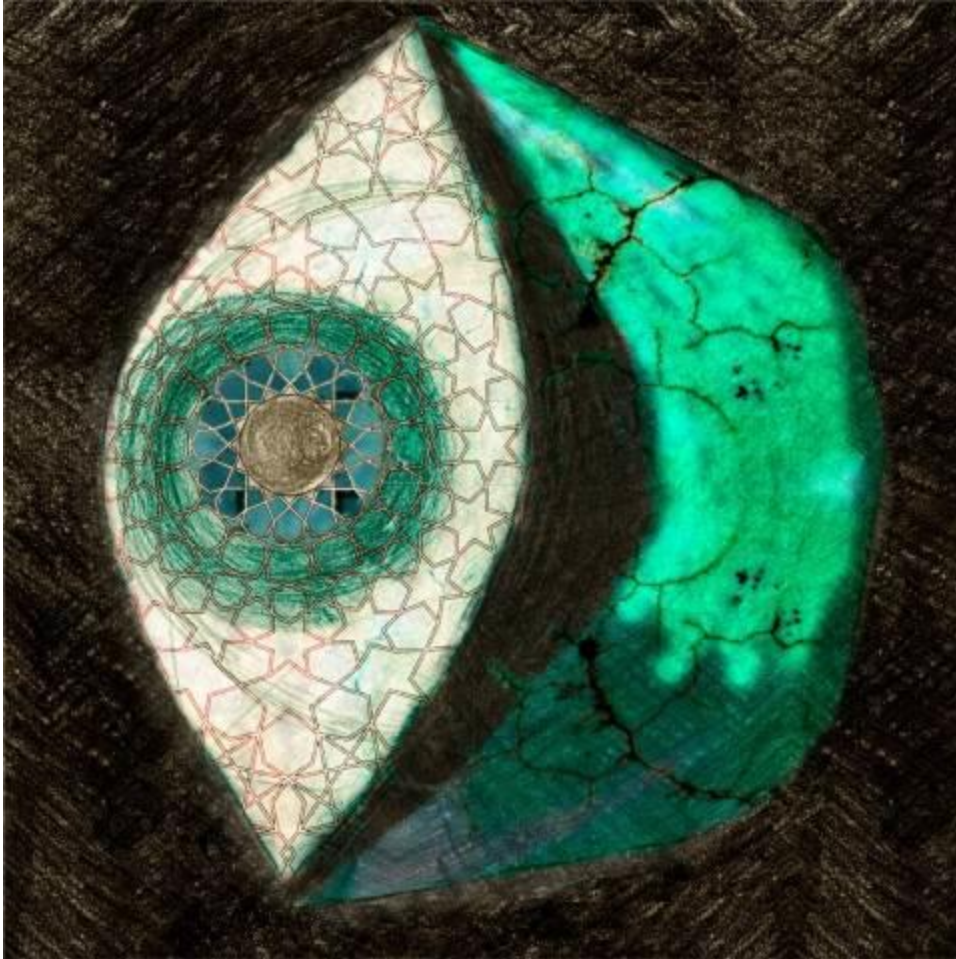


Fig 3.21 - by Author, Sequence of letters of Farhad's name, Letter H

The letter H in Farsi has two lobes and is called the two eyes. The two lobes of H are attributed to the dual character of love and how it affected Farhad and Shirin differently. The feeling of love has burnished Farhad's passion; his soul emancipates itself from the mundane, while Shirin is still entrapped with the illusion of love.

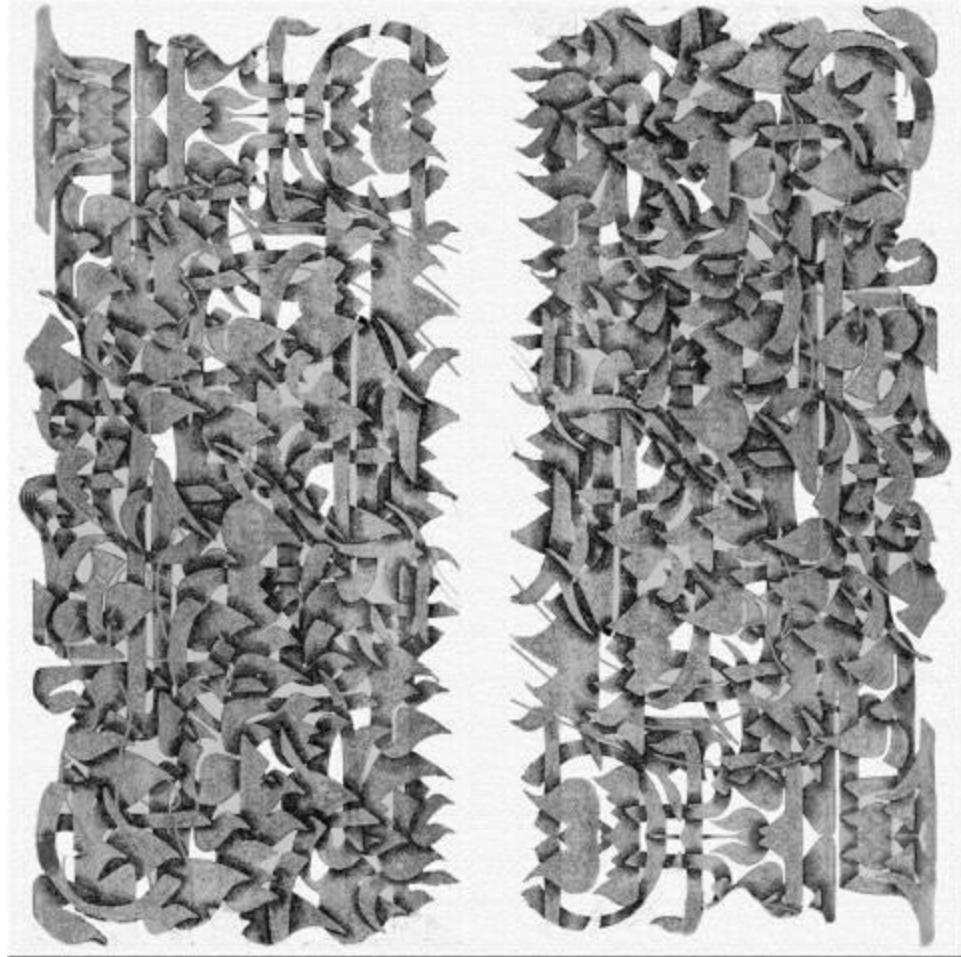


Fig 3.22 - by Author, Sequence of letters of Farhad's name, Letter A

The letter A demonstrates the verbal battle between Farhad and Khosrow that happened in the mount Damavand with its famous peak always hidden in the snow. Black calligraphy imprinted on the white background also points to the re-emergence of inscriptions in the form of calligraphy as key ornamental elements along with other non-figurative motifs from thirteenth century onwards.

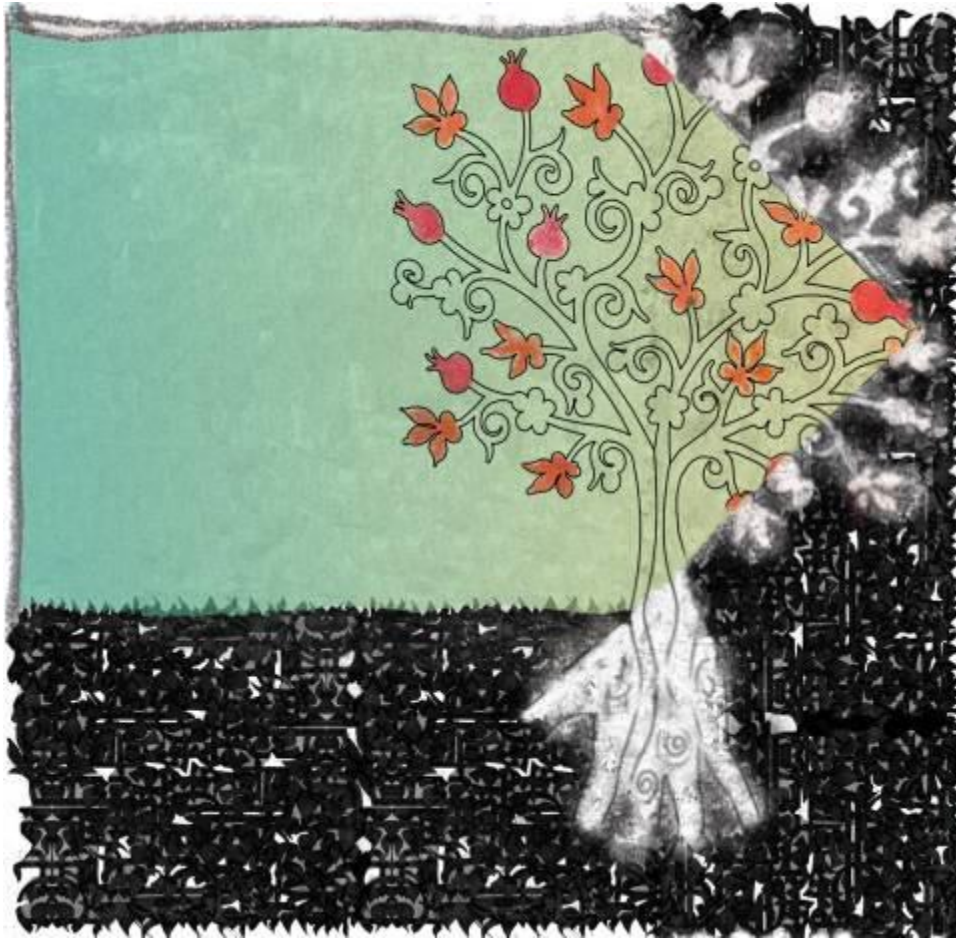


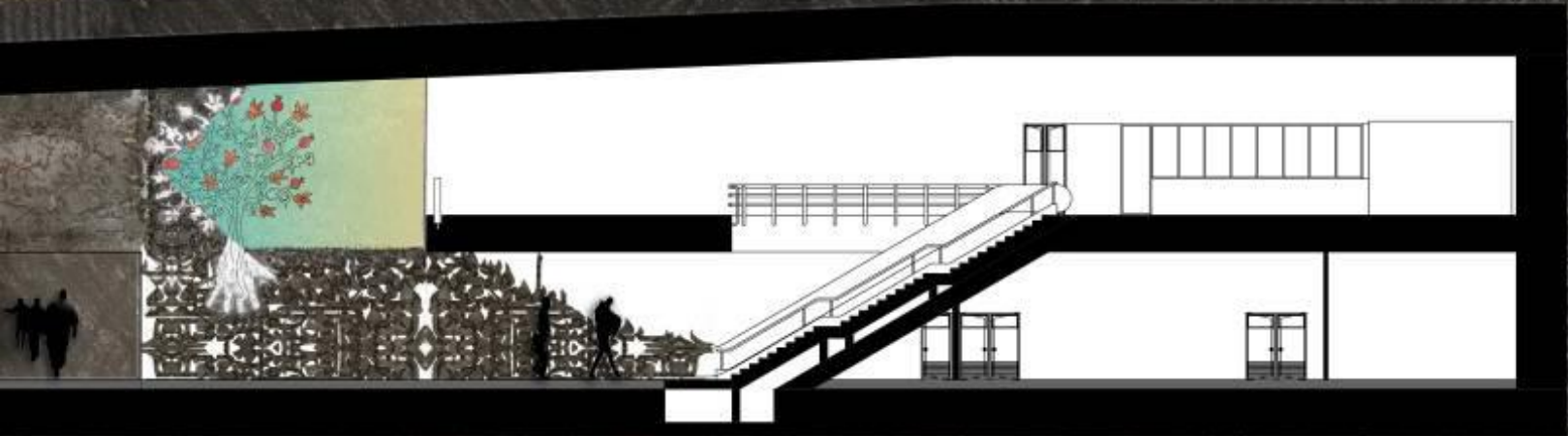
Fig 3.23 - by Author, Sequence of letters of Farhad's name, Letter D

The letter D is very important as it has a twofold nature both in the story of Farhad and his name. It is the last letter in Farhad's name and the first letter of the word death in English. Death was Farhad's end; a new life began by his death and the pomegranate tree grown from his corpse. The letter D in this scene represents both death and life; it is a threshold between death and life. The coloured section of the pomegranate tree represents Farhad's spirit on earth. Although the roots of the tree and also some of its twigs are unanimated and lifeless, the rest of the tree is alive. The tree is represented in two modes, first the white traces of the tree twigs and roots on the dark background of D belongs to the realm of death, however the other part of the tree trespasses over the threshold of death and color emerges in the blossoms and fruits that are indicating the rebirth of Farhad. The metaphorical depiction of Farhad's rebirth is enriched with the pale hues of sunrays on the backdrop of the image. The Sun and its rays are symbolizing life; the Sun bestows life on the tree through its rays and the tree flourishes and its fruit, the pomegranate, is the elixir of life bestowed on men by the tree.

Fig 3.24, 25 - (next page) by Author, the Illustrated Wall







### **The Ticket Booth**

Metaphorically, the design of the ticket booth is linked to the story in some ways. Many times in the story *Farhad* is likened to the stone which hides a gem in its heart. He is exemplified as a stone that is cracked deeply from inside because of the tension, force, and pressure from the embedded precious gem which can be interpreted as his heart or his emotions. In the same metre *Shirin's* soul is also likened to a gem fettered by a stone shell.

*You are a kind of stone that, like a gemstone, is stuck,  
I am a stone in whose heart, like a fine gem, has a cut*

The poet compares and contrasts the gem in its two statuses, first as a rough gem stuck in the stone, then after its extraction from the mine, and touched by the jeweller's hand to become a fine gem.

In the first hemistich, the rough gem affixed to the wall of a mine echoes Shirin and her lust for Khosrow, whereas stone in the second hemistich signifies Farhad whom the cutter turned into the fine gem. The process of cutting in the jeweller's workshop here is a metaphor for Farhad's longing for Shirin that resulted in his emotional awareness and his feelings that transcended bodily love, in contrast to Shirin whose lust for Khosrow did not move beyond the usual limits of sensual temptation. Farhad was tough and his emotions were rough. After encountering the beloved, like the jeweller's wheel that cuts the rough gem and turns the tough stone into a delicate and precious jewel, so did love to Farhad.

The ticket booth perfectly matches the prefigured architectural scheme of the poetic metaphor due to its function and location. It lies between the realm of public and private in the concourse area so maintains the privacy of the administrative section as well as the dynamic of the concourse. The main focus of design here is the front edge of the ticket booth that interfaces the concourse. It is conceived to be a dual-layer shell structure with distinct materials and different levels of transparency. I have tried to articulate my geometrical interpretation of the content of the poem through this shell. The shell is overlaid with interlocking tiles of stone and glass. Stone tiles mostly have regular shapes and their types range from quarry stone to white polished marble. Glass tiles however have regular and non – regular forms; they are tinted blue to blue-green to imitate rough and extracted or fine turquoise. The glass is stained with blue-green opaque enamel; streaks of stone are stuck to the enamel finish to create cavities and fractures so the illusion could be added to the glass to create hues of real turquoise. Having the stone and the enamelled glass side by side represents the tension between the firmness and determination of Farhad and frailness or daintiness (tenderness, slenderness, it should convey that she is easily tempted) of Shirin.

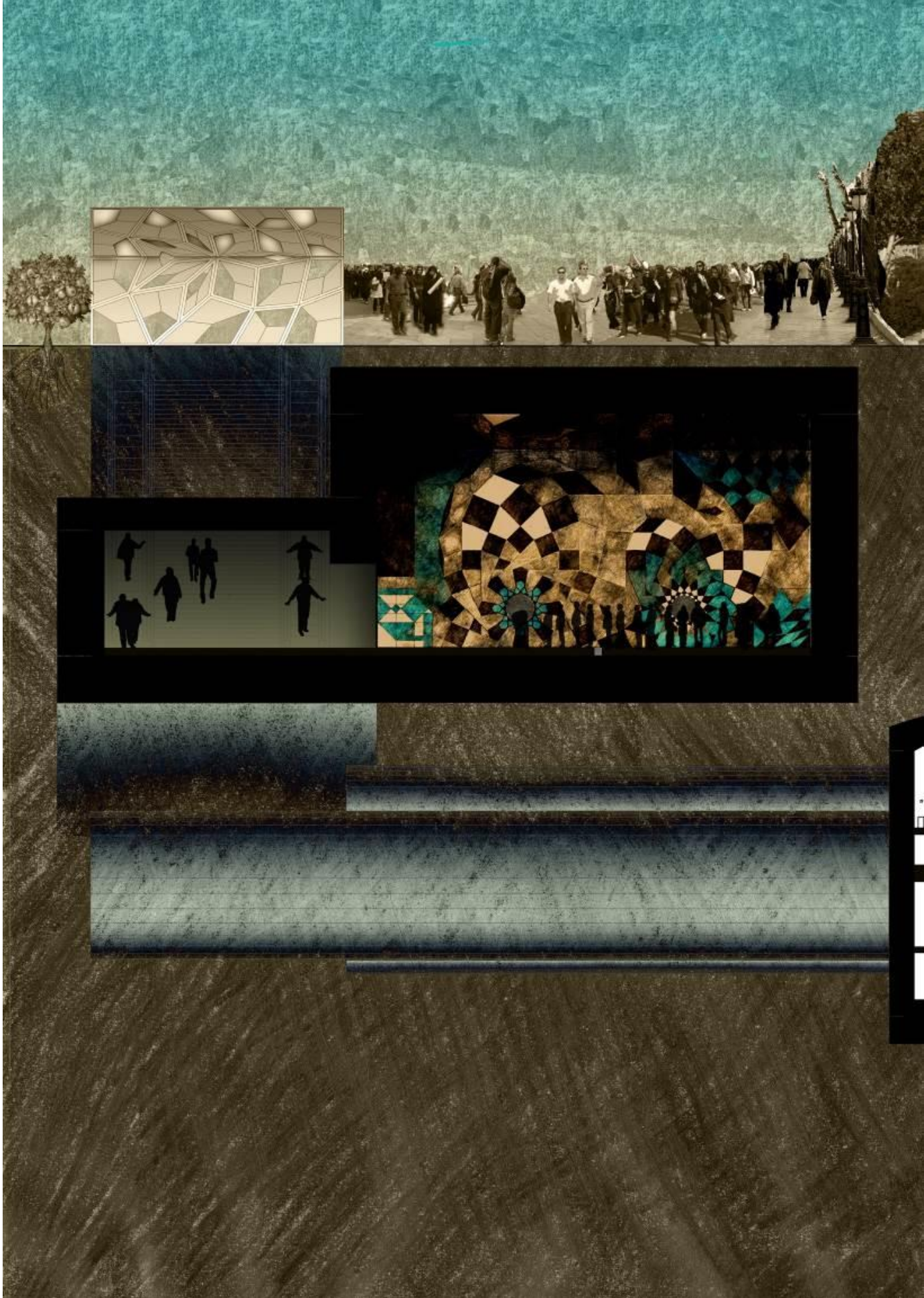






Fig 3.27 - by Author, The ticket booth

The pattern of the shell is also a simplified version of Persian knots, a network of intertwined squares, Lozenge and polygons. As the pattern reaches the ceiling, the system of knots unbraids and moves freely upwards. The rigid geometrical ensemble transforms into a massive stone layer, cut and faceted. Selected colors communicate roughness of stone and delicacy of the gem.



This combination is seen in the tile-works of mosques in the arid area of Iran, because of climatic circumstances and meaning of the space. Where desert and sky dominate, so does the yellow and blue color. Yellow symbolises the earth and turquoise blue the sky or the heaven. Yellow indicates the heaviness of earth and blue the lightness of sky.



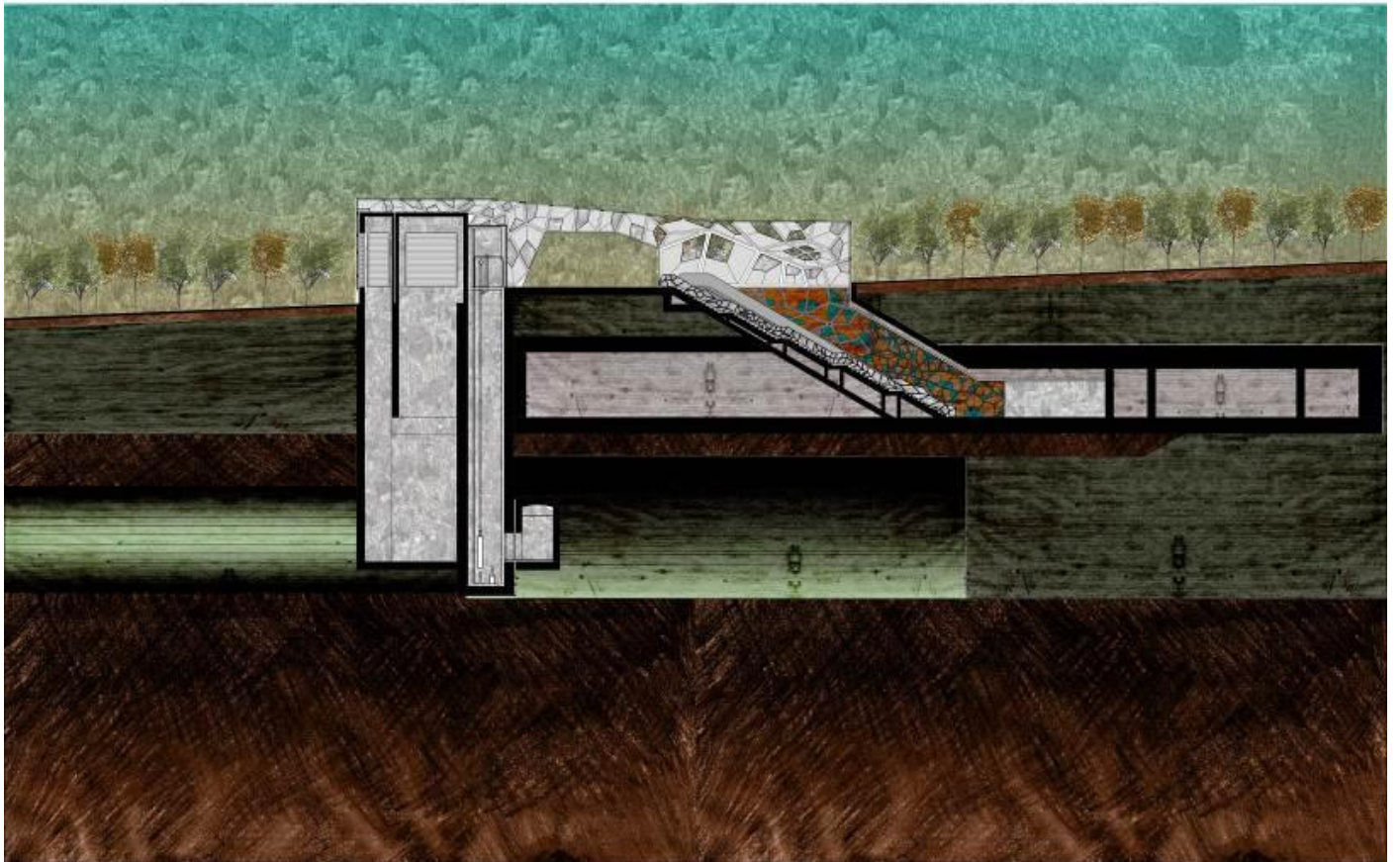
## The Pavilion

The entrance is affixed to the garden. It links the garden to the subterranean world of the station. In the Persian style there was an attempt to integrate indoors with outdoors through the connection of the surrounding garden with the pavilion or palace. Walls surrounding the pavilion were porous to open up the building into the garden. This allowed maximization, in terms of function and emotion, of what may be done in the garden and building. The entrance pavilion is a white web - type structure; it covers and enfolds the stairs and the exhaust ducts. The white web structure spills and morphs through the walls and ceiling into the interior surfaces of stairwells and vestibules. The web is a system of quadrilaterals combined in different sizes and orientations. Apparently they look to be arranged randomly beyond the definable and habitual geometry of Persian knots. Yet in some spots, traditional geometrical forms are traceable; they are deliberately fused with the pattern to make it look familiar to the eyes of passengers.

Fig 3.28 - by Author, the Entrance Pavilion,

Fig 3.29 - (next page) by Author, Section of the Entrance Pavilion





The base motif has a seemingly random quadrilateral form, although it has a simple geometrical explanation. It starts with two equilateral lines with an arbitrary angle. This angle might be selected based on limitations in the area which is supposed to be covered or can be selected based on an arbitrary base pattern. In the pavilion design the base angle starts with 90 degrees from a corner. The next step is identifying the length of the next two lines to complete a diamond which is selected to be the same length of the distance between the two ends.

The final pattern is a seamless web composed of interconnected quadrilaterals with shared sides. It is a generative pattern spreads on a surface based on a priori; the size of each motif is governed by the previous one, and also this motif governs the size of the next one. Lengths are predetermined parameters in this compound which obviously restrict the designer while arranging motifs, but angles are determined by the designer. Angles give the designer the freedom to alternate the size and order of the quadrilaterals, set them symmetrically to make a distinct arrangement of triangles, squares, polygons and stars similar to Persian knots, or balance between irregular quadrilaterals and create an asymmetrical combination. It also gives the designer the option to merge them together, so the pattern would be the synthesis of those combinations.

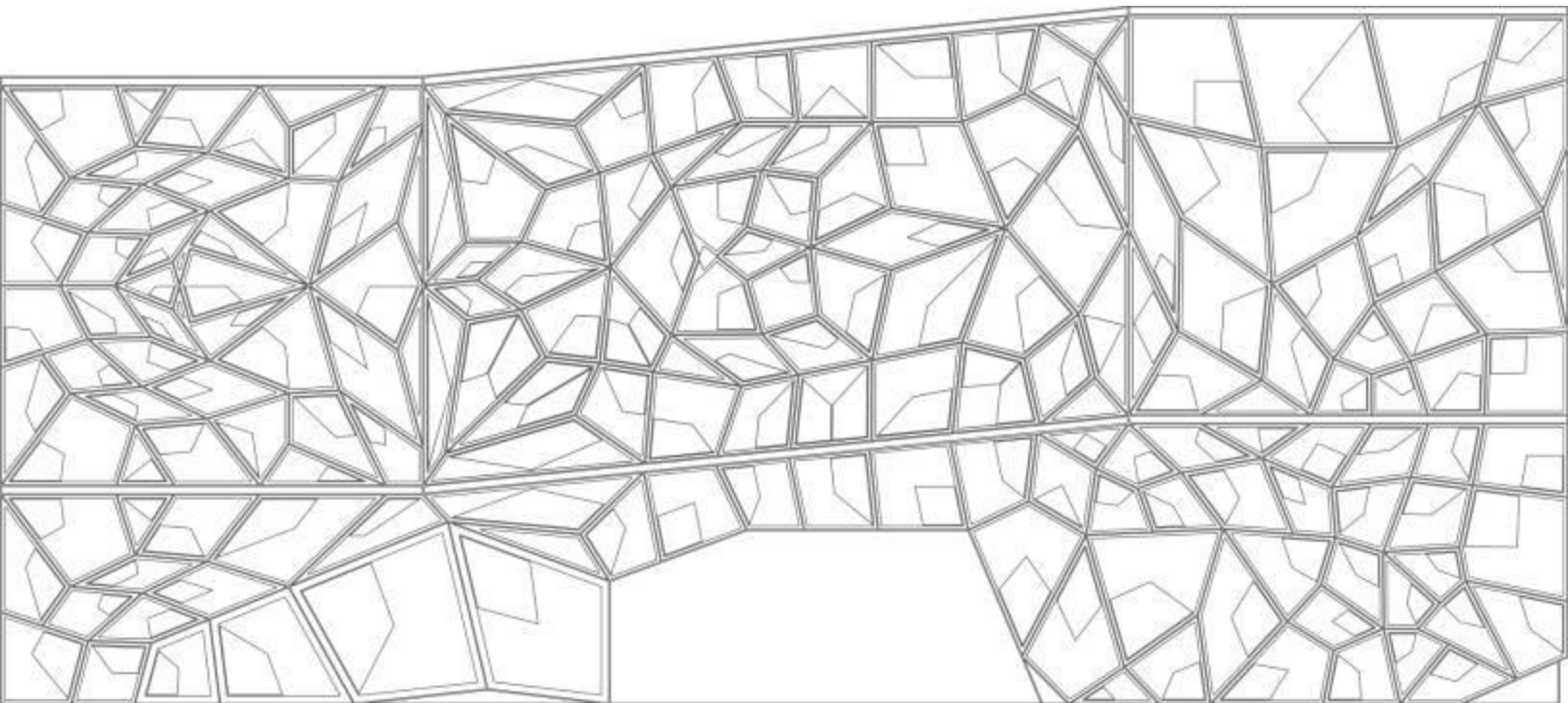


Fig 3.30 - by Author, the White Web

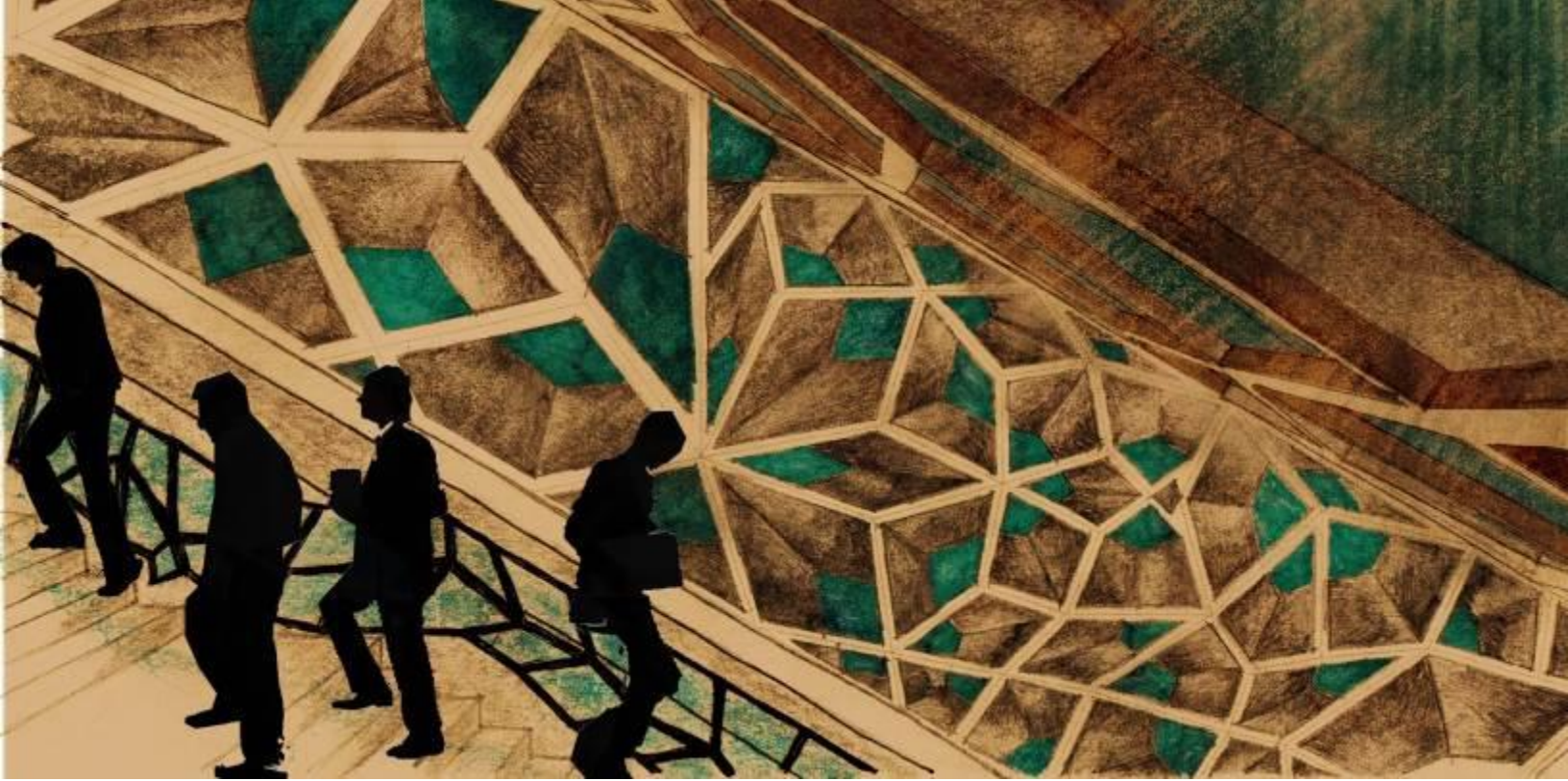
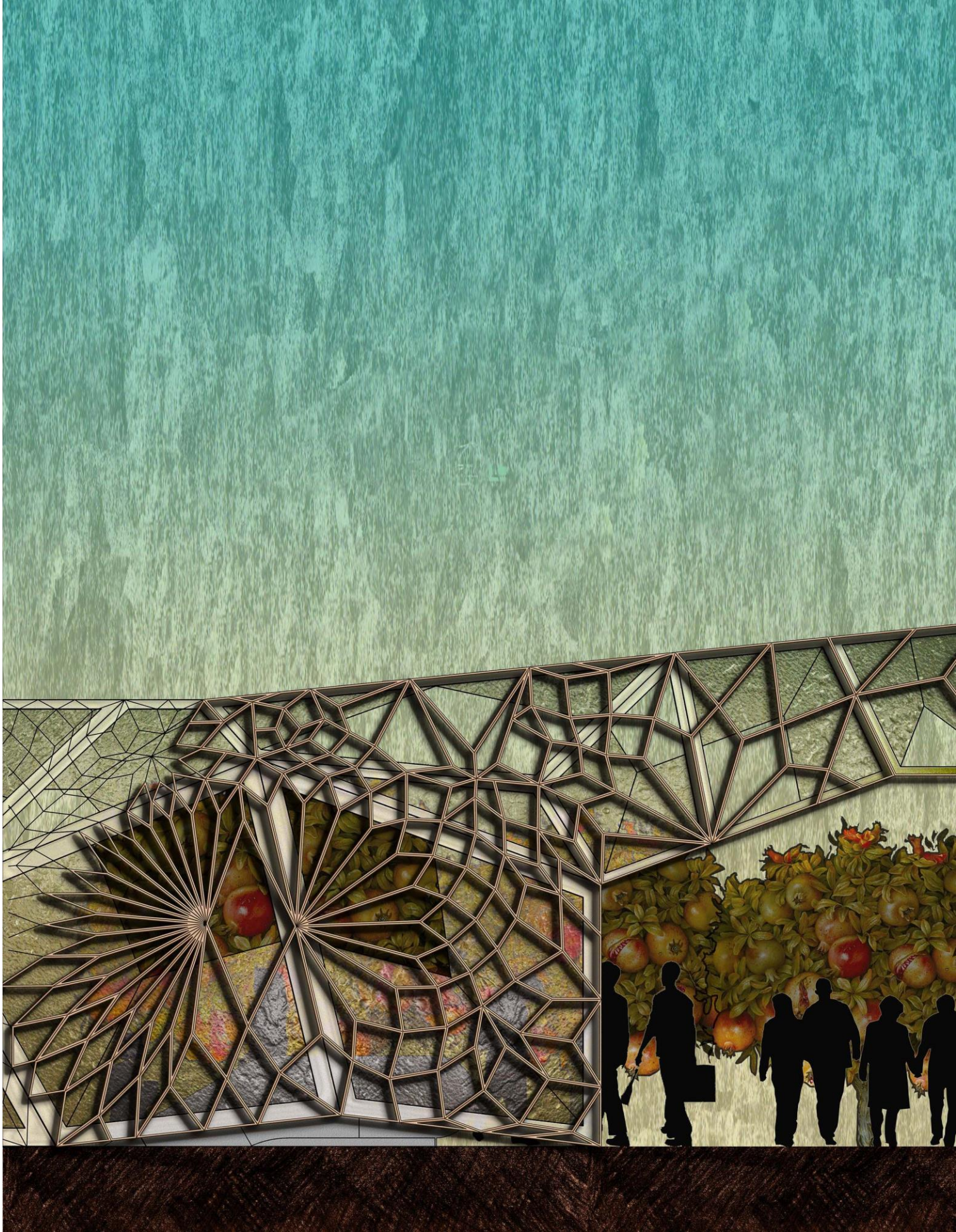


Fig 3.31 - by Author, the interior surfaces of stairwells

Alternating the size of motifs is based on what they cover and also the light. On the south side of the entrance where the exhaust ducts are located, quadrant figures shrink and condense to conceal the ducts to the extent that the air circulates properly. On the contrary, on the north side where the stairs and elevators are located, the quadrant figures enlarge to maximize the visual connection, open up the view from outside in and inside out, also let the north light penetrates the pavilion and stairways.

Quadrilateral figures of different sizes indicate the variety of commuters. Commuters are diverse and anonymous; the amalgamation of quadrilateral figures with different dimension and orientation echoes the very concept of diversity. In contrast with the centre oriented pattern of a dome that unifies the mass and draws attention to its apex as the ultimate destination to infuse sacredness into the space beneath it, here in the subway because there is no single destination or sacred entity, the pattern is not centralized in order to harmonize with the different range of users with different intentions and expectations. Vibrancy and movement is observable and conceivable in this pattern which echoes the movement and dynamism inherent to the subway station.

Fig 3.32 - (next page) by Author, Entrance Double Shell



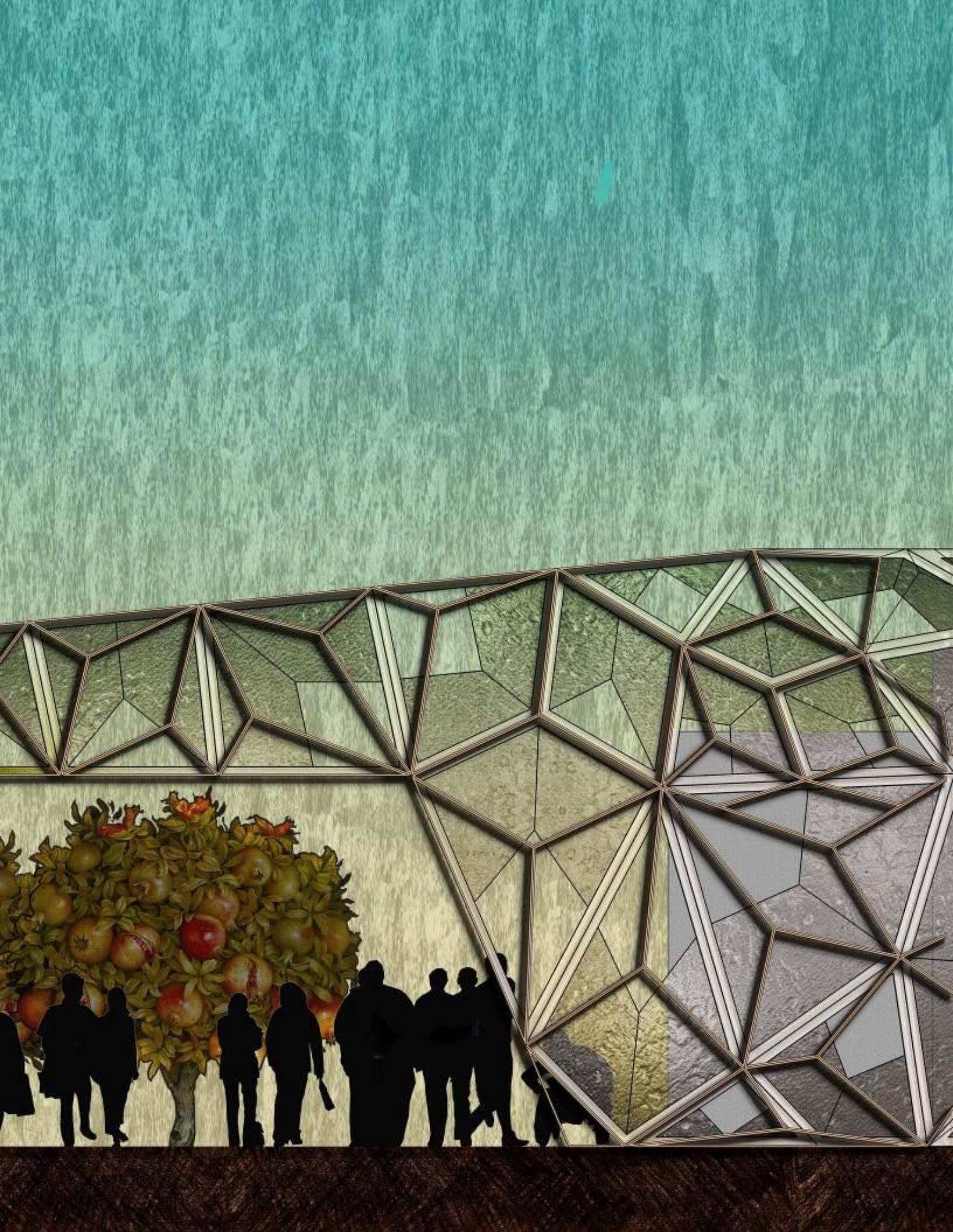




Fig 3.33 - by Author, Site Plan, Scale 1: 5000

### **The Pomegranate Garden**

*“Tehran is a large village near the city of Rey, full of gardens and fruit trees. Villagers grow excellent fruits, notably an excellent pomegranate, which is found only in Tehran.”<sup>72</sup>*

A small village two centuries ago, Tehran was famous for its pomegranate orchards. As the village grew bigger, so did the size and number of its gardens. Even as a city in the nineteenth century, only a quarter of it was built up and the rest was mainly devoted to gardens. Even a few years ago, passers-by in Tajrish Square in north Tehran (Tajrish square is one of the most important public and commercial zones in the city of Tehran and located in the vicinity of the Pole – e Rumi station) could not fail to notice the appearance of the square surrounded by the dense foliage of plane trees and lush gardens of pomegranate.<sup>73</sup>

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<sup>72</sup> Tehran has no pomegranate, a documentary by Masoud Bakhshi, 2007

<sup>73</sup> “Remembering Tehran Trees”, JadidOnline, accessed May 8, 2012, [http://www.jadidonline.com/story/05082010/frnk/tehran\\_trees](http://www.jadidonline.com/story/05082010/frnk/tehran_trees)



Fig 3.34 - by Author, the Pomegranate Garden, 1:2000

Now it is the twenty – first century, and Tehran has no more pomegranates. The last remnants of those trees were buried under tons of concrete and iron. This sums up the fate of Tehran’s trees and gardens through the course of the last century and particularly the last few decades when the construction process has been relentlessly accelerated. What remain are good memories of pomegranate gardens.





Fig 3.35 - by Author, Site Section through water path, Scale 1:1000

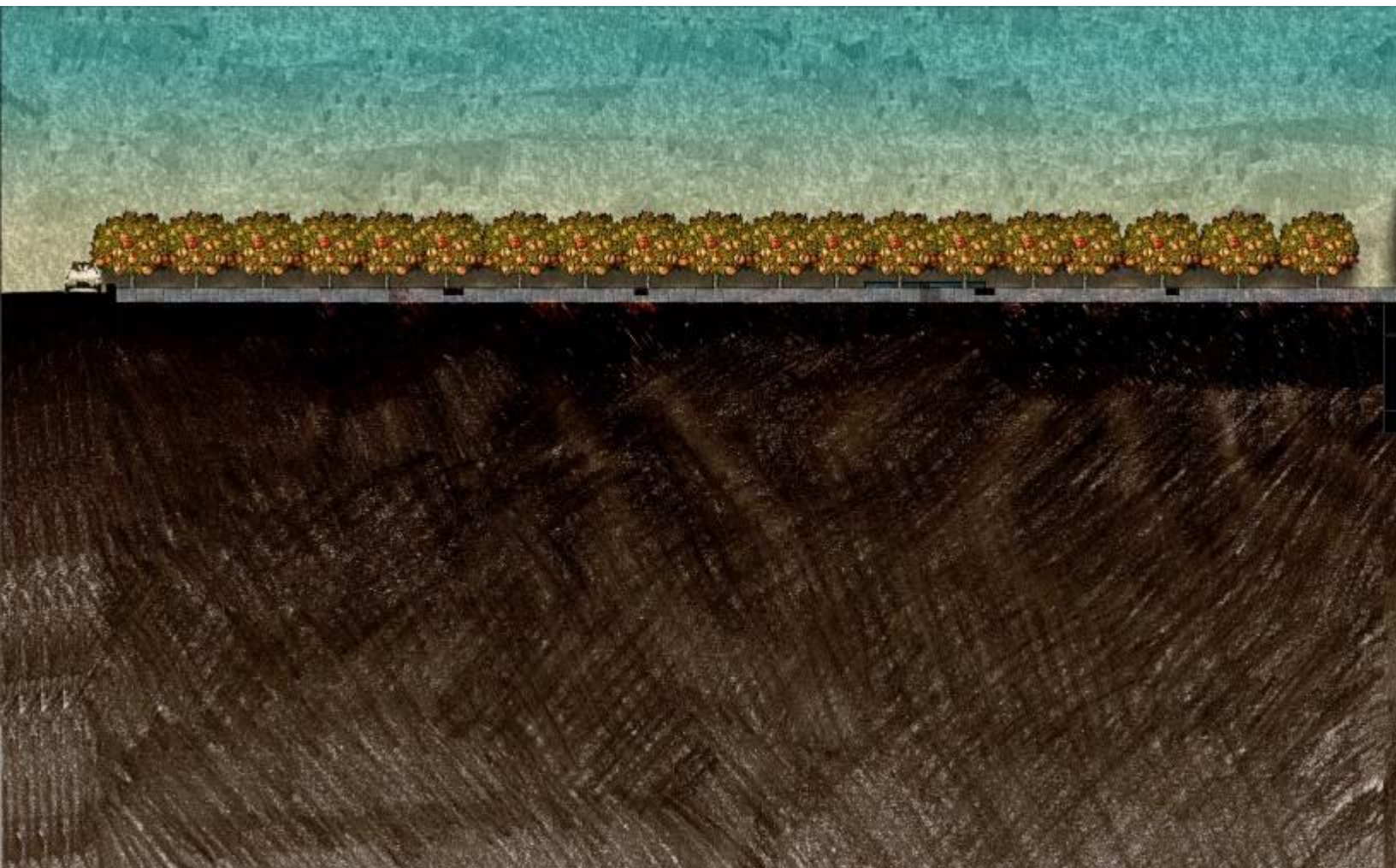




Fig 3.36 - by Author, Site Section C - C, Scale 1:750



From the south, old Tehran was bordered with walls, gardens in its centre and surrounded with mountains on its north. The city is still overlooks the mountains, but the walls are ruined and the gardens have disappeared. The open area atop the station is conceived to be planted with pomegranate trees to celebrate the remarkable Tehran of the nineteenth century. The garden evokes good memories of the past and also corresponds to the story's ending scene with the symbolic pomegranate tree which enlivens the hope of love in the world. The proposed garden also features one more key element of the story, the mountain which associates the experience of fascination and magnificence of love. These figures have to do with romantic images of the story as well as natural landscapes that perceived from the traditional style of gardening in Iran. Ultimately, longing for the beloved and Paradise along with an emphasis on highly ornate structure in the garden, forms the basis of design interventions.

Chahar-bagh (four – gardens) is the traditional Persian garden type featuring an enclosing wall, rectangular pools and internal network of canals, garden pavilions and lush planting. Having two straight waterways and four quadrants, Chahar – bagh attempted to emulate Eden. Waterways and pathways ran through each of the four quadrants and connected to a central pool. In some ways the proposed garden atop the station is a replica of Chahar – bagh; it indicates the idea of an earthly paradise walled-around with trees, pools, and a pavilion that faces the pool. However, unlike the Chahar – bagh with its orthogonal system of pathways, the proposed garden does not have a linear network of paths and lawns; instead, an intertwined arabesque pattern adorns the ground. The arabesque pattern extends throughout the site and makes available a fluid paved area for pedestrians. In this way, planting the trees follows the order of arabesque. The matrix of arabesque and pomegranate trees is appeared to be an expression of harmony.

*“It is not an accident but a deliberate, planned entity. This garden fulfills two requisites all gardens are designed to fulfill: its trees are good for food and pleasing to the eye, that is, it has both practical and aesthetic functions. This mythical garden must be watered; in this case several waterways are serving for irrigation.”<sup>74</sup>*

On its inside, the garden is landscaped with pomegranate trees planted in patches of soil with the shape of arabesque and plane trees on its periphery along the Shariati Street. Arabesques are seen as either khaki or turquoise blue. Blue represents the pool, which is shallow; khaki represents patches of soil, which are deep.

From south, a screen or wall encloses the garden and separates it from the neighbourhood; from north, a mountain hides the garden from the street partially and protects it from the turmoil of life in the city of Tehran. Where the mountain meets the earth, the water path begins; it moves along the garden, fills the shallow pools and the grand pool in front of the pavilion, and returns to the earth where the south wall encloses the garden.

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<sup>74</sup> “Persian Paradise Gardens: Eden and Beyond as Chahar Bagh”, *ElectrumMagazine*, last modified July 29, 2011, <http://www.electrummagazine.com/2011/07/paradise-gardens-of-persia-eden-and-beyond-as-chahar-bagh/>

*"The recreated mythical garden of Eden has a vital element of Persian gardens, walled or protected not just to preserve plants and keep watery humidity high but keep the prying eyes out."*<sup>75</sup>

The pomegranate garden is an oasis, it is a place of tranquility; it offers viewers the opportunity to withdraw from the tumult surrounding them, a place of refuge for lovers, hiding them from others' gaze.

*"Like the first pleasure garden in Eden, 'pleasing to the eyes' as well as good for food, this ultimate garden also fills multiple roles as a garden should. This desire of all desires, the ultimate pairi-daeza will be for feeding and healing both body and soul, just as the Persians have always known their gardens to do."*<sup>76</sup>

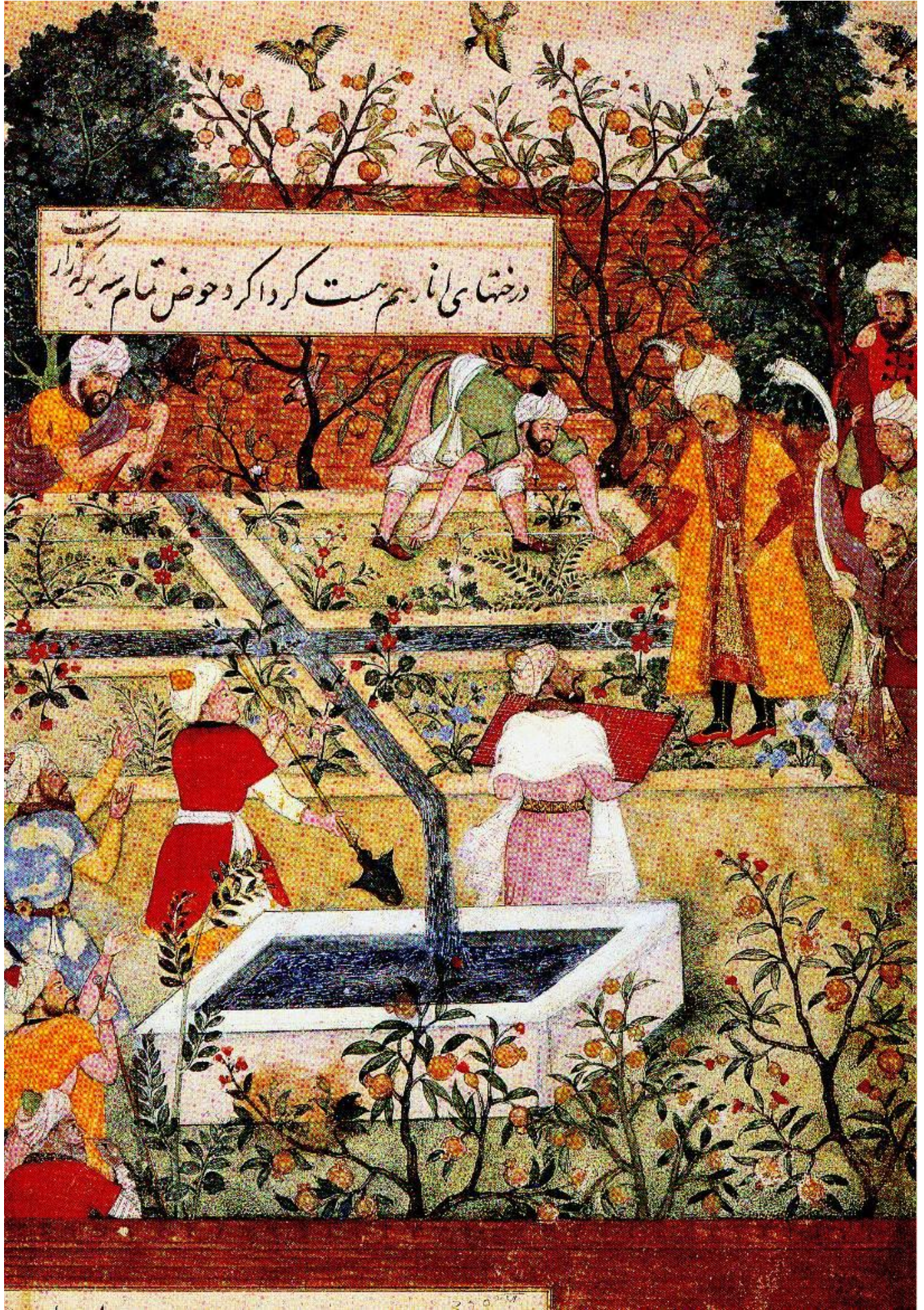
The proposed pomegranate garden unpinned from traditional garden concepts and pomegranate orchards in Tehran and inspired by the epic love story, the creation of images, ideas, and dreams, can all be the key to stimulating people's desires and fantasies. With this in mind, it is important to create places that have meaning and that mirror the interests of residents, places that recreate the relationship that people once had to gardens but which has been lost to much of the population as a result of "extreme mediatisation and artificiality"; places that have the potential to bring people back to this relationship so they can experience feeling in the truest sense of the world. If public spaces- open or closed, are successfully reactivated and emotionally charged, they have the potential to permanently shape the character and appearance of the city, in addition to becoming a historical point of reference and an architectural highlight.

Fig 3.37 - (next page) pomegranate garden, Babur, India, ca. 1590 (painted

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<sup>75</sup> "Persian Paradise Gardens: Eden and Beyond as Chahar Bagh"

<sup>76</sup> "Persian Paradise Gardens: Eden and Beyond as Chahar Bagh"



## **CONCLUSION**

For this thesis, ornament satisfies the enduring appeal for beauty and gives the observer a chance to rediscover sensuality in space. Hence, all those elements that contribute to the sensorial performance of built forms being the entire form, the envelope, or the surface of the cladding are involved. In this regard, the thesis engages literature and ornament to articulate the imaginary as a way of adding sensuality to the station. Pomegranate tree, mountain, human figures, gemstone and other clues drawn from the poem symbolise the concepts of love, longing, and loss or lust which feed the subject of ornament. The ornamental set in return, creates a theatrical spectacle in an unexpected location for passengers to excite them.

For the case of a subway station, we are talking about an architecture which is inevitably very physical. So we have real pomegranate trees and real rock that is a contemporary texture. Having a rock surface refers to that rock face which is part of the poem but for people in the subway it is a real surface, they can touch it, lean against it, stand next to it, or look into it; hence, what we see here is extremely appropriate for architectural use precisely because we give people the chance of having a tactile experience.

The pomegranate garden has this great quality of being representational, it certainly has references back to past visual culture; we can take it back to miniatures and also to Tehran; however, it is also just a garden and a real place for people to go; to experience it, they do not need to have that historical background. There are real love triangles and lovers coming and going in the garden, so we can imagine people having those moments of poetry produced in their lives. In this way people engage in the historical stories and re-enact them without needing to be aware of them.

Elaborated surfaces and architectural details drawn from poetry and imagery are manufacturers of desire for the spectators. We can imagine a lot of people who know the story but have not read it in its details. Different people might read it in their own individual ways or in similar ones. Having seen a story in a more available level in a subway might inspire people to go back and to want to read the details; they might want to make the connections back to the original literature and from there back into a sense of collective culture.

To sum up, my design strategy was to situate my architectural intervention in a broad cultural background, to adapt delicate ornamental forms and structures to current requirements, while preserving precious imagery surviving from the distant past. I inflected the models of the past in order to make them expressive in the present city. The use of architectural heritage however, was not restricted to principles and prototypes; more importantly, the culture on a broader scale was addressed with its myths and memories, including local arts and crafts, and literature. Iran is a land of poets and our images come from our poetry. So a rich vocabulary of ornament exists in Persian poetry, which I interpreted in ornamental and structural terms. Translating stories into the language of ornamentation and patterning is a form of expression that engages history, culture, and literature. Ornament here functions as cultural cement which is able to anchor contemporary architectural products within a tradition, and to keep the tradition alive at the same time.

The design project was experimental although it was proposed for an existing constructed subway station. It was a comprehensive practice, and its phases were ranging from depicting the extracted clues from the story, combining those with ornamental patterns, colors and materials, and also associating the final ornamental set with the real context of the station. Also the story was chosen based on the author's understanding of the site and the local history of pomegranate gardens in Tehran that was linked to the ending of the story. Those were all done by one hand and it was possible just because it was an experiment. However, in reality for such projects that involve different disciplines such as literature, architecture, conceptual arts and crafts, their accomplishment entails contribution of experts in those disciplines. So taking those multi – disciplinary approaches entails contribution of a group of artists and architects with their involvement in different phases of a project form finding an appropriate story, extracting clues, translating those into an artistic language and then executing them in the site.



## APPENDIX 1:

### The original poem from The Khosrow and Shirin collection<sup>77</sup>

آغاز مشق فریاد	ز لری کردن فریاد از مشق شیرین
چو روز آینه خورشید در بست	چو دل در مهر شیرین بست فریاد
تجسس کرد ماور آن زمین را	به نغمی می گذشتش روزگاری
به شادوان شیرین برودش	فرود رفت دیش پای در گل
در آمد کوهکن مانند کوهی	زبان از کار و کار از آب رفت
چو یک سیل از تسبری و بلندی	چو دیوار از رحمت مردم گریزان
رقیبان حرم به نواختندش	گرفت کوه و دشت از پیکاری
برون پرده فریاد ایستاده	غمش را در جهان نغمواره ای زد
در اندیشه که لعبت باز کردون	ز دوری کشته سودانی بیکبار
جهان ناکه پیشون سازنی کرد	ز گرمی برده مشق آرام او را
به شیرین خنده های شکرین ساز	چنان از عشق شیرین تلخ بکریست
دو فصل شکر از یاقوت برداشت	دش نالان و چشم زار و کریان
رطب بلبل که نخلش باری داد	علاج در دبی دمان ندانست
به نوش آباد آن خرمان در شیر	فرمانده چنین تنها و بنجر
ز بس گزند امن لب شکر افتاد	گرفت عشق شیرینش در آنوش
شدیم نام او شیرین از آن بود	به صد تلمیخ از مردم نهستی
ز شیرینی چه گویم چه خوابی	ز تن می خواست تا دوری گزیند
ز شکر حلقه ها در گوش کردی	اگر در نورد کرد در ناریدی
در آن مجلس که اول لب بر کشادی	در آفاق این سخن شد داستان
کسی را کان سخن در گوش رفتی	چو گرفت آن سخن فریاد در گوش
به روی حاکم می غلتید بسیار	چو شیرین دیدگان آرام رفت
شب صد چشم حرم صد چشم بر بست	
بدست آورد فریاد کزین را	
به رسم خواجگان کسی نداشت	
کز او آمد خلائق را کسبوی	
به مقدار و پیش زور مندی	
به واجب جایگاهی ساختندش	
میان در بسته باز و گشاده	
چه بازی آردش زان پرده بیرون	
پس آن پرده لعبت بازی کرد	
در آمد شکر شیرین به آواز	
وز یاقوت و شکر قوت برداشت	
رطب را کوشال خاری داد	
شکر خواند انگبین را چاشنی کیر	
شکر دامن به خورستان بر افشاند	
که در گفتن عجب شیرین زبان بود	
بر آوازش نغمتی مرغ دمای	
طبر ز را چو لب پر نوش کردی	
نبودی تن که حالی جان ندادی	
که افلاطون بدی از بوس رفتی	
چو مصروعی ز پای افتاد بر خاک	

<sup>77</sup> "The Khosrow and Shirin collection", Ganjoor, accessed March 11, 2012  
<http://ganjoor.net/nezami/5ganj/khosro-shirin>

در آن سر کوفتن بچم چون مار

بر آرد از بجز آبی شنب ناک

هم از راه سخن شد چاره سازش

بدان دانه دام آورد بازش

آگاهی یافتن خسرو از مشق فریاد

رای نودن خسرو در کار فریاد

یکی محرم ز نزدیکان درگاه

فروگفت این حکایت جلد باناه

ز نزدیکان خود باخرمی چن ۵

نشست و ز درین سخن می پند

که فریاد از غم شیرین چنان شد

که در عالم حدیثش داستان شد

که با این مرد سودانی چه سازیم

بدین مهره چگونه حجابیم

دانش را پنهان سودا گرفته است

کز آن سودا ره صحرانگرفته است

گرش ما نم بود کارم تا بست

و که خوش برزم کنی گناست

ز سودای حال آن دل افروز

بر سینه پاوسر کرد و شب و روز

بس کوشیدم اندر پادشاهی

مگر عیدی کنم بی روستایی

دلم گوید به شیرین دردمند است

بدین آوازه آوازش بلند است

کنده بر من کون عید آن مه نو

که کرد آشفته ای را بار خسرو

حرامی نزعوان دارد ز اسپر

ز از شیرینی ترسد از تیر

خردندان چنین داند پانچ

که ای دولت به دیدار تو فرخ

دلش زان ماه بی یونمید نم

به آوازش ازو خرنمید نم

کسین مولای تو صاحب کاهان

به خاک پای تو گوئند شاهان

ز بس کاوید یاد آن سیم تن را

فراش کرده خوله خویشتن را

جهان اندازه عمر درازت

سعادت یار دولت کار سزات

کنده هر بنده بر قصرش سلامی

شود راضی چون بنده سپاسی

که این آشفته را تیر سازیم

ز آه آن کز زرش زنجیر سازیم

ملک چون کرد کوش این داستان را

بوس در دل فرود آن داستان را

که سودا را منرخ زربود ز

منرخ خود زر کرد و میسر

و هم میدان هم بهتر گزیند

دو بل بر یکی خوشتر سرانید

تختش خوله بید با صد امید

ز رفتن بی بر او کردن چون خرید

چو تندی را دو کس باشد خریدار

بهای قدیش آید پدیدار

به زرد زردستان کزین بر آید

بدین شیرینی از شیرین بر آید

دل خسرو به نوعی شاهان شد

که با او بی دل هم داستان شد

بسانینا که از زر کور کرد

بس آه آن کوب زربنی زور کرد

به دیگر نوع غیرت بر دیار

که صاحب غیرتش افرو در کار

گرش توان به زرد مزول کردن

به یکی بیدش مشول کردن

در آن اندیشه عاجز گشت رایش

به حکم آنکه دگل بود پایش

که تا آن روز کاوه روز او تنگ

گذارد عمر در پیکار آن سنگ

چو بر تن سپهره کرد و دندنی

فردو آید سی سرو از بلندی

چو شسته بشید قول انجمن را

طلب فرمود کردن کوکلن را

نشاید که خوردن چاره کار

که یار است رای مرد یار

در آوردندش از در چون یکی کوه

قاده از پیش خلقی به انبوه

سخن در تندی تدرست است

که در سستی بر تیر سست است

نشان خفت اندر سر گرفته

رہی بی خویش اندر بر گرفته

طییب ار چند کیر و خن پست

به یاری به دیگر کس دهد دست

ز رویش گشته پیاپی قاری

بر او کبریته دوران به زاری

ملک فرمود تا بواقفندش

به رکابی ناری ساقندش

ز در خسرو نک کرد و ز در تحت

چو شیران بجز گرداندر زمین سخت

ز پای آن یل بالا را نشاند

به پایش یل بالا ز نشاند

نم شیرین چنان از خود بودش

که پروای خود خسرو نبودش

چو کوه در دل پایش یکی بود

ز کوه باز رو خاش یکی بود

چو همان را نیند چشم بر ز

ز لب بکشاد خسرو کوچ گوچ

منافره خسرو با فریاد

کوه کندن فریاد و زاری او

برگرمی گفت کاری شرط کردم	وگر زین شرط برگردم ز مردم	چو شد پر دانت فریاد اچنگ	ز صورت کاری دیوار آن سنگ
میان دند و زور دست بکشمای	برون شود دست برد خویش نهای	نیامودی ز وقت صبح تا شام	بیدی کوه بر یاد دلارام
چو بشید این سخن فریاد بی دل	نشان کوه جست از شاه عادل	به الناس مژده یا وقت می سنت	ز حال خویش تن با کوه می گفت
به کوی کرد خسرو بنموش	که خواند هر کس کفون بی نموش	که ای کوه ار چه داری سنگ خاره	چو نامردی کن و شو باره پاره
به حکم آنگه سگی بود خارها	به سختی روی آن سنگ آشکارا	وگر ز من به حق جان جانان	که تا آدمم که باشد بر تم جان
ز دعوی کاخ خسرو بادلی خوش	ردان شد کوه کلن چون کوه آتش	زدی بر پای آن صورت بسی بوس	بر آوردی ز شمش ناله چون کوس
بر آن کوه کوه گرش رفت چون باد	کمر بست و زخم تیش بکشد	ای حراب چشم نقش بنمان	دو اینش درون در دمندا
بر او تنال های نغز بکاشت	بر او تنال های نغز بکاشت	بت بسین تن سنگین دل من	به گوگرد شده مسکین دل من
به تیشه صورت شیرین بر آن سنگ	چنان برزد که مانی نقش از رنگ	تو در سگی چو کوچ چای بسته	من از سگی چو کوچ دل شکسته
پس آنگه از زمان تیشه تیز	گزارش کرد شکل شاه و شیدیز	نم یاری که بریات شب و روز	جهان سوزم به فریاد جهان سوز
بر آن صورت شنیدی کز جوانی	چو نامردی چه کرد از مهربانی	تورا تا دل به خسرو ما باشد	غریبی چون منت کی یاد باشد
وزان دیکه که آمد به پورده	چه کرد آن پسر زان با آن جوانمرد	نشسته شاد شیرین چون گل نو	شکر ریزان به یاد روی خسرو
اگر چه دنیه بر گرگان تله بست	به دنیه شیر مردی زان تله درست	خدا کرده چنین فریاد مسکین	ز بهر جهان شیرین جان شیرین
چوپه از دنیه ز انسان دید بازی	تو بر دنیه چرای می گدازی	در این دغلیه و تنگ آفریده	وجودی دارم از سنگ آفریده
مکن کین میش دندان سپردارو	به خوردن دنیای او گمبارو	مراد عاشقی کاری است مثل	که دل بر سنگ بستم سنگ بردل
چو پنج حالت ندوب دار	ز پس رفتن چرا لیدوب دار	ز سودای تو ای شمع جهان تاب	ز دیداری آسوده ام ز در خواب
بگفت از جان شیرینم فرو بست	بگفتا عشق شیرین بر تو چو بست	مبادا کس بدین بی خانمانی	بدین تلفتی چه باید زندگانی
بگفتا حشرش منی چو مستاب	بگفت آری چو خواب آید کجا خواب	وزان جا بر شنیدی برشته کوه	حیث کوه کندن گشت مشهور
بگفتا دل ز مهرش کی کنی پاک	بگفت آنگه که باشم خسته در خاک	به زخم کوه کردی تیشه را تیز	به شب تا روز کوه بار بودی
که سنگ است آنچه فرمودم ز خاکست	بگفت آشت از من دور بهتر	ز سنگ و آتش حیران شنیدی	در آن کهرشته سحر کرده ان شنیدی

رفق شیرین به کوه میتون و سخط شدن اسبوی

آگاهی خسرو از رفق شیرین نزد فرهاد کشتن فرهاد به کمر

مبارک روزی از خوش روزگارن	نشسته بود شیرین پیش یاران	خبر دادند سالار جهان را	که چون فرهاد دید آن دلستان را
به خنده گفت ای باران دل افروز	علم بر میتون خواهم نزد امروز	بدان آهین که او سنگ آزمون کرد	تولند میتون را میتون کرد
بسیه میم کاهین با زوی فرهاد	چگونز سنگ می برد به پولاد	اگر ماند بدین قوت کی ماه	ز پشت کوه سیرون آورد راه
بیاد لعل او فرهاد جان کن	کننده کوه را چون مردگان کن	به پرسش گفت با سپران بشیار	چرا مید ساقین تدیسران کار
به شخص کو پیکر کوه می کند	غمی در پیش چون کوه دماند	چنین گفتند سپران خردمند	که گر خوابی که آسان کرد دین مجد
چو از لعل لب شیرین خبر یافت	به سنگ خارده در کشتی گم یافت	فرو کن قاصدی را کز سر راه	بدو گوید که شیرین مرد ماه
به دیش آهین از دل گرم تر گشت	به آهین سنگش از گل نرم تر گشت	طلب کردند نافر جام کوبی	کره پیشانی دلنگ رویی
به دیتی سنگ را می کند چون گل	به دیگر دست می زو سنگ بردل	فرستادند سوی بی تویش	شده بر ناخانی را بنوش
ز اسب ار کوه زربودی ندیش	سخط گشتی به زیر کوه ییش	سوی فرهاد رفت آن سنگدل مرد	زبان کشاد و خود را سنگدل کرد
چنین گویند که اسب با در فدا	سخط شد زیر آن کج کمر باد	چومد ترش روی تیغ کفتار	دم شیرین ز شیرین دید کار
چو عاشق دید مکان مشوق چالاک	فرو خواهد قفاو از با بر خاک	بر آورد از سر حسرت کی باد	که شیرین مرد و آگ نیست فرهاد
به گردن اسب را با سوارش	ز جا برداشت و آسان کرد کارش	دینا آن چنان سرو شبنگ	ز باد مرک چون افتاد بر خاک
به قصرش بر داز انسان ناز پرورد	که موی بر تن شیرین نازرد	چو افتاد این سخن در گوش فرهاد	ز طلق کوه چون کوبی در افتاد
مهندس در پولا تیه	ز چوب ناز تر کرد می همیشه	صلای در شیرین در جهان داد	زمین بر یاد او بوید و جان داد
ز بهر آنکه باشد سگ تیرش	به دست اندر بود فرمان پذیرش	چو بشید این سخنامی جگر تاب	فراز کوه کرد آن تیش پر تاب
نمان در سنگ رفت و در خاک	چنین گویند غامی بود نمک	از آن در بر آمد شوشه نار	درختی کشت و بار آورد بسیار
از آن شوشه کون کر نامایی	دوای در حیرت مایایی	نظامی گزید آن نار بن ر	به دقصر در چنین نخلد این سخن را

## **BIBLIOGRAPHY**

### **ARTICLES**

- Aran, Hamid, "Economic and Transportation Monthly of Iran", Tarabaran 9, (1999).
- Beebly, Thomas H., "The Grammar of Ornament/ Ornament as Grammar", Ornament 1, (1977).
- Dimand, Maurice S., "Studies in Islamic Ornament: I. Some Aspects of Omayyad and Early 'Abbāsīd Ornament", Arts Islamica 4, (1937).
- Falahat, Mohamad S. and Mohamad Zare, "The emergence of eternal truth by light in Islamic Architecture", Canadian Journal on Environmental, Construction and Civil Engineering 4, (2011).
- Grigor, Talinn, "Orient oder Rom? Qajar "Aryan" Architecture and Strzygowski's Art History", The Art Bulletin 89, (2007).
- Kadoi, Yuka, "Aspects of Frescoes in Fourteenth-Century Iranian Architecture: The Case of Yazd", Iran 43, (2005).
- Mahdavi, Shahrzad, "History and Memory Vanish from the Face of Tehran", Memar 73, (2012).
- Micara, Ludovico, "Contemporary Iranian Architecture in Search for a New Identity", Environmental Design: Journal of the Islamic Environmental Design Research Centre 1, (1996).
- Popovitch, Sava, "The Iranian Element in Persian Art", The Burlington Magazine for Connoisseurs 57, (1930).
- Summerson, Sir John, "What is ornament and what is not", Ornament 1, (1977).

### **BOOKS**

- Albarn, Keith, *The Language of pattern; an enquiry inspired by Islamic decoration*, London: Thames and Hudson, 1974.
- Anderson, Stanford Eladio Dieste, *innovation in structural art, 1917 – 2000*, New York: Princeton Architectural Press, 2004.
- Baer, Eva, *Islamic Ornament*, 1998, New York: New York University Press, 1998.
- Belting, Hans, *Florence and Baghdad: Renaissance Art and Arab Science*, 2011, Cambridge, Mass.: Belknap Press of Harvard University Press, 2011.
- Boardman, John, *Persia and the West: an archaeological investigation of the genesis of Achaemenid Persian art*, 1927, New York: Thames & Hudson, 2000.
- Canby, Sheila R., *Shah 'Abbas: the remaking of Iran*, London: British Museum Press, 2009.

- Critchlow, Keith, *Islamic Patterns: An Analytical and Cosmological Approach*, Rochester: Inner Traditions, 1999.
- Curatola, Giovanni and Gianroberto Scarcia, *The art and architecture of Persia*, New York: Abbeville Press, 2007.
- Curtis, John, *Forgotten Empire: the world of ancient Persia*, 1946, London: British Museum Press, 2005.
- Frye, Richard N., *the Golden Age of Persia*, 1920, London: Butler and Tanner, 1989.
- Gleiniger, Andrea and Georg Vrachliotis, *Pattern: ornament, structure, and behavior*, Boston: Birkhäuser, 2009.
- Grabar, Oelg, *the Mediation of Ornament*, 1992, Princeton: Princeton University Press, 1992.
- Grigor, Talinn, *Building Iran: Modernism, Architecture, and National Heritage under the Pahlavi Monarchs*, New York: Periscope Publishing Ltd., 2009.
- Hodgson, G., *Nature and illumination*, 1935, Whitefish, MT.: Kessinger Publishing, 2004.
- Honour, Hugh and John Fleming, *the Visual Arts: A History, 1919 – 2001*. New York: H.N. Abrams, 2002.
- Horne, Charles F, *the Sacred Books and Early Literature of the East*, New York: Parke, Austin, & Lipscomb, 1917.
- Issam Parman A., *Geometric concepts in Islamic art*, 1939, London: World of Islam Festival, 1976.
- Michaud, Roland, Sabrina Michaud and Michael A. Barry, *Design and color in Islamic architecture: eight centuries of the tile-maker's art*, 1948, New York: Vendome Press, 1996.
- Moussavi, Farshid and Daniel López-Pérez, *The function of form*, Barcelona; New York: Actar; Cambridge, Mass.: Harvard University, Graduate School of Design, 2009.
- Moussavi, Farshid and Michael Cubo, *the Function of Ornament*, Cambridge, Mass.: Harvard University, Graduate School of Design, 2006.
- Pirnia, Mohammad K., *Iranian Architectural Styles*, Tehran: Islamic Art, 2002.
- Pope, Arthur U., *Introducing Persian Architecture*, Oxford: Oxford University Press, 1972.
- Pūrjavādī, Naṣr Allāh, *The splendour of Iran*, London: Booth Clibborn Editions, 2001.
- Schafter, Debra, *The order of ornament, the structure of style*, Cambridge: University Press, 2003.
- Stierlin, Henri, *Islamic art and architecture*, London: Thames & Hudson, 2002.

**WEBSITES:**

Arcinet, "Safavid Surfaces and Parametricism", accessed December 2, 2011,  
<http://archinect.com/features/article/29553480/safavid-surfaces-and-parametricism>

Culture of Iran, "Pre-Zoroastrian Religions of Iran", accessed December 12, 2011,  
<http://www.cultureofiran.com/pre-zoroastrian.html>

Ganjoor, "The Khosrow and Shirin collection", accessed March 11, 2012,  
<http://ganjoor.net/nezami/5ganj/khosro-shirin/>

JadidOnline, "Art in the Tehran Metro", accessed January 29, 2012,  
[http://www.jadidonline.com/story/29012009/frnk/art\\_in\\_metro\\_eng](http://www.jadidonline.com/story/29012009/frnk/art_in_metro_eng)

JadidOnline, "Remembering Tehran Trees", accessed May 8, 2012,  
[http://www.jadidonline.com/story/05082010/frnk/tehran\\_trees](http://www.jadidonline.com/story/05082010/frnk/tehran_trees)

Iran Chamber Society, "Borrowed Ideas; Persian Roots of Christian Traditions",  
accessed December 1, 2011,  
[http://www.iranchamber.com/culture/articles/persian\\_roots\\_christian\\_traditions.php](http://www.iranchamber.com/culture/articles/persian_roots_christian_traditions.php)

"The Rise of the Persian Renaissance", Iran Heritage, accessed April 5, 2012,  
<http://www.iranheritage.org/persian-renaissance/abstracts.htm>

Yatzer, "Re - sampling ornament at S AM", accessed August 20, 2011,  
<http://www.yatzer.com/RE-SAMPLING-ORNAMENT-at-S-AM>