Original Research Article

A Morphological-Historical Study on The Initial Core of the Razavi Holy Shrine Complex
With a Focus on Narrative Documents and in Comparison with the Architectural Design of the Sassanid and Early Islamic Palaces*

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Abstract

Problem statement: The Razavi Holy Shrine Complex is one of the most prominent buildings in Iran from both religious and structural perspectives. However, the initial spatial layout of its very first building and the process of its physical expansion has not been studied yet. Thus, investigations on its initial structure and the primary stages of its expansion will significantly contribute to a broad understanding of the existing structure.

Research objective: This study looks for the footprints of the initial building around the tomb, in the existing complex, intending to identify the spatial layout.

Research method: Through an “interpretive-historical” approach, this study investigates the initial spatial layout of the holy shrine around the tomb. To this end, a hypothesis has been made: the spatial layout of the initial mausoleum of Imam Reza (A.S.), which was more complex than a simple (single) grave, has followed the spatial and morphological layouts of the Sassanid architecture. This hypothesis is firstly considered according to historical texts; through morphological investigations, it then looks for the footprints of the initial building around the tomb. The discovered layout is finally compared to several Sassanid and Early Islamic palaces. Based on these three investigations, the findings are ultimately reconciled.

Conclusion: The results obtained from the investigations show that the structure of the initial building of the Razavi Holy Shrine Complex that is rooted in the Humayd Ibn Qahtaba’s Palace, has possibly followed the architectural design of the Sassanid Palaces; the cruciform geometry (Dar-Al-Siyadah) beside the porch-shaped space (Dar-Al-Huffaz) bears a great resemblance to the spatial layouts of the Sassanid Palaces.

Keywords: The Initial Structure of Razavi Holy Shrine, Humayd Ibn Qahtaba, Sassanid Architecture, Early Islamic Architecture, Razavi Holy Shrine.

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Introduction
It is not possible to study the formation and the expansion of Mashhad city regardless of the position of the Imam Reza Holy Shrine in the third century A.H. Throughout the history, the holy shrine has played a major role in the city expansion and has significantly impacted on the quality and quantity of the physical development of the city. Thus, it is impossible to ignore the important role of the city in its realm. Furthermore, the burial of Imam Reza (A.S.) in the Humayd Ibn Qahtaba’s garden, considered as a government headquarters in the Great Khorasan, has led to the foundation of one of the largest historical complexes in Iran. The study of the alterations in the architectural design of this complex is, therefore, of great importance for Mashhad.

Almost no historical data are currently available regarding the origin and the history of the formation of the initial core of the shrine; numerous theories have been therefore presented concerning the period of its formation. Given that some of the later structures of the shrine possess inscriptions or endowments, many of which have been mentioned in various historical texts, a relatively accurate period of history can be specified for them. This study, in turn, attempts to provide a clearer understanding of the structure of the holy shrine in the early centuries of its construction based on studying the written historical documents and comparing them with the historical architectural design principles and documents.

Research hypothesis
The spatial layout of the initial mausoleum of Imam Reza (A.S.), which was more complex than a simple (single) grave, has followed the spatial and morphological layouts of the Sassanid architecture.

Research background
Several studies have been carried out to explore the role of the holy shrine in the formation of Mashhad and address how it originated, expanded and evolved throughout history.

Based upon reviewing historical texts, Sadrikia and Bemanian (2015) have studied the advent and the physical development of the holy shrine from its foundation until the fifth century A.H.; they represented that the initial building was a simple tomb to which the Balasar Mosque and the North Porch, connected to the mosque and grave, have been added by the fifth-century A.H. They also stated that “Ibn Al-Athir” was the only one who mentioned the destruction of the shrine by “Amir Sebuktiqin” and no one else such as “Bayhaqi” did attribute this demolition to “Sebuktiqin”. Hence, they argued that the destructions in the early fifth century A.H. may have not been massive. They ultimately represented the development status of the shrine up to the fifth century A.H. (Fig. 1).

In the article, “Principles of physical development of the Razavi Holy Shrine with focus on the historical developments of the ninth century A.H.,” Sadrikia (2015) focused on the ninth century A.H., that from this time onwards, in her view, the great expansion of the shrine has begun. She also stated that before this period, there were few major changes made by Shiites and devotees of Imam Reza (A.S.) around the shrine. Based on various historical texts, she mentioned that at the time of its foundation, the initial tomb was not magnificent; it was only a simple and unpretentious building with a short dome. She continued with describing the development process of the shrine in the ninth century A.H. and ultimately represented a scheme of the development status of the shrine within this period (Fig. 2).

Following the historical documents and with a specific focus on the Razavi Holy Shrine, Zarei, Hashemi Zarjabad and Masoudi (2016) investigated the expansion process of Mashhad from the burial of Imam Reza (A.S.) in “Sanabad” until the end of the Qajar era. They argued that the formation and expansion of the city depended on the shrine.

Moreover, several archaeological excavations have been carried out around the holy shrine. In his book “Analysis of the Significance of Astan-e Quds-e Razavi Museums Earthenware Masterpieces in Iranian Pottery” Labbaf Khaniki (2014) pointed
operations. Therefore, field studies were conducted in three ways of creating a shear wall, excavating boreholes and collecting cultural materials. He also added that three cuts have been made on the eastern wall of the canal on the east side of the holy shrine and eight boreholes have been excavated in different spots of the shrine. The most ancient layers of civilization have been discovered in a borehole that had been excavated under the “Azadi Courtyard” and on the west side of the courtyard adjacent to the porch, leading to the shrine “Ivan Tala” (Golden Porch; also known as Naderi Porch). The remains of architectural elements and the buildings containing clay and mud walls and brick floors with thick
layers of plasterboard have been also discovered. The history of these discoveries can be attributed to the beginning of Islam. He also added that pre-Islamic artifacts have not been discovered in this area. According to several archeological and canal excavations in the “Azadi Courtyard”, Habibi (2008) pointed out that pottery, including earthenware jars, has been collected and studied, many of which have been considered by researchers to be created in pre-Islamic history, given their special style (Fig. 3).

Research method
Discovering the initial structure of the initial building of the mausoleum of Imam Reza (A.S.) and the history behind its development is still in a state of ambiguity and the main purpose of this study is to fill this gap through a historical approach. To provide an accurate understanding of the current position of the building, firstly, information has been collected through surveying historical texts such as historical documents, travelogues, etc., to make a hypothesis, reconcile the information with the existing buildings and categorize each part of the complex into different periods of history. The references from which this information has been collected are categorized into two main groups:
A) The primary sources, simultaneously created within the development period of the building and have depicted the important events of the time.
B) The secondary sources, created by contemporary historians and researchers.
Secondly, the hypothesis has been evaluated and discussed and it is expected that a structural organization could be discovered around the tomb that reflects the features of Pre-Islamic Architecture. In conclusion, in the first stage, a structural organization has been sought through numerous maps, prepared by Bijan Saadat in the second Pahlavi era (Saadat, 1976), Abdolrazaq Boqayeri (1924) and Pirnia (2011) (Fig. 4). Following that, to make the discovered organization more comprehensible for researchers, the case studies of the Sassanid and Early Islamic Palaces have been compared with the discovered layout. The findings of this section have been compared with the periodicity of different historical sections of the holy shrine complex (Fig. 5) to further evaluate the obtained information. The resulting conflicts have been then discussed.
This article also accompanies with some limitations, divided into general and specific categories.
A) Specific limitations:
- Lack of historical information regarding the initial building of the Razavi Holy Shrine (there is not much description of the Humayd Ibn Qahtaba’s Palace).
- A large number of texts have not provided any descriptions of the building in the early centuries of Islam. However, most of the narrators have focused on the personality traits of Imam Reza (A.S.) and the way of his martyrdom;
- The most important limitation of this research is the impossibility of experimental observation of the initial building. Furthermore, within different periods, various parts of the building have been hidden under the decorations created in the later periods, so that access to the initial building has been restricted;
- The application of conventional archaeological methods in the initial core of the Razavi Holy Shrine Complex has not been allowed.
B) General limitations:
- Devastation resulting from various historical invasions;
- The constant changes of words and the language over the ages and the difficulties of discovering synonyms for the obsolete language in special cases;
- The influence of narrators on historical events;
- The loss of some references after several important invasions in history such as the Mongol invasion, etc. Within this research, these limitations have led the authors to evaluate and reconcile the gathered information to the available data, through a logical reasoning methodology. Finally, it should be mentioned that these two sections of the article (text-based study and morphological-based study) are not distinct from each other, though, they are intertwined and have a correlative relationship with each other.

The historical background of the context and physical structure of the Razavi Holy Shrine

It is beyond the scope of this research to describe the physical changes of the holy shrine from the Early Islam up to the contemporary era; however, a brief description of the important points regarding these changes will have been made in Fig. 5. Thus, regardless of evaluating the complexities, a relatively concise narrative of the subject has been presented. The purpose of Fig. 5 is to provide an overview of the physical changes of the Razavi Holy Shrine from the time of the burial of Imam Reza (A.S.) up to the Pahlavi era. Moreover, the information obtained from this image will be used to discover the initial core of the Razavi Holy Shrine.

Subsequently, the factors by which the physical structure of the Razavi Holy Shrine has shaped will have been studied. To provide a set of information for the subsequent discussion and a basis to make a hypothesis, this study will have been conducted through “Studying the historical texts on the historical background of Sanabad” and “Studying the historical texts on the structure of the initial building of the Razavi Holy Shrine”.

- Studying the historical texts concerning the historical background of Sanabad

In 201 A.H., “Ma’mun” exiled “Imam Ali al-Ridha” (A.S.) from Medina to Khorasan. When Imam arrived Tous, “Ma’mun” martyred him by poisoning in 203 A.H. “Ma’mun” buried Imam Reza (A.S.) up to the village of “Sanabad”. The area in which Imam Reza (A.S.) was buried, has been named “Tus” by many of the travelogues and historical references up to the fourth century A.H. For instance, in his book “Al-Buldan” in the third
- Mirror decoration of the dome ceiling of the Razavi Holy Shrine and the completion of gilding the porch of the New Courtyard (Etemad Al-Saltanah, vol. 3, 1985, 51-54).

- Mirror decoration of the dome ceiling of the Razavi Holy Shrine and the completion of gilding the porch of the New Courtyard (Etemad Al-Saltanah, vol. 3, 1985, 51-54).

- Gilding the Amir Alishir Nava'i's Porch and the minarets, next to the dome (Astarabadi, 1982, 62).
- Construction of the Naderi Minaret (Astarabadi, 1982, 62).
- Construction of the Naderi Saqqa Khanah (Marvi, 1985, 203).

- Gilding the dome (Najib Kazarkar et al., 2015, 106).
- Construction of the up and down aisles of the street (Haghighatbin, Ansari & Pourjafar, 2009, 39).
- Expanded and completion of the Atiq Courtyard (Najib Kazarkar et al., 2015, 99).
- Streaming the water of Golasb Fountain to the Courtyard (Haghighatbin et al., 2009, 39).

- Construction of the Parizad, Dodar, and Balasar Schools (Sadrikia, 2016, 52-53).
- Construction of the Amir Alishir Nava'i's Porch (Sadrikia, 2015, 52-53).
- Fetch of the water of Golasb Fountain to the Holy Masjid (Samarqandi, 1974, 506; Torkaman, 1971, 854).
- Dar-al-Siyadah Porch belongs to the Timurid era (Borhan Azad, 1968, 11).
- Dar-al-Hujjaz Porch was erected by Amir Alishir Nava'i (Khawandmir, 1999, 92).


- Construction of the minaret and the dome by Suri Ibn al-Mu'tazz.

- Minor changes, made by the devotees of Imam Reza (A.S.)
- The formation of Bazaar as a bridge between Nowqan and Sanabad (Erfanian Salim & Asgharzadeh, 2014, 21).

Fig. 5. The development trajectory of the holy shrine until the Pahlavi era. Based on the historical texts, the construction history of the dome is not identified. Source: authors based on references in figure.
century A.H., Ibn Ishaq Ya’qubi (1964, 53) stated that “in Tous, there are ethnic groups of Arabs from Arabic pedigree and most of the inhabitants are Ajams (non-Arabs) and the sacred grave of Amir al-Mu’minin is also laid there” Or in his book “Surat al-Ardh” in the fourth century A.H., Ibn-Hawqal (1987, 163-169) stated, “The cities of Neyshabur, Marv, Balkh and Herat are among the largest areas of Khorasan and ... there are smaller and less important provinces, including Qohestan, Tous, Nisa, etc. in Khorasan and Transoxiana. If Tous is also considered as part of Neyshabur, its cities are Raikan, Tabaran, Nowqan. The grave of Imam Ali al-Ridha (A.S.) is laid outside the city of Nowqan and next to it, is the grave of Caliph Harun Al-Rashid in an elegant tomb in a village called Sanabad in which the castle wall is prominent and a group of believers is praying”. In the book, “Ahsan-u at-Taqasim fi Ma’rifat-e Al-Aqalim” (The Best Divisions for Knowledge of the Regions) in the fourth century A.H., Al-Maqdisi (1982, 488) also represented that, “The grave of Ali Ibn Al-Ridha is laid in Tous. A fortress has been erected around it and contains several houses and a bazaar. In this area, Amid Al-Dawlah Faeiq also developed a mosque, than which no other mosque is better in the whole Khorasan”. For the first time, the name, Mashhad, was mentioned in the authentic historical texts of the fourth century A.H. in the writings of Al-Istakhri (1989, 203), Ibn-Babawayh (1983, 136-137) and Al-Maqdisi (1982, 155). Some scholars also mentioned that up to the ninth century A.H., the history of Mashhad was closely intertwined with that of Tous (Najib Kazarkar, Alizadeh & Saremi 2014, 106, Ghassabian, 1998, 6-7).

In addition to travelogues and historical references, we can also refer to some narrations that consider “Sanabad” as environs of Tous. For instance, Majlisi (1976, 289) quoted from Imam Sadegh (A.S.) that during Noah’s flood, four lands complained to God concerning the water that overwhelmed them and God had mercy on them and saved them from sinking. These four lands are as follows: Beyt Al-Ma’mour, Najaf, Karbala and Tous. He also quoted from Vafi, “These four lands complained to God, given that there was no one in those lands to worship God; therefore, God laid these places the burial locations of his saints. The first area to appear in this land was Sanabad, which was developed by “Iskander Dhu al-Qarnayn”, the builder of the dam and was inhabited until the development of Tous”.

Most of the narrators have named this area as Tous, instead of naming it Sanabad; this implies its extensive and strategic geographical and cultural location, which originates from a rich historical background in the Pre-Islamic era. From a historical perspective, until the Sassanid era, the name of Tous, as a place name, has not been specifically mentioned in historical texts and references (Jahanpour, 2006, 2) and researchers attribute the city to the Achaemenid era only by analyzing the city’s name and myths. Referring to “Bundahishn”, Afshar Sistani (1999, 329) pointed out that Tous is also referred to as “Tousa”. Additionally, he referred to the book “Vendidad” in which it was stated that “Ahura Mazda” created the sixteen lands, one of which was named “Aourve” Avestan scholars have recognized this name equivalent to Tous.

In the fourth century A.H., in the book, “Afarinesh va Tarikh” Moqaddasi (1995, 2016) stated, “It is said that Jamshad made Hamedan in Jabal so as he did Istakhr in Persia and Mazar in Babylon and Tous in Khorasan”. Referring to “Hamdallah Mustawfi”, in “Nuzhat Al-Qulub”, Etemad Al-Saltanah (1983, 187) mentioned: “Tus originated from the fourth land, Jamshid Pishdadi has developed it, after its devastation, Nowzar has rebuilt it and attributed it to his name”. Kholousi Rad (1989, 137) asserted that Tous must have existed during the Sassanid era; he added that according to the mythical history of this city, Tous has been developed by Jamshid Pishdadi. The name Tous has been mentioned in several events in the Sassanid era. Referring to “Shahnameh”, Jahanpour (2006, 3) defined the Sassanid Yazdgerd I’s place of death in Tous, next to Cheshmeh Sou. The site of the fire temple, “Azarsoudi Mehr”, seemed equivalent to the site of the fire temple “Azarbarzin Mehr”, was located in Tous (Zadsparam, 1987, 11).
Besides, in Abu Mansuri’s Shahnameh, Abu Mansur Mamari linked his origin to Konarangiane Tous (Dehqani, 2015). According to the historical text Cities of Iran, which dates back to the late Sassanid era, Pigulevskaya (1988, 160) stated that Iranshahr is divided into four parts in four directions of north, south, east and west and Tous, Samarkand, Kharazm, Marv, Balkh, etc., are defined as eastern cities of Iran.

Ultimately, we can also refer to the Hadith al-Lawh of the Holy Prophet Muhammad (PBUH) who stated that Imam Reza (A.S.) would be buried in a place made by one of the righteous servants of God. Commentators interpreted that the Holy Prophet meant “Dhu al-Qarnayn”, by saying “righteous servant”. (Ibn Abi-Zainab, 1997, 96; Ibn-Babawayh, 1983, 30; Mazandarani, 1963, 365; Majlisi, 1984, 321). Hence, they considered this issue as a reflection of the very long history of this region.

Based upon the above information, it can be concluded that Tous possesses a pre-Islamic history and a rich culture, that has made this area effective even after the advent of Islam, given that until the fourth century A.H., “Sanabad” was still considered as parts of Tous.

• **Studying the historical texts concerning the structure of the initial building of the Razavi Holy Shrine**

Given the importance of the Imam Reza’s (A.S.) character, it is perhaps not unreasonable to expect that a large number of the authentic historical texts have been written regarding the personality traits of Imam Reza (A.S.) and the way of his martyrdom rather than his mausoleum. Many of the texts regarding the building and its quality date back to the later periods of history. As a result, less information can be obtained concerning the initial core of the Imam Reza’s mausoleum.

While there is little information regarding the building in which Imam was buried, two general narrations have been proposed. The first narration states that Imam was buried in the “Humayd Ibn Qahtaba”’s Palace (Ibn-Babawayh, 1983, 17; Al-Fattal al-Neyshaburi, 1987, 382). For instance, Abu-Dalf Al-Khazraji (1975, 84) stated, “Tus consists of four cities, two of which are large and others are small. Magnificent Islamic artifacts can be observed there. The Humayd Ibn Qahtaba’s residence with almost one square Meile area (one Meile is equal to 1482 meters) is laid there; the tombs of Ali al-Ridha’s (A.S.) and Caliph Harun Al-Rashid are also located in one of its gardens.” (Khorasani, 2005, 645).

According to another narration, the construction history of the palace is considered to be in the late second and the early third centuries A.H. (ibid.). The reason for presenting this narration might be explained through the fact that “Ma’mun” shortly resided in Marv after his father’s death and paid special attention to his father’s tomb by developing this area; whereas, there are narrations and quotations from Imam Reza (A.S.) stating that, after his arrival to Sanabad, the holy Imam entered the “Humayd Ibn Qahtaba” al-Ta’I’s Palace and said, “I will be buried in this place and the Almighty will soon set the place for my Shiites and devotees to pilgrimage …” (Ibn-Babawayh, 1983, 377). Majlisi (1976, 291) also mentioned; “Sanabad was a small village in Tous in which Humayd Ibn Qahtaba had a house and a garden. After the death of Caliph Harun Al-Rashid, he was buried in Humayd’s house and Ma’mun has erected a dome over the grave of the Harun’s father. Having been martyred, Imam Reza (A.S.) was buried next to Harun’s grave, under the same dome, erected by Ma’mun”.

According to the two narrations mentioned above, it can be concluded that the first narration is probably more dependable; Ma’mun might have added some parts to the initial building.

Regarding the place, considered as the Qahtaba’s Palace throughout history, the following hypotheses can be discussed:

- The first hypothesis is based on the fact that Humayd’s Palace had existed before he was established as the governor of Khorasan.

Regarding the first hypothesis, Emam (1969, 17) claimed that in the middle of the second century A.H., “Sanabad” was the capital of Tous and there was an
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- The second hypothesis is based on the fact that the founder of the developer of the palace was exclusively “Humayd Ibn Qahtaba”.

Given that this palace is known as the name “Humayd Ibn Qahtaba”, the general view is that the palace was erected by Humayd himself; different groups of people did not make any specific arguments about it.

In the early centuries of Islam, most of the people have expended a lot of effort to describe the events, happened to Imam Reza (A.S.) and only a few of those people have described the building. At the beginning of the seventh century A.H., referring to “Abu-Dalf Al-Khazraji”, “Yaqut Al-Hamawi” stated that Abu-Dalf was astonished by the palace so that he described the building as:

“Between Tous and Neyshabur, there is a palace, firmly and magnificently erected. In terms of the height of the walls and the building strength, I have never visited any other structures comparable to this one. The palace consists of beautiful pavilions, arches, porches, treasuries and sanctums, that stun every visitor; the palace has exotic arches and numerous treasures and sanctums” (Abu-Dalf Al-Khazraji, 1975, 85 cited in Al-Hamawi, 1979, 49). Abu-Dalf then asked the locals about the founder of the building and they responded: “This mansion was erected by one of the Tababe’e and Sultans of Himyarite, indicating that the king moved from Yemen to conquer China, resided in this area and built this pavilion here to lay the trophies and continue disburdened and to establish a river, the canal of which is still laid there…” (ibid.)

According to the information above and based upon the Abu-Dalf Al-Khazraji’s claims, it is implied that the structural and physical features of the initial building were more complex and according to Imam Reza’s (A.S.) word, “I will be buried in this place”, the architectural design of the initial building dates back the time before the arrival of Imam Reza (A.S.) to Tous.

**Discussion on the hypothesis**

In this section, the proposed hypothesis will be examined step by step to provide a logical description of the discussion.

As previously mentioned, the spatial layout of the initial building of the mausoleum of Imam Reza (A.S.) has been followed by the morphological and spatial layouts in the Sassanid Architecture; moreover, the structure of this mausoleum was more complex than a simple (single) tomb.

In section 2, entitled, “The historical background of the Razavi Holy Shrine”, an attempt has been first made to show that the geographical location of Tous and subsequently “Sanabad” had special geo-cultural frameworks and this, in turn, has contributed to a deeper understanding of the context of the building. Following that, different hypotheses have been examined regarding the development history of the initial building of the mausoleum of Imam Reza (A.S.).
The history belonged to a long period from Pre-Islam until the beginning of the third century A.H. has been referenced by historical texts. This part of the study has been therefore conducted through investigating the historical texts on the physical structure of the holy shrine. According to historical texts, several points are highlighted as follows:

1. The intersection of the “Silk Road” and the cities of Tous and Sanabad, along with the ancient aqueduct of “Sanabad” were of the important factors for the expansion of this area (Keimanesh, 2011, 12) (Fig. 7). Furthermore, the vicinity of the village of “Sanabad” to Tous, Neyshabur and the ancient city of Dastgerd, has caused “Sanabad” to be considered as the environs of Tous by many of the Early Islamic historians. Further studies have also revealed that each of these cities dated back to the time before Islam and they had already existed within the Sassanid era. Furthermore, several Sassanid artifacts, such as the “Bazeh Hoor Fire Temple” are visible in the proximity of Sanabad. (This highlights the strategic location of the region and the mobility of the geographical region of Tous before Islam).

2. Habibi (2008) pointed out that within the excavations carried out in the “Azadi Courtyard”, some pottery artifacts of the Pre-Islamic era have been discovered, which may indicate the rich history and livability of this area in the Pre-Islamic period. (This highlights the mobility and civilization in that area).

3. Kohestani Andarzi and Neyestani (2018, 13) pointed out that the frontier guards (Konarangian) of Tous were not at peace with the Muslims given that they intended to govern the region. As a result, no massacres or devastations took place and the rein of the frontier guards (Konarangian) of that area stayed active under the reign of the Muslims. Therefore, the architectural enrichment of this region might have continued after the advent of Islam. (This highlights the continuous presence of its previous architectural schemes and patterns).

4. After the conquest of Tous, Muslims did not settle there; they, though, camped and settled near the government headquarters of Tous province (Sanabad) which was later called Nowqan (Bakhtyari Shahri, Mortazaei & Shabanisamghabadi, 2015, 19). It is, therefore, expected that the culture of that region has not undergone many changes (This highlights the existence of a rich social and cultural framework, reflecting the existence of a rich architecture as well).

5. According to the description of the mausoleum of Imam Reza (A.S.) form the Ibn-Hawqal’s (1987) point of view, as a “firm fortress” and the Abu-Dalf Al-Khazraji’s (1975) point of view, as “exotic”, along with his queries of the locals who claimed this building was erected by its ancient sultans, it can be included that the architectural design of the Humayd’s Palace was clearly in contrast with its surrounding architecture (This highlights the continuous presence of its previous architectural schemes and patterns).

6. Ibn-Babawayh (1983, 376-377) pointed out that while entering the Qahtaba’s house, as the seat of Qahtaba’s governance and the capital of Khorasan, Imam Reza (A.S.) said: “This is my cemetery and I will be buried in this place”. It can be, thus, said that the Qahtaba’s mansion was considered as a residential-governmental complex in which “Caliph Harun” was
buried and had already existed before the presence of the Imam (A.S.) in Tous (This highlights the vastness of the initial building in the early third century A.H. and its expansion later on).

7. Given the important and influential role of “Harun al-Rashid” among many of the prominent Caliphs, he was probably buried in a place, worthy of his characteristics and governmental position. Especially, since the later Caliph was his son. On the other hand, considering the guardianship role of Imam Reza (A.S.), his adjacent burial place to the Harun Al-Rashid’s grave and their important political roles, it seems unlikely that they were buried in an area not worthy of their political roles and dignity (This highlights the existence of a building more extensive than a simple tomb).

8. Furthermore, based on the historical texts regarding the measures made by Ma’mun for developing the tomb, the phrases “effort for the development” and the “development” of the mansion and “Sanabad” are introduced; this is a proof of the existence of a structure which subsequently became more extensive (This highlights the expansion of the existing architectural structure).

9. Abu-Dalf Al-Khazraji (1975), who had visited the initial building in the third century A.H., estimated the area size of the building as one square Meile and added that Imam was buried in one of the gardens of the complex. In another part, he also mentioned the “beautiful pavilions, arches, porches, treasuries and sanctums” (This highlights the complex structure of the initial building).

10. Tahmasbi (2014) stated that numerous spatial diversity can be seen in the Sassanid Palaces and the palaces consist of three parts: religious areas, inner yard (special court) and outer yard (general court). In addition, according to the palaces of Early Islam, Hillenbrand (2008, 377-379) described that these palaces follow a complex function. (This highlights the complex structure of the palaces in the Sassanid and Early Islamic periods).

The highlighted points are summarized as follows:

Points 1 and 2 indicate the rich culture of the region and its mobility and as a result, the reflection of a specific architectural design in the region. Based on points 3 and 4, it can be considered that the culture of Tous should have evolved after the rise of Islam and have not undergone many changes; the architectural design of the mausoleum of Imam Reza (A.S.) should have also been developed as a result of the rich culture and architecture of the region. According to point 6, it is concluded that due to the slow and continuous evolution of the ordinary structures in the past, the language pattern design of the Humayd’s Palace was different from the all-encompassing architecture of that time and this has led to such a statement and indicated the long history of the building. Based on the presented points, it can be argued that the initial structure of the spatial layout of the Razavi Holy Shrine might have been formed based on the architectural design criteria of Sassanid Palaces.

According to points 8, 9, 10 and 11, it can be concluded that, at the time of the burial of Imam in the Humayd Ibn Qahtaba’s Palace, the palace might have had a complex structure.

In the following section, the footprints of the initial building in the current position of the Razavi Holy Shrine will have been examined; though, before that, bearing in mind that the building was not destroyed in the fifth and eighth centuries A.H. and the ancients have rebuilt and restored the initial building. Some reasons are subsequently presented to support this claim:

Zanganeh Ghasemabadi (1997, 166) believed that the destruction did not take place completely; he supported this claim by three reasons:

1. The building has been visited by different people within different periods of history and they have also described the holy shrine;
2. In the tomb, you can see the exquisite tiles on which the name of the founder and the dates of 512, 612 and 761 A.H. are written;
3. In case of destruction, it is expected that during the reconstruction of the tomb, the position of the pillars should have been changed by the devotees of Imam to relocate the Imam’s grave to the center of the tomb. Though, according to various travelogues, it seems
that the graves of Imam Reza (A.S.) and “Harun al-Rashid” should have not been relocated.

In addition to the above reasons, two other reasons can be presented:

4. The excavations made around the tomb show that the remains of the building could be traced in the Early Islam era; this in turn indicates the reconstruction of the building in the later centuries. Molavi and Shahrestani (1965, 109) stated: “Currently, the tension ring of the holy dome of the Munawarah Tomb is laid on a wall whose part is connected to the ground is Chineh and the upper part has erected by brick; what is left of the Chineh wall so far is up to two meters above the ground.

5. The devastations caused by the wars did not result in the destruction; however, some parts remained intact. Today’s perception regarding the destruction of an artifact might differ from the past to some extent. For instance, the destructions of the Amir Arsalan Jazib’s minaret and mausoleum and the destructions of the Lashkari Bazaar Palace made by the Mongols (Fig. 8) indicate that while some parts have undergone devastations, the other parts of the complex and the walls have remained intact.

Based on the 5 points mentioned above, after the devastations, the architects might have reconstructed the building over the ruins. However, it is expected that during the reconstruction process, some of the morphological features of the building may have changed.

Identifying the initial structure of the Humayd Ibn Qahtaba’s Palace through morphological investigations

According to the proposed hypotheses, it can be expected that despite all these devastations, the signs of the initial building around the tomb could be traced in form of a special layout within the current position of the complex given that, the destructions might have not been made complete and the architects of that period may have made reconstruction practices over the ruins of the pavilion or tomb. However, it is expected that some of the morphological features of the building have changed (Fig. 9 A-D).

A question raises on, “How can this layout be discovered?” Considering the oldness of the building, it is expected that the thickness of pillars, the scale of the spaces, the proportions, the geometry, etc. might have changed during the history. Therefore, the plan of the holy shrine complex, as a basis for discovering the initial core, will be morphologically analyzed and evaluated.

A) Given that the initial core of the building possesses heavy pillars (three meters thick), the pillars of the plan have been the center of our focus for the investigation (Fig. 9-b).

B) Following that, the geometry and proportions of the building have been also considered. In this step,

“Rawzah Al-Munawarah” and the contemporary porches of Dar-Al-Siyadah and Dar-Al-Huffaz have been discovered in a more organized and logical style (Fig. 9-c). Moreover, once the findings of this section have been matched with Fig. 4, it was found that the history behind the development of this part has not been specifically identified and it seemed to be far older; thus, this complex has been considered as a focal point for the subsequent analysis.

The discovered complex (Rawzah al-Munawarah and the porches of Dar-Al-Siyadah and Dar-Al-Huffaz) consists of two intertwined parts: the first part, with a cruciform geometry (Dar-Al-Siyadah) and the second part, with a dome and a porch-shaped space in front of it. To determine the construction layout of the discovered complex, the layout will have been compared with the palaces of Early Islam and Sassanid eras.

- **A comparative study between the cruciform geometry, porch-shaped space and the dome with the Sassanid and Early Islamic Palaces**

According to the existing assumptions regarding the history and the construction layout of the Humayd Ibn Qahtaba’s Palace, while some believe that the construction history and layout of the palace dates back to the Sassanid era, others assert that the Palace was erected by Humayd. Hence, in the form of Table 1, this research attempts to investigate the...
Sassanid and Early Islamic Palaces concerning their cruciform geometry and their porches. Seven cases of the Sassanid and the Early Islamic Garden Palaces, developed up to the seventh century A.H., have been selected. The selected cases include 4 Sassanid Garden Palaces (Bishapour Complex, Taq-e Kasra, Hajijabad Arbabi House and Khosrow Palace) and 3 Pre-Islamic Garden Palaces (Lashkari Bazaar Palace, Qazneh Palace and Rahimabad Pavilion). Regarding the case studies, it should be noted that although no distinguished palace has left from the Sassanid and the Early Islamic eras, it is still expected that the general layout and geometric-spatial features may be traced and reconstructed. The discovered complex possesses a cruciform geometry as well as a dome with a porch-shaped space. Therefore, to match the discovered complex with the Sassanid and Early Islamic Palaces, in the first step, the cruciform geometry of the space is examined; in case of finding any matchings, it is then followed by integrating it with a porch-shaped space. Ultimately, the integration of the cruciform geometry, the dome and the porch-shaped space will have been traced.

- Discussion on the discovered layout (cruciform geometry and the porch-shaped space)

According to the comparison made in Table 2 & 3, it can be stated that the discovered complex bears the greatest resemblance to the palace of the “Bishapour Complex” and it should also be noted that a cruciform geometry can be discovered only inside the Sassanid Palaces. Once the discovered layout was compared to Fig. 6, doubts were cast. Hence, this section attempts to resolve the uncertainties:

- The first doubt expresses that Dar-Al-Siyadah was erected during the Timurid era. This issue has been mentioned in various conference papers and on websites. In the article “Dar-Al-Siyadah”, Borhan Azad (1968, 11) stated that the porch of Dar-Al-Siyadah was built in 821 A.H. However, those who have presented this assertion did not support it with a reliable reference or argument; doubts could be therefore raised from their claims. More investigations have been carried out on this issue.

1. In further studies, it has been found that the most ancient wooden artifact of the holy shrine is the gate of the Dar-Al-Siyadah, known as “Qazi Al-Hajat”, which dates back to 507 A.H. This gate might have been considered as the main entrance or at least one

Table 1. The formation of the hypotheses. Source: authors.
Table 2. The cruciform geometry, porch-shaped space and the dome in the Sassanid Palaces. Source: authors.

<table>
<thead>
<tr>
<th>Plan and name of the palace</th>
<th>Organization of the porches and cruciform space</th>
<th>Outstanding features</th>
</tr>
</thead>
</table>
2. According to Azarnoush, the cruciform hall is devoted to the private prayer room of the palace.  
3. According to Azarnoush, the cruciform room and the porch-shaped space are the smaller areas of a larger building.  
 noush, the cruciform hall is devoted to the private prayer room of the palace.  
3. According to Azarnoush, the cruciform room and the porch-shaped space are the smaller areas of a larger building.  
4. Cruciform space (1) porch-shaped space (2) Dome (3)  
   √   √  -  
5. Description: The cruciform geometry and the porch-shaped space are observed within the building and they bear resemblance to the layout found in the holy shrine. However, the dome cannot be observed in it. |
| 2. Hajiabad Arbabi house    | ![Hajiabad Arbabi house Diagram]             | 1. According to Azarnoush, the building belongs to the middle Sassanid era.  
2. The porch opens to a courtyard and ultimately opens to another one, at the end of which, another small porch is laid.  
3. The cruciform room is devoted to the private prayer room of the palace.  
4. On the west side of the cruciform room, there is another entry that provides access to the Temple of Anahita.  
5. Cruciform space (1) porch-shaped space (2) Dome (3)  
   √   √  -  
6. Description: The cruciform geometry and the porch-shaped space are not observed within the building; they are distinct and do not form an integrated complex. |
2. A small part of the building has remained intact and several studies have focused on this part.  
3. There was another porch in front of the main porch.  
4. Cruciform space (1) porch-shaped space (2) Dome (3)  
   -   √  -  
5. Description: The cruciform geometry is not observed within the building; thus, it does not match the layout discovered in the holy shrine. |
2. The courtyard and the porch seem to be the central parts of this building.  
3. The building has four porches.  
4. A T-shaped porch can be observed in the western part of the building.  
5. The religious section and the cruciform room are located in the southwest of the building.  
6. Cruciform space (1) porch-shaped space (2) Dome (3)  
   √   √  -  
7. Description: The cruciform geometry and the porch-shaped space are not observed within the building; they are distinct and do not form an integrated complex. |
1. The building belongs to the late Sassanid era.
2. There are numerous inner courtyards.
3. The dome is connected to the columned porch on one side and the courtyard on the other side

Cruciform space (1) porch-shaped space (2) Dome (3)
- √ √

Description: While the cruciform geometry is not observed within the building, the porch leading to the dome is obvious. Thus, it does not match the layout discovered in the holy shrine.

Table 3. The cruciform geometry, porch-shaped space and the dome in Early Islamic palaces. Source: authors.

<table>
<thead>
<tr>
<th>Plan and name of the palace</th>
<th>Organization of the porches and cruciform space</th>
<th>Outstanding features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Khosrow Palace</td>
<td><img src="image1" alt="Plan Diagram" /></td>
<td>1. The building belongs to the third century A.H.</td>
</tr>
<tr>
<td></td>
<td><img src="image2" alt="Organization Diagram" /></td>
<td>2. The building has a square-shaped plan and an “extroverted nine-dome” construction layout</td>
</tr>
<tr>
<td></td>
<td><img src="image3" alt="Legend" /></td>
<td>Cruciform space (1) porch-shaped space (2) Dome (3)</td>
</tr>
<tr>
<td></td>
<td><img src="image4" alt="Description" /></td>
<td>- √ √</td>
</tr>
<tr>
<td></td>
<td><img src="image5" alt="Description" /></td>
<td>Description: While the cruciform geometry is not observed within the building, the porch leading to the dome is obvious. Thus, it does not match the layout discovered in the holy shrine.</td>
</tr>
<tr>
<td>2. Rahimabad Pavilion</td>
<td><img src="image6" alt="Plan Diagram" /></td>
<td>1. The building belongs to the fourth century A.H.</td>
</tr>
<tr>
<td></td>
<td><img src="image7" alt="Organization Diagram" /></td>
<td>2. The ownership of the palace is attributed to Sultan Mahmud of Ghazni.</td>
</tr>
<tr>
<td></td>
<td><img src="image8" alt="Legend" /></td>
<td>Cruciform space (1) porch-shaped space (2) Dome (3)</td>
</tr>
<tr>
<td></td>
<td><img src="image9" alt="Description" /></td>
<td>- √ √</td>
</tr>
<tr>
<td></td>
<td><img src="image10" alt="Description" /></td>
<td>Description: While the cruciform geometry is not observed within the building, the porch leading to the dome is obvious. Thus, it does not match the layout discovered in the holy shrine.</td>
</tr>
<tr>
<td>3. Lashkari Bazaar South Palace</td>
<td><img src="image11" alt="Plan Diagram" /></td>
<td>1. The building belongs to the fifth century A.H.</td>
</tr>
<tr>
<td></td>
<td><img src="image12" alt="Organization Diagram" /></td>
<td>2. There are numerous courtyards.</td>
</tr>
<tr>
<td></td>
<td><img src="image13" alt="Legend" /></td>
<td>Cruciform space (1) porch-shaped space (2) Dome (3)</td>
</tr>
<tr>
<td></td>
<td><img src="image14" alt="Description" /></td>
<td>- √ √</td>
</tr>
<tr>
<td></td>
<td><img src="image15" alt="Description" /></td>
<td>Description: While the cruciform geometry is not observed within the building, the porch leading to the dome is obvious. Thus, it does not match the layout discovered in the holy shrine.</td>
</tr>
</tbody>
</table>
of the main entrances of the holy shrine complex (Kafili, 2018, 293). Based on this discovery, the building might have existed in the Seljuq era.  

2. In reviewing the historical texts about Dar-Al-Siyadah, we can refer to the book, “Muntakhab-u at-Tawarikh,” which states: “… There is a gate on the north side of Dar-Al-Siyadah that opens to Saqqa Khanah. Towards the gate, on the right side, there is a silver window, behind which is the Balasar Mosque and on the left side, in front of the silver window, a very nice small mosque is located. The length and width of this mosque are four and three Zar’ (41 inches), respectively; some scholars stated that Imam Reza (A.S.) has prayed in this mosque …” (Khorasani, 2005, 649). The “Haj Qasim” Mosque was also located in front of the Balasar Mosque. While this quote may not be taken seriously, it can indicate the oldness of the Dar-Al-Siyadah. 

Regarding the second doubt, we can refer to “Ghiyaš Ad-Din” Khwandmir (1999, 92) (historian of the tenth century A.H.) who has described the life of “Amir Alishir Nava’i” in the book, “Makarim Al-Akhlaq” he mentioned that Dar-Al-Huffaz was built by “Amir Alishir Nava’i”: “Dar-Al-Huffaz was built inside the Rawzah Al-Razaviah in the holy city of Mashhad. And it has been elaborately decorated with Islamic motifs and a layer of azure and gold. Also …” Through not very in-depth research, three doubts can be expressed regarding this statement:

3. According to the inscriptions, laid in Goharshad Mosque, it can be mentioned that the construction of “Goharshad Mosque” was completed in 822 A.H. “Amir Alishir Nava’i” was born in 844 A.H. and once “Sultan Husayn Bayqara Mirza” (875 A.H.) came to the throne, “Amir Alishir Nava’i” was appointed as the Minister. Therefore, it can be said that at least within 53 years, a shapeless and unused space between the mosque and the tomb has remained. Given the rich history of construction in the historical architecture of our country, this claim seems unlikely.

4. There are similarities between the golden tiles on the north pillar of the Dar-Al-Huffaz Porch and the golden tiles inside the tomb. They also referred to an inscription on the north pillar of the Dar-Al-Huffaz Porch which was completed in 612 A.H. (Molavi & Shahrestani, 1965, 112). Thus, it can be said that the Dar-Al-Huffaz Porch had already existed in 612 A.H.  

5. Also, considering the dimensions of the Dar-Al-Siyadah Porch, many people might have visited the holy shrine at the time of its construction. Therefore, providing access from Dar-Al-Siyadah to the tomb seems to be a concern. To this end, two strategies can be proposed. The first strategy is to cross the Balasar Mosque; this seems unlikely given the small proportion of the space that bothers people to cross the first row of prayer or approach the sanctuary. The second strategy is to round the Balasar Mosque; in this case, there must be another space to bridge the Dar-Al-Siyadah to the tomb; it can be hence stated that the porches of Dar-Al-Huffaz and Dar-Al-Siyadah were erected in the same period (Fig. 10). Based upon the above points, it can be argued that the porches of Dar-Al-Huffaz and Dar-Al-Siyadah might have existed before the Timurid era; however, they were not very prominent; in the subsequent periods, in particular, in the Timurid era, the porches have been considered and rebuilt.

**Conclusion**

This study aimed to discover the initial structure of the mausoleum of Imam Reza (A.S.) through a text-based methodology and morphological-historical investigations on the evolution of the building. On the one hand, given the devastations, left from the reign of kings, some parts of the historical documents and the building have become inaccessible. On the other hand, many important parts of the building have been hidden under the decorations, made in the later periods, or they might have undergone changes over the centuries so that became inaccessible; however, it is expected that the footprints of the initial building can be traced in the existing structure.

In the first step, through investigating the historical documents, an attempt was made to gather all the descriptions, existed in the early centuries, to build an overview of the initial core of the Razavi Holy
Shrine. Moreover, through studying historical texts and investigating several Sassanid and Early Islamic Palaces, a hypothesis was proposed.

In the second step, a spatial layout was discovered and followed around the tomb, according to the descriptions and assumptions on the date of the construction. To this end, the holy shrine was investigated regarding the pillars, the scale of the spaces, the proportions and the geometry. In parallel, through investigating different texts, an attempt was made to identify the history of each part of the building.

In the third step, in parallel with identifying the central core of the building, which possesses a cruciform geometry, a dome and a porch-shaped space, the core was analyzed and matched with the Sassanid and Early Islamic Palaces. For this purpose, firstly, the cruciform-based geometry of the palaces was investigated; in case of discovering any similarities, the cruciform-based geometry was integrated with the porch-shaped space. The integration of the cruciform geometry, the dome and the porch-shaped space was ultimately traced. The discovered layout bore the greatest resemblance to the palace of the “Bishapur Complex”. Furthermore, it should be noted that the cruciform geometry was firstly observed in the Sassanid Palaces.

Furthermore, the information obtained from this analogy was compared to the image of the periodicity of the spaces to identify and resolve any existing contradictions. Finally, according to the documents presented in this article, it can be concluded that:

1. Considering the discovered similarity between the structure layout of the holy shrine and the palace of the “Bishapur Complex” and given the discovered cruciform-based geometry in Sassanid Palaces, it can be said that the structure of the “Humayd Ibn Qahtaba”’s Palace has followed the architectural style of Sassanid Palaces.

2. The initial building of the mausoleum of Imam Reza (A.S.) had a complex structure and the porches of Dar-Al-Siyadah and Dar-Al-Huffaz were the main parts of the initial core of the building.

3. According to the cruciform-based geometry along with the porch-shaped space and the examined hypotheses, it can be said that the building has not been destroyed and architects have reconstructed the building over the remaining parts; however, some morphological and spatial features of the building have undergone some changes.
Acknowledgments
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A morphological-historical study on the initial core of the Razavi holy shrine complex, with a focus on narrative documents and in comparison with the architectural design of the Sassanid and early Islamic palaces.