



# An Investigation of the Architecture of Goy Masjid (Blue Mosque) of Tabriz to Match it up with the Accomplished Restorations

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## ABSTRACT

Goy Masjid (Blue Mosque) of Tabriz, as the only remaining architectural building from the Muzaffariyya Complex of the Turkoman period of Qaraqyunlu, has special architectural features and studying the history of architecture has particular importance for understanding the architecture of Iranian mosques. Different views are presented in terms of the difference in the architectural form and the origin of its design, and it is emphasized to take patterns of the architecture of other regions. Our understanding of the architecture of the original building is only through historical documents because natural and human factors had seriously damaged its architecture throughout history. And today's building is the result of conservation and restoration operations over the past fifty years. For this purpose, the research question has been proposed as follows: What is the relationship between the form and plan of Goy Masjid and Iranian mosques? And what is the process of formation and carrying out restoration operations of Goy Masjid? The purpose of this research is to present views regarding the origin of Goy Masjid architecture and to analyze and examine a pattern of the architecture of Iranian mosques, four-Eyvān (porches) in the plan of the mosque, to find out how to exploit and appearance in the Goy Masjid form, and also considering the characteristics Stated in the historical documents, the process of the restoration operation should be presented with it. The research method used was the descriptive-analytical method. Data included documents, pictures, and notes left from the past and its restorers along with field visits and observations. The results of the research showed that despite the efforts made by some researchers to attribute the adaptation of the original idea of the architecture of this mosque to other cultures, the form and plan of the Goy masjid have an Iranian origin, which has been presented the four-Eyvān pattern of Iranian mosques in a different way. The repairs and restorations done to protect and maintain the Goy Masjid and the operations in the embellishments part of the building have apparently been in line with the theoretical basis. However, the lack of adherence to the identical theoretical basis, and the existence of opinions intensity in the restorations can be seen. In the architectural restoration part, the geometry, and proportions of the original structural features of the building have not been observed and no attention or study has been given to it by the restorers.

## Introduction and the Problem Statement

Since the architecture of Goy Masjid has unique features compared to the previous buildings and has emerged differently from the known designs in mosques, it has a special place in the history of Iranian architecture. Even after the construction of Goy Masjid, it is not observing an example similar to it or a design derived from it in architecture. Knowing more about the architectural features of Goy Masjid helps to identify the architecture of the Turkomans of Qaraquyunlu, its origin, and its evolutionary path. Their values and ideology have influenced their works in their short-term rule in such a way that they have enjoyed a valuable place in the history of architecture. In addition, such recognition and investigation will have a significant impact on the necessary protection and restoration operations for the Goy Masjid and its surroundings. The purpose of this research is to present views related to the origin of Goy Masjid architecture and to analyze and examine a pattern of Iranian mosque architecture, four-Eyvān<sup>1</sup> in the plan of the mosque, how to exploit and display it in the Goy Masjid's form, and also according to the features stated in Historical documents related to the restoration operation should be checked. While the only available source of information about Goy Masjid is historical documents and writings, because due to the serious damage caused to the Muzaffariyya complex due to natural and human factors, there is little information, and that is from the ruins left of the mosque before the restoration operation.

## Research Method

The descriptive-analytical method was used to achieve the objectives and answer the research questions. By describing the history and architecture of the Muzaffariyya complex through library documents, an attempt has been made to introduce and identify the architectural features of this valuable historical complex, by expressing the results of previous research and examining the architectural features of Goy Masjid, attain a cognitive of its initial architectural design and provided the results by analyzing the findings.

### • Muzaffariyya Complex of Tabriz

The Muzaffariyya complex was a trace of the Turkoman era of Qaraquyunlu in Tabriz, and due to the damage caused throughout history, only the ruins of Goy Masjid remained from this complex.

At the time of construction, the complex was located outside the Khiyābān gate, next to the old historical road Kohne Khiavan (Wahabzadeh, 2006, 242). Also, Peyrovi and Kabirsaber (2016) have pointed out the location of the axis from the Silk Road in the Muzaffariyya complex's Meydan<sup>2</sup> (Peyrovi & Kabirsaber, 2016, 18). During the Turkoman period, with the construction of this complex and the Sahib-Abad complex, important centers in the east and north of the city, the Bazaar the center of the city was developed towards these two important centers (Mohammadzadeh & Mansouri, 2017, 19). This complex is considered the works of Jahanshah, the most important ruler of Qaraquyunlus in their capital, Tabriz (Javadi, 1973, 90). Later, during the period of Aqqyunlus, the daughter of Jahanshah endeavored to complete and built buildings of complex (Dehghani Tafti, Modarreszadeh & Memarian, 2021, 8). Based on historical documents and analysis, the Muzaffariyya complex was built as a religious-educational complex, and during the Ilkhanate period, such buildings were known as Abvab-Al-bar (Hag Parast & Nejad Ebrahimi, 2014, 90). This complex included various elements in line with the function. Such as Masjid, Maqbareh<sup>3</sup>, Sahn<sup>4</sup>, Howz Khaneh<sup>5</sup>, Madrasa<sup>6</sup>, caravanserais, Khangah<sup>7</sup>, Qanāt<sup>8</sup>, Zemestani & Tabestani Qorfe<sup>9</sup>, etc. (Fig. 1) which was named after its creator builder Ab-Al-Muzaffar Jahanshah (Wahabzadeh 2006, 216) (Hag Parast & Nejad Ebrahimi, 2014, 91 & 94). According to Lisa Golombek among the works of the brilliant period of the Turkomans in Tabriz, there are no traces left except Goy Masjid, which should be considered the same as Timur's Samarkand and Shahrukh's Herat (Golombek, 1995, 62).

### • Goy Masjid

In terms of architectural form and embellishments, Goy Masjid contains a large part of Turkoman art (Hag Parast & Nejad Ebrahimi, 2014, 91). Based on inscriptions and documents, the time of its construction goes back before the date of 1468 .Ibn Karbalaie (2004) described in his description" ,In the entrance of Tabriz towards the east ,which is called the Khiyābān ,there is a very beautiful and elegant mansion (Complex) known as Muzaffariyya, from the works of Abul-Muzaffar Jahanshah King, the son of Qarayousef, the son of Tore Mesh, and the son of Beiram the

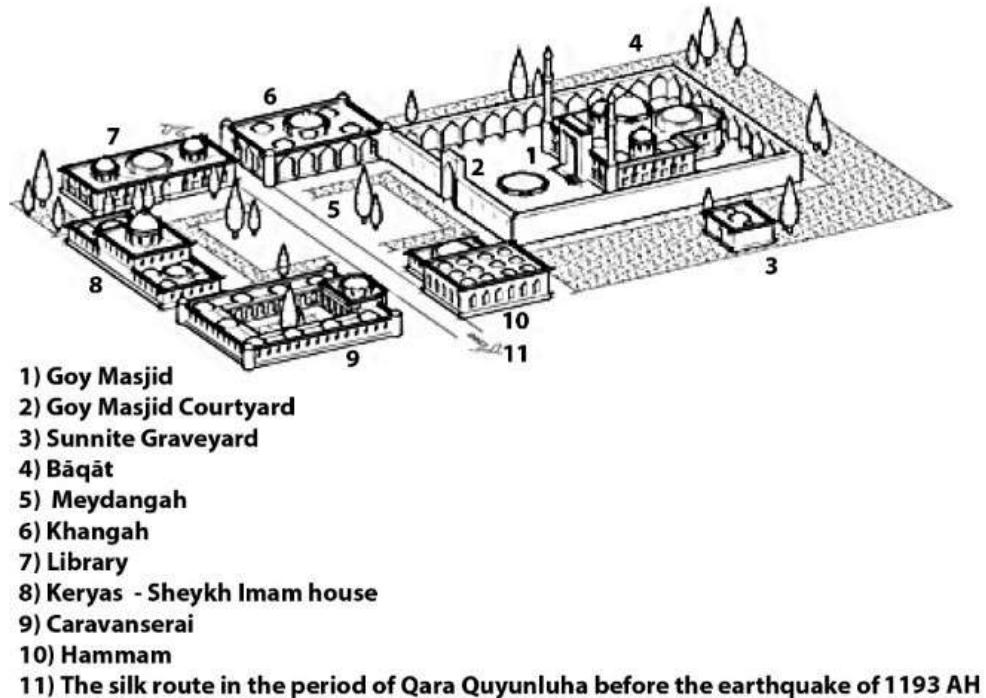


Fig. 1. Reconstruction and hypothetical design of the Muzaffariyya complex in the Qaraqyunluhs period in another research. Source: Kabirsaber, Mazaherian & Peyrovi, 2013, 9)

Turkoman Khāje and this imperial is also called Qaraqyunlu and Barani, It seems that this mansion was built with the effort and diligence of his respected wife Khatun Jan Begum ..." (Ibn-Karbaliae 2004, 524). The construction of the mosque was under the management of Ez-Aldin Qāpuči (Hag Parast & Nejad Ebrahimi, 2014, 94). According to Hossein Ibn Karbaliae, Khatun-Jan-Begum called the important masters of Tabriz to the palace for the construction of the Muzaffariyya complex and chose Khāje Ali-Ibn-Osman (Ali Kujaji) among them (Seçkin, 2013, 1026). The name of the mosque is derived from the color of its Kashi-Kari<sup>10</sup> embellishments in Turkish, it is known as Goy Masjid, in Persian it is known as Masjed-e Kabud. The art of Kashi-Kari in this mosque is one of the highest kind in the Islamic world, i.e. appearing with the Mo'arraq<sup>11</sup> style with azure, turquoise, black, and white tiles and using various Eslimi<sup>12</sup> designs (Golestan Quran, 2000, 21). Yahya Zokā (1989) said in this regard: "This style of Kashi-Kari is not comparable to the special geometrical compositions of the Seljuk and Mughal arts and is much superior to them." (Zokā, 1989, 186). It is worth mentioning that the Goy Masjid building was built in combination with the

Maqbareh along with surrounding elements, Howz-Khane-ha, Sahn, and Revag<sup>13</sup>. This family tomb was the burial place of Jahanshah himself, his wife, and his children (Wahabzadeh, 2006, 214).

#### • The Architectural Features of Goy Masjid

The Goy Masjid was built with two connected Gombad-Khāne<sup>14</sup>, the largest one belonging to the mosque and the other one belonging to the Maqbareh (in the south of the building) and with the minarets on the sides of the portal or entrance Eyvān without a Miyansara<sup>15</sup>. And the Sahn facing the entrance portal is considered the mosque courtyard (Dehghani Tafti, Modarreszadeh & Memarian, 2021, 12). The entrance to the mosque is from the Eyvān of the entrance portal in the north of the building and access to the Maqbareh is after entering the inside of the mosque from the sides of the mosque's mehrāb<sup>16</sup> (Figs. 2 & 3).

Due to the planning and decorative features of the Goy-Masjid, Nuri Seçgin (2013) considered it one of the most important buildings in the history of Turkish architecture, which represents a school that is reflected in many buildings of its time in the context of cultural, social, and economic relations

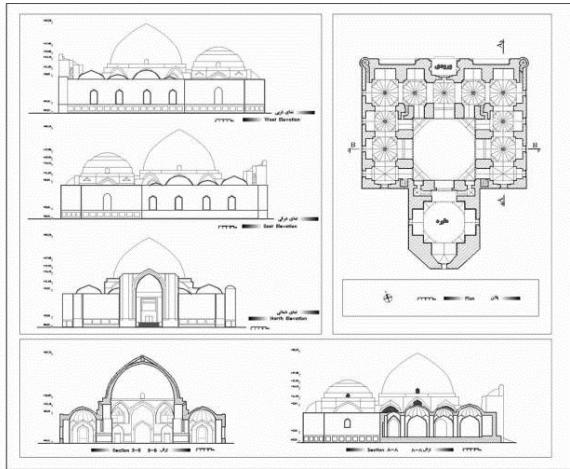


Fig. 2. Plan, sections, and views of the Goy-Masjid. Source: Hag Parast & Nejad Ebrahimi, 2014, 91.

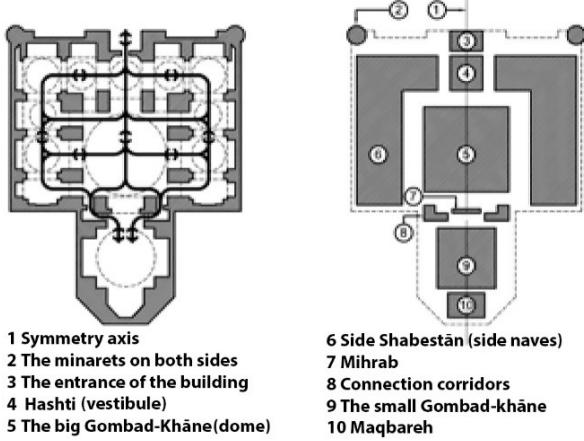


Fig. 3. The connection between the spaces of the Goy-Masjid, source: Kabirsaber, Mazaherian & Peyrovi, 2013, 11.

(Seçgin, 2013, 1026). In terms of its form of plan and its specific volume, it is different from other architectural examples of Iranian mosques, and it is built in a compact and mass architecture, which has a beautiful visual interaction with the surrounding space despite the limited connection of the internal spaces with its surroundings and it is designed to be compatible with the climate of Tabriz (Kabirsaber, Mazaherian & Peyrovi, 2013, 6 & 10 & 13). The architectural symmetry of the building should be attributed to the proportions of the Timurid architecture of the Khorasan and Mā-Warā-an-Nahr<sup>17</sup> regions (Ansari & Nejad Ebrahimi, 2010, 39). On the other hand, Ertuğrul Ökten (2014) attributes the plan of the mosque to the Rab'-e Rashidi building in Tabriz, which was beyond Timurid art

(Ökten, 2014, 376). Sultanzadeh (2010) believes that “the design and execution of the mosque’s embellishments are derived from Iranian art, but the characteristics of the design are adapted from Ottoman mosques.” (Sultanzadeh, 2010, 167). The origin of the Goy Masjid plan in the form of two back-to-back domes without a courtyard is attributed to the evolution of similar examples in Ottoman architecture, such as Pustinpuş Baba Zawiyah in Yenişehir, Hüdavendigar Mosque in Bursa, Yeşil<sup>18</sup> Cami<sup>19</sup> in Bursa, etc. (Fig. 4) (Wahabzadeh, 2006, 238). Also, because of the plan design, this attitude is raised.

It is noteworthy that the economic and cultural relations between the Qaraquyunlus and the Ottomans were such that many merchants and artists had many comings and goings through the Tabriz-Bursa caravan route. According to Turkish historians, most of the Ottoman Turks came to Tabriz to learn art and architecture, and Tabriz architects also used to go to Ottoman cities for the construction, calligraphy, and Kashi-Kari of some important and royal buildings (Dehghani Tafti, Modarreszadeh & Memarian, 2021, 10). This claim of origin from Ottoman architecture was due to the similarity of shape with mosques of the same period in Anatolia. Yahya Zokā (1989) considers the cultural and social relations between Iran and Anatolia in the 16th century AD to be the cause of this similarity regarding the architectural form of the mosque and suggests that Yeşil Cami of Bursa is derived from the architecture of the Goy Masjid (Zokā, 1989). It is mentioned in the history that “Timur took a group with him as well as the painter Ali-Ibn-Ilyas-Ali when he returned to Samarkand from the war, who was later commissioned to build Yeşil Mosque in Bursa, and masters from Tabriz also worked with him.” (Seçgin, 2013, 1030). Pirnia (2004) also accepts the slight similarity of the Goy-Masjid with the architecture of the Ottoman mosques in Bursa, but he did not consider this as a definite reason for modeling, rather considered to be derived from the Shah-Wali-Taft Mosque, and the Sheikh Lotfollah Mosque is derived from the Goy-Masjid (Fig. 5); (Pirnia, 2004, 266).

Some researchers point out Goy Masjid’s similarity to Isfahan’s Shah Mosque and Ulu Cami, one of the Qaraquyunlu buildings (Seçgin, 2013, 1030). Sheila Blair and Jonathan Bloom pointed out the possibility that the

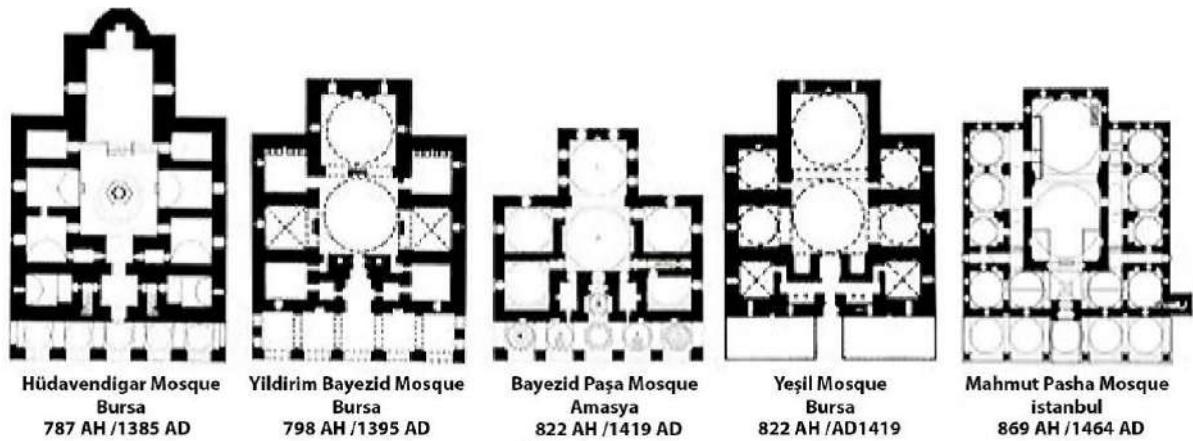


Fig. 4. Plans of some two-domed Anatolian mosques in the Ottoman period after the conquest of Bursa. Source: Kabirsaber, Mazaherian & Peyrovi, 2013, 16.

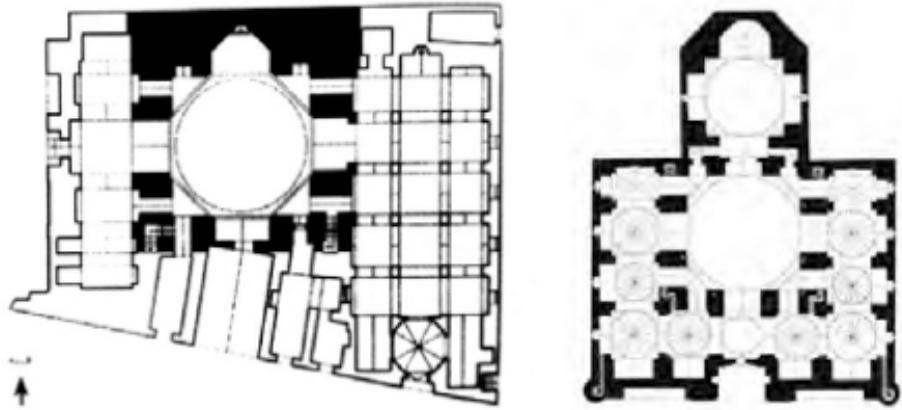


Fig. 5. Right: mosque – the tomb of Tabriz Goy-Masjid (1465); Left: Shah Wali Taft Mosque (1468). Source: Dehghani Tafti, Modarreszadeh & Memarian 2021, 11.

architect of the Imam Mosque in Mashhad was the same as the Goy Masjid, and this architect had knowledge and connection with the architecture of the Yeşil Mosque (Kabirsaber, Mazaherian & Peyrovi 2013, 7). Hillenbrand also believes that the architectural form of Goy Masjid is the result of the evolution of Timurid architectural experiences and the continuation of Khorasan architectural experiences similar to the Shah Mosque of Mashhad (Dehghani Tafti, Modarreszadeh & Memarian, 2021, 6). Of course, considering the T-shaped plan of the Goy-Masjid, this type of plan was used especially in the 14th in some architectural buildings of Anatolian Turk Beyliks and before that, it was mostly used in the Ottoman period (Seçgin, 2013, 1030). In the Ottoman period, Kashi-Kari embellishments were not used in buildings, especially on the exterior (Kabirsaber, Mazaherian & Peyrovi, 2013, 7 & 15). The achievement of research in this regard "has acknowledged the similarity of the Goy-Masjid with Anatolian mosques in

terms of its two-domed form, and in terms of its construction, form, structure and Kashi-Kari Mo'arraq, it is indebted to Iranian architecture and in this way, the imported form combined with the elements of Iranian architecture culture has taken on an Iranian countenance." (ibid., 21). According to Seçgin "in general, it can be said that these approaches are based on the similarity in the form of the plan that the buildings show in terms of their external lines." (Seçgin, 2013, 1031). Quoted from Moudon the shape and form of a building generally are the results of a process that has been overtly and covertly influenced by various ideas and concepts rooted in the past (Dehghani Tafti, Modarreszadeh & Memarian, 2021, 7). Perhaps at first glance, in terms of the presence of two domes in the structure of the Goy-Masjid and the origin of the Turkomans Qaraquyunlu from Anatolia and examples of two-domed mosques in the Ottoman period, it was concluded that the pattern of the Goy-Masjid was derived from them. But according to the course of

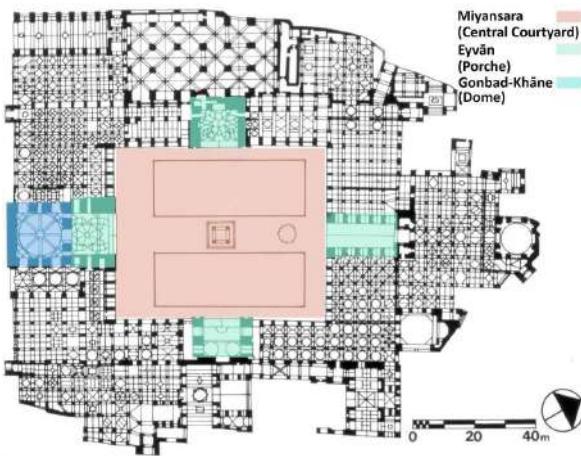


Fig. 6. The appearance of the four-porch pattern over time in the plan of Jameh Mosque of Isfahan (777 AD Construction time of the primary building). Source: Analysis by Authors.

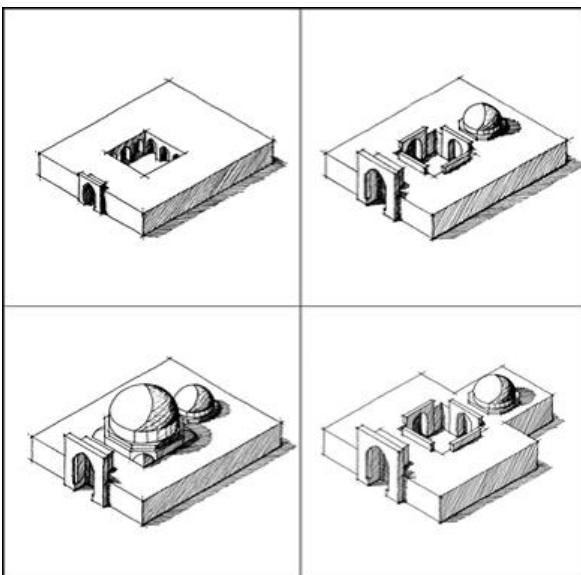


Fig. 7. Comparing the architectural elements of the Goy-Masjid with the simple pattern of Iranian mosques. Source: Kabirsaber & Mohammadi, 2019, 98

development and the architectural characteristics of Iranian mosques throughout history, one of the products of which was the import and addition of the Eyvān to the plan of the mosques, another achievement can be reached. Based on that, the patterns of Iranian mosques are classified into Shabestān<sup>20-e</sup>, single Eyvān, single Eyvān with dome, two-Eyvān, two-Eyvān with dome and four-Eyvān with dome (Fig. 6). If we match these common patterns in the form and plan of mosques, i.e., the four-Eyvān with a dome with the design of the Goy-Masjid, we can achieve an important point. This pattern is generally designed as a single dome in the plan, including the central space as a

Miyansara with four Eyvān that open to this space, and a dome or Gombad-Khāne behind one of the Eyvān is designed towards the Kiblah.

Kabirsaber and Mohammadi (2019) stated that the Goy Masjid has a plan without a Miyansara, that the dome is placed on the Miyansara in a four-Eyvān pattern, the level of contact with the outside is also reduced, and it is designed in harmony with the climate with minimal openings (Kabirsaber and Mohammadi 2019, 98 & 99). On the other hand, by considering the pattern of Iranian mosques and analyzing the components of the plan of the Goy Masjid, it can be found that the pattern of Iranian mosques has been manifested differently (Fig. 7; Table 1).

Matrakçı Nasuh during his trip to Iran in the 16<sup>th</sup> AD with the Ottoman army of the Safavid period displays the oldest image of the mosque. that the dome is observed on the cylindrical Gariv<sup>24</sup>, and this was probably the initial form (Fig. 8). It should be noted that in the architecture of the Timurid period, the long Sarv<sup>25</sup>-shaped dome on an elongated cylindrical Gariv is one of the best innovations of that period (Kabirsaber, Mazaherian, and Peyrovi 2013, 12). By matching the dome on the Gariv of the Timurid period and the Matrakçı miniature from the Goy-Masjid and considering the proportions of the side dome of the Goy-Masjid, it can be seen that the original dome is different from the dome that was built during the restoration (Figs. 9, 10 & 12) (Ansari and Nejad Ebrahimi 2010, 40). In the 17th century, in Chardin's drawing from Tabriz, the state of Goy Masjid can be seen (Fig. 11).

### Restoration of the Goy-Masjid

There is a report by Andre Godard, a French architect, and archaeologist, about the Goy Masjid in 1928 AD: "There is nothing left of this great mosque except for a few foundations and a part of the outer wall and its front, which has fallen into a pitiful condition. But what remains is so beautiful and geometrically usable that the Iranian Archeology Group decided to preserve it as it is, i.e. Don't start renewing the large Gombad Khāne on shaky and unstable foundations and completing the Kashi-Kari (which they can't build today)." (Fig. 13) (Archives of the General Department of Cultural Heritage of East Azarbaijan Province)

The restoration of the Goy-Masjid to preserve

Table .1 The comparison of the Goy Masjid and the example of a mosque with the four-Eyyān with a single dome pattern .Source :Authors.

Mosque of Muzaffariyya Complex (Turkoman's Qaraqyunlu period)	Example of an Iranian-Islamic mosque
Goy-Masjid of Tabriz	Jameh Mosque of Ardestan
The big Gombad-Khāne as Miyansara Four Tāq <sup>21</sup> around the big Gombad-Khāne as Eyyāns The dome of the Maqbareh as a Gombad-Khāne	Miyansara Eyyān Gombad-Khāne
Side Tāq-ha <sup>22</sup> beside the main Tāq-ha	Eyyān-Che or Tāq-ha <sup>23</sup> on the sides of the main Eyyān-ha
The place of the non-existent Shabestān on sides	The Shabestān on the sides of the Gombad-Khāne



Fig. 8. The Goy-Masjid in the miniature of Matrakçı Nasuh. Source: Nasuh, 2000.

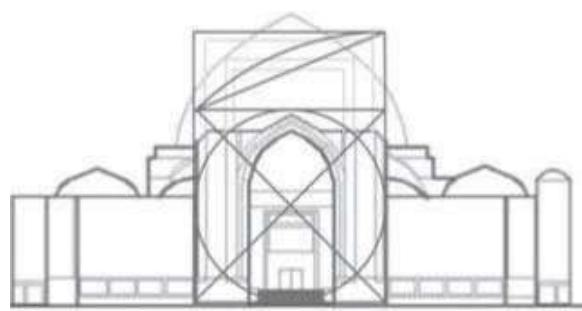


Fig. 10. Probable proportions of the original entrance portal compared to the restored portal. Source: Ansari & Nejad Ebrahimi, 2010, 41.

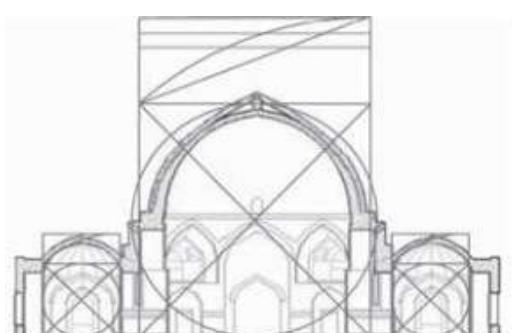


Fig. 9. Proportions in the section of the Goy Masjid, (source: Ansari and Nejad Ebrahimi 2010, 40)

the inscriptions and monuments by the National Organization for the Protection of Antiquities started in 1939, the main portal was also repaired, and some walls were rebuilt by Ismail Dibaj and Haj Abulqasem Memar between 1948-1949 (Golestan Quran, 2000, 21). In the repairs that started to prevent the collapse and excessive deterioration of the main portal, they repaired it and blocked its cracks, and by rebuilding the Tāq behind the main portal and limiting it with new walls, they formed a

simple and small mosque (Wahabzadeh, 2006, 230). The repair program was categorized according to Table 2 and the operation was carried out under the supervision of Ismail Dibaj and Haj Abulqasem Memar. According to Dibaj's description, "the repair and protection of the mosque continued until 1973, but despite the repairs, due to moisture infiltration from

the open space of Gombads and frost and temperature difference, the Kashi-Kari of the plinths collapsed, to preserve the importance of the traces, it was decided to cover the roofs. Further, the study of the foundation to withstand the type of covering has been started and to select the architect for the Gombad of the Maqbareh and the Shabestān, studies have been

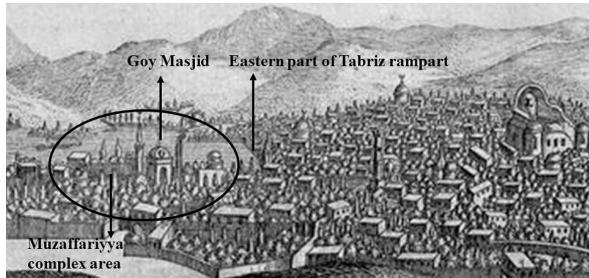


Fig. 11. Chardin's drawing from Tabriz city (17th century). Source: Hag Parast & Nejad Ebrahimi, 2014, 91.

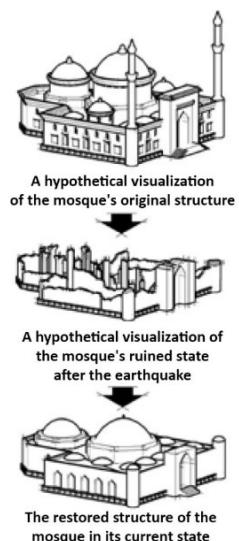
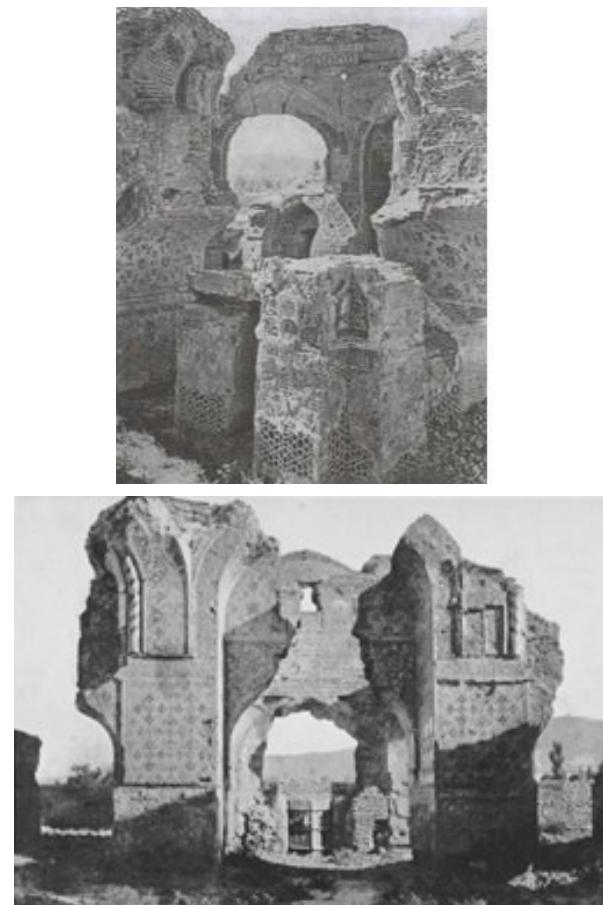


Fig. 12. The reconstruction design of the Goy Masjid architectural form based on documents and pictures. Source: Kabirsaber, Mazaherian & Peyrovi, 2013, 12.



Figs. 13. The state of the mosque after the destructive earthquake. Source: Archive of the General Department of Cultural Heritage of East Azarbaijan Province.

Table 2. The repair program classification. Source: Authors based on Wahabzadeh 2006.

No.	Repairs
1	Blocking the cracks and seams of the great Shabestān - restoring its walls and Rumi <sup>26</sup>
2	Renovation of the walls and Rumi and the opening of the Tāq around the large Shabestān up to the top of the Tāq (The existence of its major part) except for the Gombad according to the old condition without the slightest difference in terms of architecture - preserving the existing Kashi-Kari - The new parts without tiles - Construction of new brick materials according to old bricks
3	Revitalization of the north view: renewal of the foundations, Rumi, and Cheshme-Tāq on the sides of the main entrance of the mosque, Roman arches, and new coverings according to the old examples without minor differences.
4	Fixing the improper condition of the mosque with these repairs, increasing the size of the entrance hall. Leaving the covering of the large Shabestān, restoring the works of the small Shabestān, and preservation of the remaining marble stones due to the need for further investigation.
Any action such as construction, etc., in the area around the mosque, is done under the supervision and approval of the General Department of Archaeology.	

conducted for the most suitable known cover in Iran so that the architect can implement it in harmony and accordance with the architecture and elegance of this building. Ostad Reza Memar from Tabriz undertook to make the dome of the Maqbareh a discrete Do-Posh-Gosasteh<sup>27</sup> and the large Shabestān Gombad, Do-Posh-Be-Ham-Peyvasteh<sup>28</sup> (Due to the avoidance of high height and the effect on the old parts and the lightness of the incoming loads). The preparation and construction of the dome had started since the beginning of 1973 AD." (Wahabzadeh, 2006, 234 & 235). The specifications of the dome of the mosque are listed in Table 3. By matching what was implemented with what the studies of the geometry and architecture of the mosque shows (Table 4), the restorers distorted the historical form of the mosque by choosing the traditional method of restoring the dome in addition to overloading the historical structure. However, the restorers argued that they were able to protect the Kashi<sup>29</sup> of the mosque with this method. But in practice, it has been presented in a form different from the historical form, and this practice has hindered the perusal of the possibility of presenting the original

form. And the lack of signs and symptoms for the restoration of these parts, it seems that few people notice that this part is not historical. Matching the restoration images shows that the dome's foundations needed to have the necessary strength for loading because a large part of the remaining kashi and traces have also been destroyed.

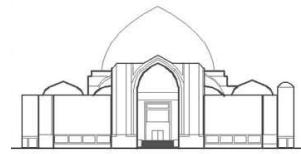
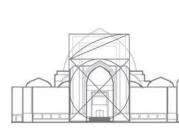
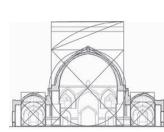
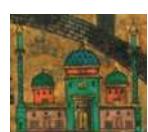
About the Kashi-Kari of Goy Masjid, the embellishments, and Kashi-Kari repairs, in 1996 AD, its restoration priorities were categorized as follows (Table 5). What can be seen in the Kashi-Kari and in general the decorations restorations of the mosque is the lack of coherence in the restorations. In some parts of these decorations, only plastering was considered (Fig. 14). This is especially the case in the restoration of the unique marble stones of the Gombad-Khaneh, where the restoration of the patterns was plastered, and no effort was made to pay attention to the beauty and values of this section. In the restoration of Kashi, complete completion with the same color, restoration with a color difference, no color difference, and no restoration can be seen in different periods of restoration (Fig. 15) and for

Table 3. Executive specifications of the dome. Source: Authors.

Specifications of the large dome	Diameter	Height	Khiz (height of the arch)	Cover	Implementation method
	<ul style="list-style-type: none"> <li>- 16.35 meters from the inside</li> <li>- 19.20 meters from outside</li> </ul>	<ul style="list-style-type: none"> <li>- 19.70 meters from the inner floor to the inner cover</li> <li>- 22.60 meters from the inner floor to the tip of the Tāq-Jenaqi arch of the outer cover</li> <li>- 24.60 meters from the outer floor to the edge of the outer cover</li> </ul>	<ul style="list-style-type: none"> <li>- 8.17 meters inner dome</li> <li>- 11.04 meters outer cover</li> </ul>	<ul style="list-style-type: none"> <li>- The distance between the two layers is 2.10 meters, including the covers (38 cm each).</li> </ul>	<ul style="list-style-type: none"> <li>- Dividing the length of the dome circle into 32 sections, one of which is empty for the Khashkhashi hole</li> </ul>

Table 4. A comparative study of the specifications of the original building of the mosque with its condition after the restoration operation. Source: Authors.

Specifications	Early mosque	The mosque after restoration
The origin of the dome design	In the continuation of the long Sarv-shaped dome on the elongated cylindrical stem of the Timurid era	Choosing the traditional method of dome restoration Avoiding high altitude and heavy loading Avoid affecting old parts
Specifications of the dome	A dome on a Gariv (cylindrical stem)	Do-Posh-Be-Ham-Peyvasteh covers executed on the bases with cornering
Architectural features	High minarets High portal	low height minarets low height portal



The mosque after restoration



Fig. 14. The northern front and the entrance of the mosque (Mar 2023). Source: Authors' archive.

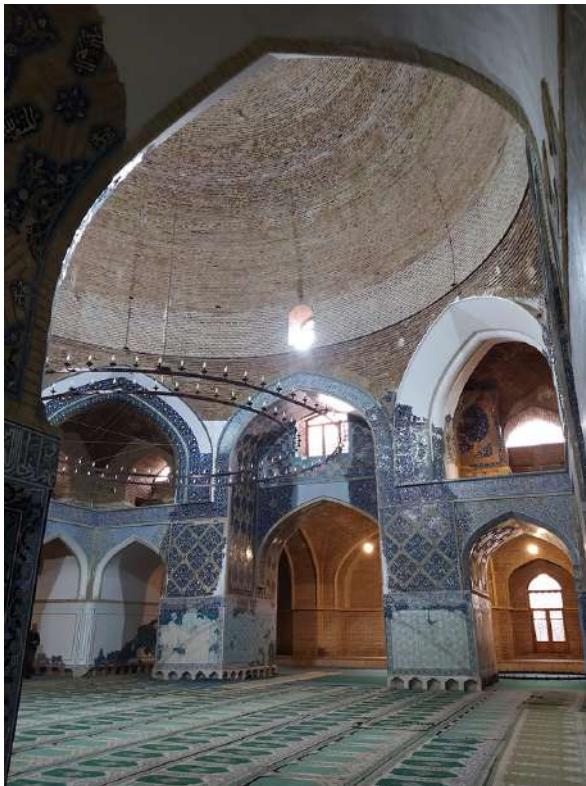


Fig. 15. A View to the Great Shabestān (Dec 2022). Source: Authors' archive.

this reason, it seems that Goy Masjid has been affected by restorations more than it is affected by its geometrical beauty and Kashi. It is obvious that there is no equal method of action in this regard. The lack of providing sufficient documents for researchers in the building work has caused this to intensify. According to the international charters of restoration, it is necessary to form a museum for this purpose next to the building, and by documenting all the

activities, everyone will be informed about the restoration process.

## Conclusion

Muzaffariyya complex is one of the important complexes of the Turkoman era of Qaraquyunlu, which is a continuation of the complexes that started before with the collections of Abvab-Al-bar, such as Rab'-e Rashidi and Ghazaniyya. Muzaffariyya complex included various buildings, which the most prominent of them is the mosque of the complex, which today is known as Goy Masjid. The majority believe that the mosque is inspired by the architecture of Anatolian mosques, but with a closer look, according to the pattern of Iranian mosques, we can achieve a relationship between them. By matching the example of the four-Eyvān with the dome pattern with the plan structure of the Goy-Masjid, it can be said that this single-domed pattern is used in a different way from the well-known pattern of Iranian mosques. This is an important issue and like the embellishment of the mosque, which is the evolution of Iranian Kashi-Kari, the form, and plan of the Goy-Masjid have an Iranian origin. While, in general, the elements and features of the architecture of the building are indebted to Iranian architecture. By looking more closely at the information left from the original building of the mosque and by analyzing them, the structure of the Goy-Masjid can be imagined and described. And the repairs and restorations done for the protection and maintenance of the Goy-Masjid have fundamental weaknesses and of course, the changes made in it during the era have caused the difference between the current situation and the original building. Today, the result of the restoration operation in the embellishment of the building has moved along with the basis, but in the geometry and proportions of the building, the features of the original structure have not been observed. Such as the difference in the big dome of the mosque, that the original dome was on a Gariv, and the proportions of the entrance portal were different and higher than the current situation, or the difference of the current minarets of the mosque are some of the cases that can be mentioned.

Table 5. Restoration priorities of embellishments and Kashi-Kariha. Source: Authors based on Wahabzadeh, 2006.

Priority	Items
1	Fastening and stabilization of the remaining Kashi-Kari.
2	Reconstruction of brick frames forming horizontal and vertical lines of interior architecture, inscriptions according to existing examples
3	Cleaning the surfaces and empty spots between Kashi-Kari (Gombad-Khāne), whitening them with sandblasting, Kerma-Bandi (without waves) (the whitening level is 2-3 mm lower than the tiling level)
4	Framing inscriptions, painting inside frames and Gereh-Bandi
5	Completing and painting the written words and verses between the Quranic inscriptions with the Eslimi in the background with the previous specifications.
6	Designing and painting the Eslimi-haye Lachaki according to the remaining sections and parallels
7	Designing and painting the Gereh of the Gombad-Khāne plinth according to the documents and the remaining parts

## Endnotes

1. Porch\ 2. Square\ 3. Tomb\ 4. Courtyard\ 5. Pools\ 6. School/ 7. Monastery\ 8. Aqueduct\ 9. Hibernal and Estival Rooms\ 10. Tiling\ 11. A type of Kashi-Kari\ 12. Islamic\ 13. Porch\ 14. Rotunda domed hall\ 15. Central courtyard\ 16. Altar\ 17. Transoxiana\ 18. Green\ 19. Mosque\ 20. Seraglio\ 21. Arch\ 22. Arches\ 23. Porches\ 24. Stem\ 25. Cypress\ 26. A kind of arch\ 27. Two-layered\ 28. Two connected layers\ 26. Tile

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