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Title:

From Nakhchivān to Kemah: The western extent of brick Persianate funerary architecture in the 6th/12th century

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Abstract:

This paper is an investigation into the western extent of a regional school of funerary architecture that developed in the Ildegüzid ruled lands of north-west Iran in the 6th/12th century. The formal, decorative and epigraphic elements of two octagonal tombs, the Yūsuf ibn Kuthayyir tomb in Nakhchivān, (Azerbaijan) and the Mengücek Ghazi tomb in Kemah, (Turkey) are examined in detail. By comparing these two buildings, and demonstrating the similarities and differences, elements of the dynamic nature of architectural development in Anatolia in the late 6th/12th century may be better understood.

From Nakhchivān to Kemah: The western extent of brick Persianate funerary architecture in the 6th/12th century

The primary aim of this paper is to show the origins of the form and decoration of the most common style of tomb built across Anatolia in the 6th/12th to 8th/14th centuries by examining the surviving brick-built examples.[1] It has been said that a second Iran was created in Anatolia[2] and the general impact of Iranian style on the architecture of Anatolia has been addressed by Crane.[3] The focus of this study is on the clear stylistic links between the brick-built funerary architecture built under Ildegüzid patronage in Azerbaijan during the mid to late 6th/12th century and that of the Mengücekids and Rūm Saljuqs built in the late 6th/12th and early 7th/13th centuries in Anatolia. By using the few surviving structures as texts to illuminate the poorly understood nature of patronage and construction methods in the early years of Turco-Muslim rule in Anatolia, a clearer picture of the process of architectural development can emerge. In addition, this work aims to bring the specific details of the three structures discussed in detail here to a wider audience in a broader and non-Turkocentric context.[4] The two buildings that are the main focus of this study are the Yūsuf ibn Kuthayyir tomb (557/1162)[5] in Nakhchivān City[6] and the Mengücek Ghazi tomb (*c.* 586/1190-91) in Kemah, 42km west-southwest of Erzincan in eastern Anatolia.[7] A detailed analysis of the Nakhchivān tomb is followed by a close study of the Kemah tomb and the resulting comparisons allow a number of observations with regard to the similarities and differences between the two structures to be clearly demonstrated. This is followed by an examination of the Kırk Kızlar tomb in Niksar.[8] As a result it becomes clearer which forms and techniques moved west and were adopted in Anatolia, and which remained in Azerbaijan.

Concurrent with the expansion of Rūm Saljuq territory in Anatolia under Sulṭān Kılıç Arslān II, the death of the Khwarāzm Shāh II Arslān in *Rajab* 567/March 1172 allowed the *atābeg* (guardian) Ildegiz, whose capital was in Nakhchivān, effective control of Azerbaijan and much of the territory to the south and east. The Saljuq Sulṭān Arslān Shāh had the semblance of power (*sūrat*) but it was the *atābeg* who exercised real authority (*ma'na*).[9] Ildegiz died at Nakhchivān in 570/1174-5 and his son Muḥammad Pahlawān ruled until his death in 582/1186-7.[10] It was during the reigns of these two rulers that the architectural style of Nakhchivān and Marāgha that became so influential in Anatolia developed.[11] Nakhchivān City, on the east bank of the Araxes River, is now within the capital of the Nakhchivan Autonomous Region, under the administration of the Republic of Azerbaijan. From the second half of the 6th/12th century until the defeat of the Ildegüzids in 622/1225 by the forces of the Khwarāzmshāh,[12] a vibrant and distinctive style of funerary architecture developed in the region.[13] Nakhchivān is located at the point where Turkey, Armenia and Iran now meet and there are the full or partial remains of four tombs that survive from the mid to late 6th/12th century. In addition there are three surviving Ildegüzid-era tombs in Marāgha; the square Gonbad-i Surkh (542/1148),[14] the Round Tower (563/1168) and the octagonal Gonbad-i Kabūd (593/1197),[15] along with one in Urmia, the circular Se Gonbad (580/1180).[16] Formal and decorative elements from one or more of these structures can be found in most of the early brick tombs of Anatolia. The earliest dated structure in Nakhchivān is the octagonal tomb of Yūsuf ibn Kuthayyir,[17] which is the structure that is closest in form, scale and decoration to the Mengücek Ghazi tomb in Kemah.

The Mengücekids were an obscure *ghāzī* dynasty that were first recorded in 512/1118 when Isḥāq ibn Mengücek threatened Malatya from his fortress in Kemah. At his death

the lands were divided between his sons in the traditional Turkic manner. Dāwūd I ibn Isḥāq ruled Kemah and Erzincan until his death in 560/1165, followed by Bahrām Shāh ibn Dāwūd who ruled until 622/1225.[18] It was during his rule that the court in Erzincan became a cultural centre[19] and the tomb in Kemah was constructed.

The architectural connections examined below reflect the wider cultural milieu of the time. In the lands of al-Jibāl,[20] under the control of the Ildegüzids, the connections were particularly strong but they can be seen to have extended to the lands of the Ghūrids in Khurūsān and even as far east as the Khwārazmshāh's capital at Gurganj and the Qarakhānids in Uzgend. Although there had been octagonal tombs built in Iran since the 5th/11th century,[21] the earliest surviving tomb with an octahedral pointed roof is the Yūsuf ibn Kuthayyir tomb in Nakhchivān.[22] This was the style of tomb roof that that subsequently proliferated across Anatolia.

In order to understand the source of one of the main decorative elements of both tombs under discussion attention must turn to the preceding tombs built to the east. The tomb of Naṣr ibn 'Alī ibn Mūsā (d.403/1012-1013)[23] is the central of the three connected, square-planned, Qarakhānid tombs in Uzgend, at the east end of the Farghāna valley in Central Asia.[24] It is the earliest of the three, with a suggested date of construction in the 5th/11th century.[25] The entrance façade of the tomb features one of the earliest examples of the type of geometric brick strapwork[26] decoration that is seen on the seven blind facets of the Yūsuf ibn Kuthayyir tomb and on the entrance tympanum of the Mengücek Ghazi tomb in Kemah and the Kırk Kızlar tomb in Niksar.

In the mountains to the northeast of Julfa, near the Araxes River are the remains of the (undated)[27] brick-built Gīlān tomb.[28] Only about a meter of the square-plan superstructure survives, but the octagonal crypt with a central column remains intact.[29]

There are fragments of strapwork decoration, and the articulated plan of the upper section can be seen from the remains of the structure. The square form of the upper section and the remote location in the mountains are both characteristics of the Melik Ghazi tomb near Pinarbaşı, 89km east of Kayseri (*c.* late 6th/13th century).[30] These similarities make an interesting comparison regardless of the relative chronology of the two structures.

Yūsuf ibn Kuthayyir tomb, Nakhchivān

Unlike many of the tombs in greater Iran and Anatolia, the Yūsuf ibn Kuthayyir tomb (fig. 1) is both well preserved and has had limited restoration during the 20th century AD. The lower section of most of the blind facets can be seen to have been restored to the height of about one meter, along with some of the decoration around the lower portion of the entrance, but the rest of the structure appears to be largely original.[31] The entrance facet of the octagonal tomb, facing 286 degrees, is referred to as facet 1, and the numbering system used below moves clockwise around the tomb, so that the facet to the left of the entrance is facet 2 and to the right is facet 8 (fig. 2). The decoration of the Yūsuf ibn Kuthayyir tomb consists of three primary elements, all of which are on the exterior. There is epigraphy, all in Kufic and in unglazed brick, which consists of two panels as well as a band around the top of the tomb. There is a panel over the entrance that gives the name of the patron and a panel at the top of the recessed section of facet 2 that gives the name of the builder. The second main element of the decoration is the seven different types of geometric brick strapwork in the recessed sections of the blind facets of the tomb. The final decorative element is the array of patterns incised into the mortar. This can be further divided into two sub-groups, the rectilinear patterns in the rising (vertical) and bed (horizontal) joints of the

brickwork and the primarily curvilinear patterns in the mortar between the brick strapwork on the panels. One aspect of the Yūsuf ibn Kuthayyir tomb that is unusual is the lack of stone foundations, a feature that is seen in so many other tombs of the period across Iran and Anatolia.

Fig. 2 – Yūsuf ibn Kuthayyir tomb, Nakhchivān © R. McClary

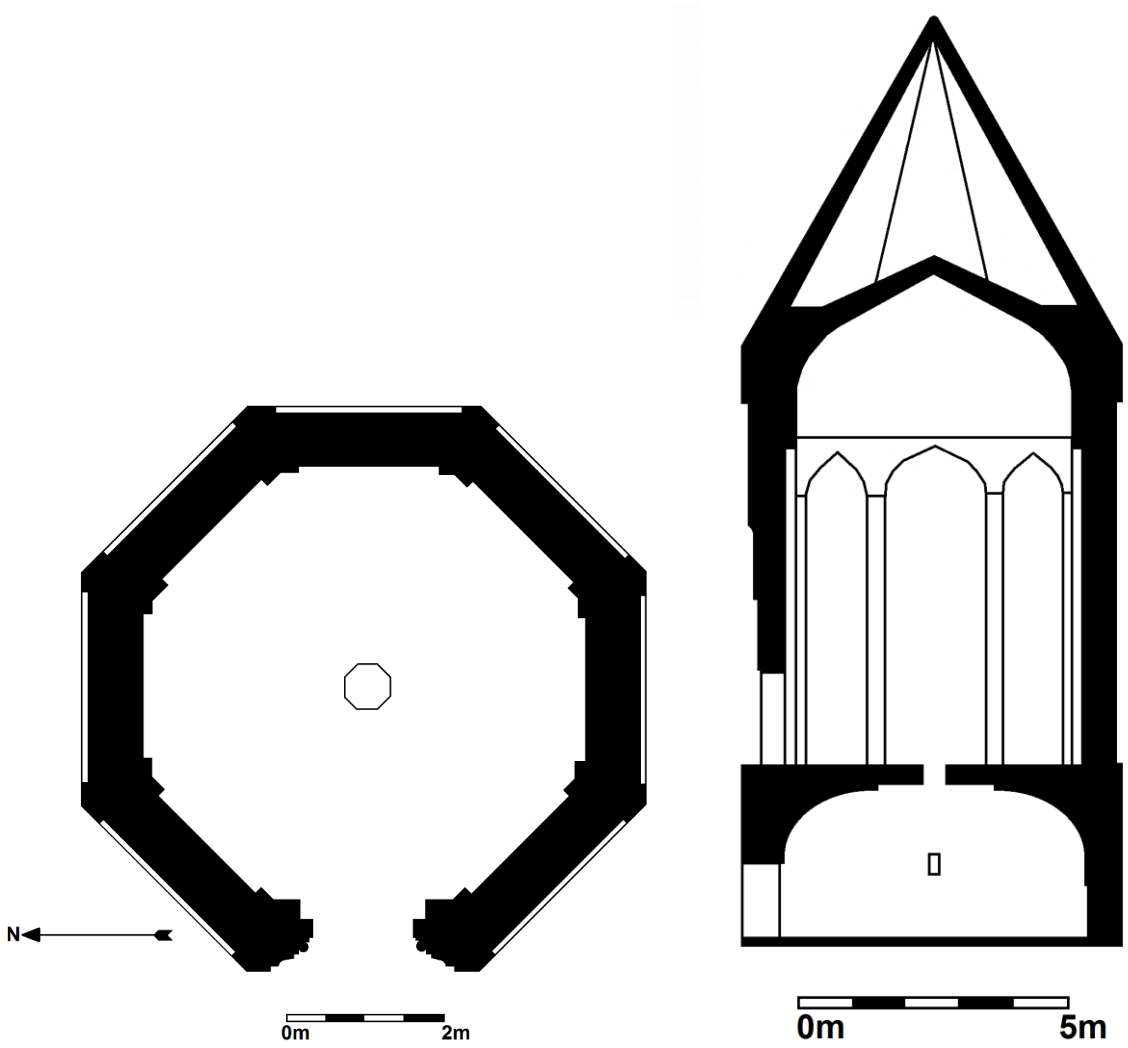


Fig. 2 – Yūsuf ibn Kuthayyir tomb cross-section (L) and elevation section[32] (R) © R. McClary

Epigraphy

The tomb features three epigraphic inscriptions, all of which are executed in brick in Kufic script. One is a panel of three lines over the entrance on facet 1, with the name of the patron and the date of construction (fig. 5) and another at the top of the recess of facet 2 which gives the name of the builder (fig. 3). The third inscription, which is pious in nature, is spread over eight panels, with one located at the top of each facet.

There is a slight discrepancy between the given reading of the builders *nisba* and the last three letters in the panel on facet 2, but it may be assumed that the reading is

correct, given the location of the tomb and the nature of the signature on the nearby but later Mu'mina Khātūn tomb (582/1186-7) (fig. 4). It reads:

Work of Ajamī ibn Abū Bakr, the builder, of Nakhchivān

'amal Ajamī ibn Abū (sic) *Bakr al-banna al-Nakhshwānī*[33]

عمل عجمي بن أبو بكر البنا النخجواني

Fig. 3 – Craftsman's signature panel at the top of facet 2 of the Yūsuf ibn Kuthayyir tomb © R. McClary

Fig. 4 – Craftsman's signature panel over the door of the Mu'mina Khātūn tomb © R. McClary

The three lines of Kufic epigraphy over the door give the name of the patron and the date:[34]

This is the mashhad of al-khawājah al-ra'īs al-adjall Rukn al-Dīn Jamāl al-Islām muqaddam al-mashā'ikh Yūsuf ibn Kuthayyir al-'Alī (?) on the date shawwāl 557

هذ(ا) المشهد الخواجه الرئيس الأجلّ ركن

الدين جمال الإسلام مقدّم المشايخ يو

سف بن كشيرالعلىّ (?) بتأريخ شوال سنة سبع و خمسين و خمس مائة

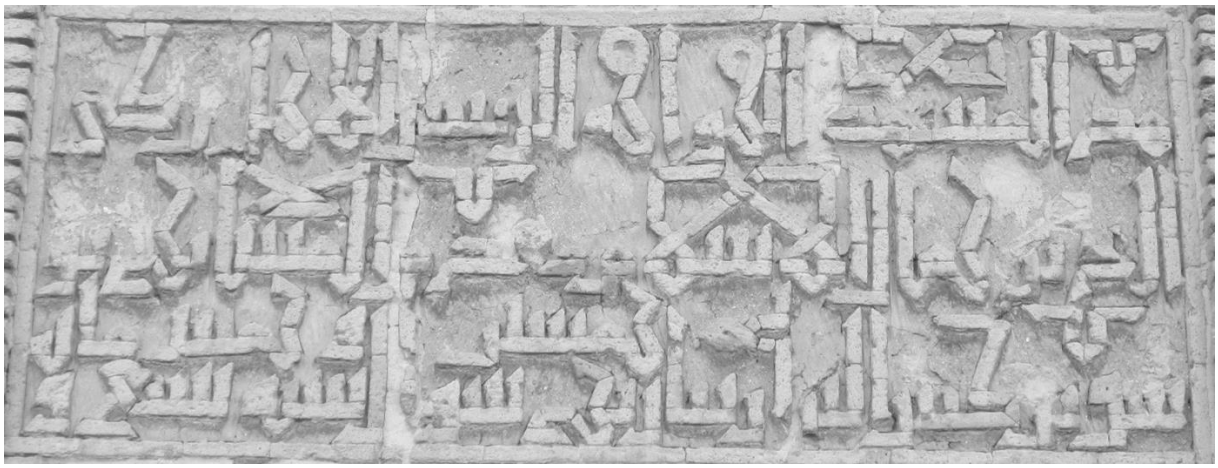


Fig. 5 – Panel above the door of the Yūsuf ibn Kuthayyir tomb, mentioning the patron © R. McClary

In addition to the two panels with the patron, date and builder, there is a band of epigraphy that runs around the top of the body of the tomb on eight panels (fig. 6). The most popular Qur'ānic text employed on monuments in the early Islamic period in Iran was *āyāt* 17 to 19 of *sūra* 3[35] and it appears that the tradition continued into the 6th/12th century. A close examination of the epigraphy has revealed that following the words *Bismillāh al-Raḥmān al-Raḥīm* (in the name of God the Most Gracious, the Most Merciful) on facet 8, the band features *āyāt* 17, 18 and the first part of 19 of *sūra* 3 of the Qur'ān[36] which reads:

(17) *those who are steadfast, truthful, truly devout, who give [in God's cause] and pray before dawn for forgiveness.* (18) *God bears witness that there is no god but Him, as do the angels and those who have knowledge. He upholds justice. There is no God but Him, the Almighty, the All Wise.* (19) *True Religion, in God's eyes is islam [devotion to Him alone].* [37]

بسم الله الرحمن الرحيم (17) الصابر ين و الصاد

قين و القانتين والمنفقين و المستغفر ين

با لاسحار(18) شهد الله انه لا اله ا لاهو و

الملىكة وا و لو العلم قا ىما با القصط لا ا

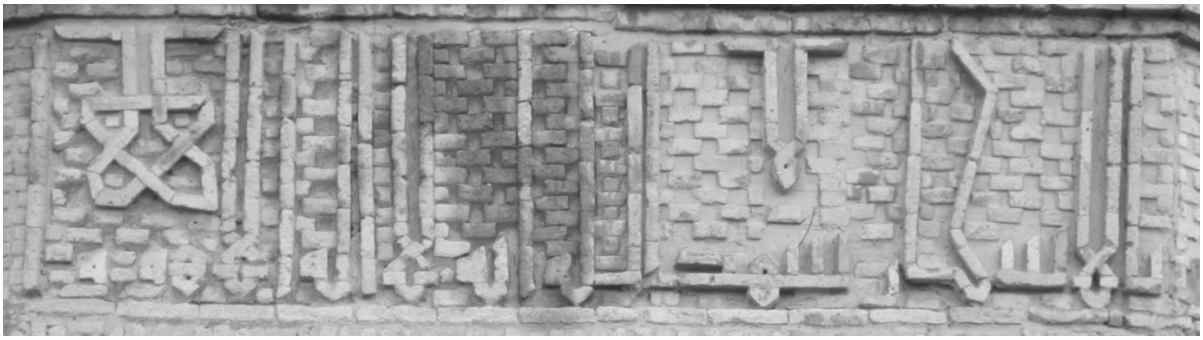
له الاهو العزيز الحكيم (19) اب لدين عنه

الله الاسلام.

The legible part of the inscription contains only the first line of 3:19, which extends to the middle of facet 5. The exact reading of the rest of the text remaining unclear. Eleven sections of elaborate knotwork decorate the areas above the text that lack an *alif* or a *lām* extending into the upper register. The patterns are not inserted purely to fill voids in order to add to the visual rhythm of the text, as the most elaborate examples of knotwork are placed so as to accentuate particularly powerful words. Facet 4 features the most, with three, which are placed over *al-ʻAzīz* (the All Mighty), *al-Hakīm* (the All Wise) and *al-Dīn* (the religion). Another particularly elaborate example can be seen on facet 1 over the word *al-munfiqīna* (those who give [in God's cause]).[38]

Facet 8

Facet 1



Facet 2

Facet 3

Facet 4

Facet 5

Facet 6

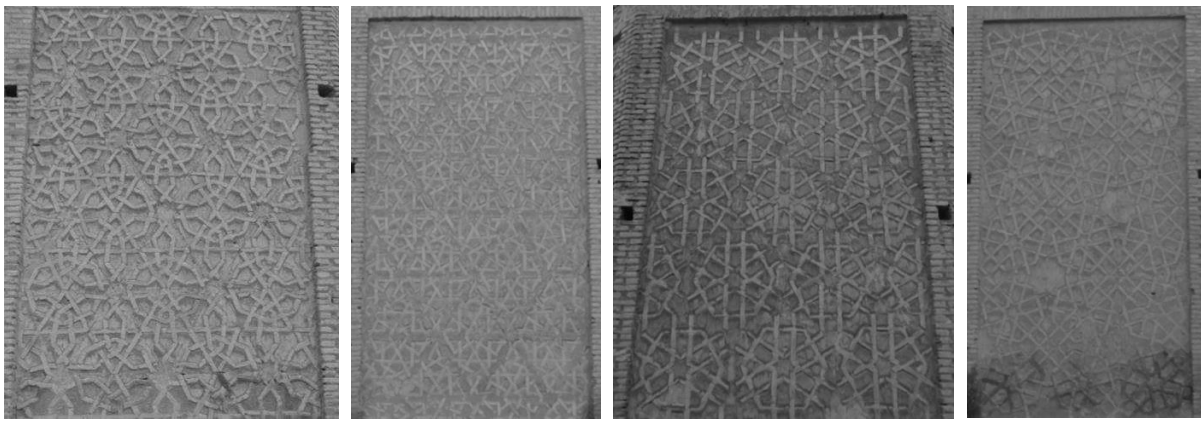
Facet 7

Fig. 6 – Yūsuf ibn Kuthayyir tomb upper epigraphic band © R. McClary

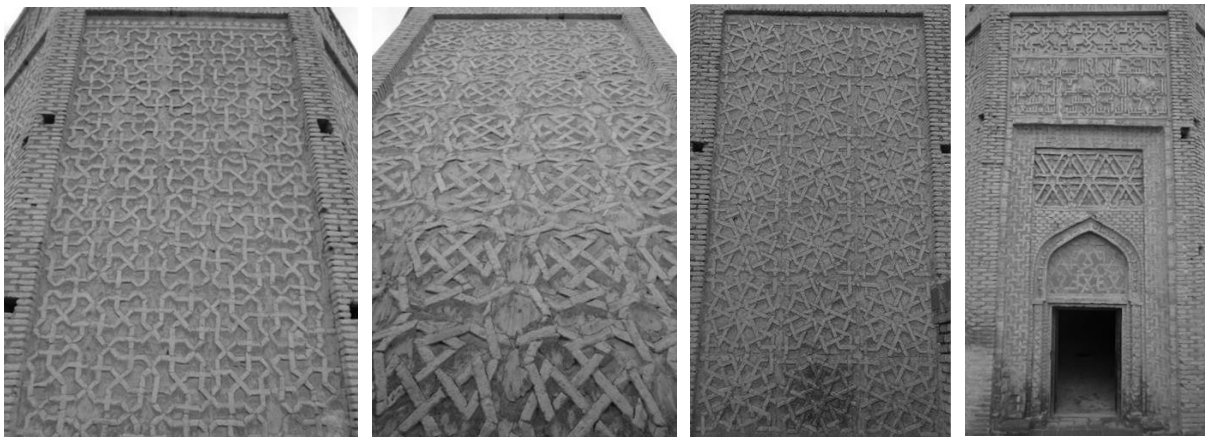
Strapwork decoration

Each of the outside edges of the blind facets features at least one square putlog hole, with the pairs staggered from one facet to the next (fig. 1). It must be presumed that they were for scaffolding rather than ventilation, as they do not extend into the interior of the tomb. The most visible style of decoration on the tomb is the geometric brick strapwork that decorates all seven of the blind facets of the octagonal body of the tomb.[39] The patterns are built up of separate panels that were individually constructed on the ground and then applied to the exterior of the tomb (fig. 8).[40] Four of the facets - 5, 6, 7 and 8 - feature square sections of geometric strapwork. Those on facets 5 and 8 measure *c.*78cm^2, with eight rows of three. Facet 7 has ten and a half rows, each with four individual panels that measure *c.*58cm^2 while facet 6 has thirteen rows

of five that measure *c.*47cm^2. The patterns on facets 2 and 3 consist of triangle repeats which alternate between a row of three triangles and a row of two full sections with a half panel on each edge. Facet 4 also has alternating rows of three and then two full with two half panels at each end, but the panels are octagonal. Although none of the panels have the same pattern, and a number of different configurations of constituent units are employed, the overall design has an aesthetic sense of unity in diversity (fig. 7).



Facet 2 Facet 3 Facet 4 Facet 5



Facet 6 Facet 7 Facet 8 Facet 1 - Portal

Fig. 7 – Yūsef ibn Kuthayyir tomb portal and external facets © R. McClary

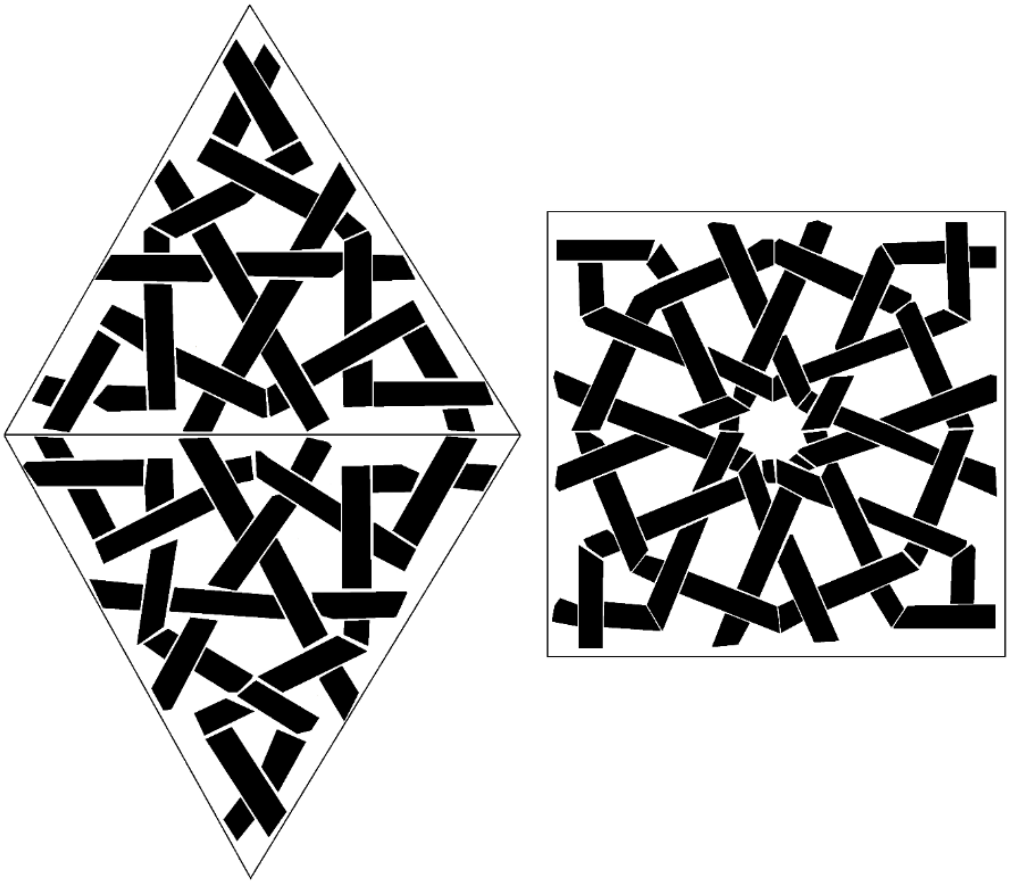


Fig. 8 – External constituent panels from facet 3 (L) and facet 8 (R), all *c.*78cm wide © R. McClary

Although the strapwork pattern on the tympanum of the Kemah tomb is not built up of units of the kind used on the blind facets of the Nakhchivān tomb, the technique was subsequently employed in Anatolia in the latter part of the 7th/13th century. The use of triangular and square revetment panels to create a larger strapwork pattern was employed on the blind facets of the elevated brick-built octagonal drum of the otherwise stone tomb attached to the Gök Madrasa in Amasya (665/1266-7).[41] In the Amasya example the octagon-based pattern is built up using both glazed[42] and unglazed sections in a similar manner to the panels on the exterior of the Mu'mina Khātūn tomb in Nakhchivān.[43] Although the Kemah tomb is closest in style to the antecedent Nakhchivān structures, it is clear that other techniques developed under Ildegüzid patronage came to be employed across Anatolia throughout the 7th/13th century.

Incised patterns

The external facets of the tomb had a thin skim coat of plaster applied to cover the joints between the constituent panels and to create a smooth surface into which the curvilinear patterns were incised. The lower section of the outer walls of the tomb have been repointed and re-plastered, with new incisions, to a height of about one and a half meters. The section above is heavily weathered on all facets, with the best preserved sections being the area immediately below the overhanging lip at the top of the recessed panels of the structure. The incised decoration of the tomb can be divided into two categories, the rectilinear rising and bed joint decoration of the brick work of the portal, and the primarily curvilinear decoration in the areas around the strapwork decoration of the seven blind panels.

The most common of all the rising joint decorations in Iran is the X-and-circle pattern and the surviving, albeit eroded, examples on the Yūsef ibn Kuthayyir tomb are located on the outside edges of the portal facet (fig. 9). The cavetto of the portal features a variation of the X-and-circle pattern used in the rising joints but they run through two opposing 90 degree turns. To maintain the rhythm of the pattern there are also small square patterns. Both the main pattern and the smaller secondary pattern are similar to incised patterns on the portal of the later tomb in Kemah. The bricks around which the mortar is incised are a combination of straight and pointed edges with an average length of about ten centimetres (fig. 9).

The best preserved section of the curvilinear incised patterns is at the top of facet 5, which is due to the overhanging lip that prevents rainwater running down and eroding the patterns, as has happened on most of the rest of the panels. The patterns, incised by hand,[44] consist of leaf-like enclosed patterns and open S-shaped lines, along with

numerous circular incisions (fig. 10). In addition the top of the recessed panel on facet 6 features a band of brick lozenges with the triangular areas of plaster in between them decorated with triangular incisions (fig. 28.B). The two engaged columns that flank the entrance portal are built up with custom-made curved bricks that are in the form of rectangle over a large central lozenge. When combined they leave an X-shaped void that may originally have been filled with incised plaster.

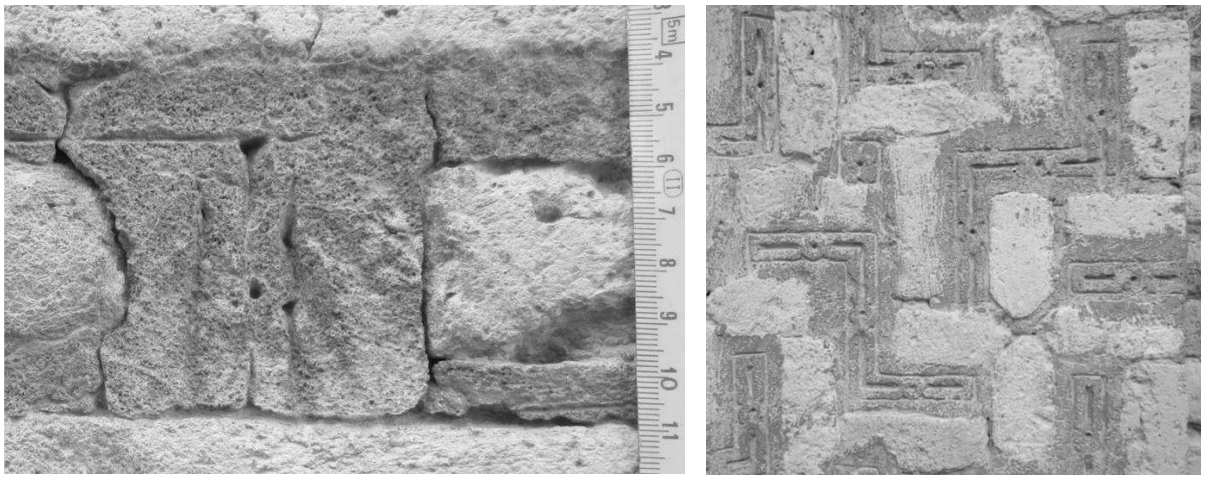


Fig. 9 – X-and-circle mortar incisions around the portal (L) and incised mortar patterns in the portal cavetto (R) of the Yūsuf ibn Kuthayyir tomb © R. McClary

Fig. 10 – Facet 5 plaster incisions, Yūsuf ibn Kuthayyir tomb © R. McClary

Yūsuf ibn Kuthayyir tomb interior

Unlike the exterior, which has rectangular blind recesses, the interior of the Yūsuf ibn Kuthayyir tomb features pointed-arch recesses, with the arch delineated in a much lighter coloured brick, resulting in a bi-chrome aesthetic[45] (fig. 11). It is the internal form of the Nakhchivān tomb, coupled with the external strapwork and glazed elements that are employed on the exterior of a number of later brick tombs, both in the Ildegüzid tombs in Marāgha as well as the octagonal Kırk Kızlar (forty daughters) Tomb in Niksar, north of Sivas, of the early 7th/13th century.[46] The floor of the tomb features a herringbone pattern of bricks that measure 22.5cm x 11.5cm on the face and has an octagonal opening to the crypt in the centre that reflects the overall plan of the structure (fig. 11). Aside from the floor and the arches, the interior of the tomb is very plain, in contrast to the style of some of the earlier brick tombs in Iran and Central Asia.[47]

Although the general form and many of the decorative elements of the Yūsuf ibn Kuthayyir tomb were subsequently employed in the later Kemah structure, one major difference between the two buildings is the form of the crypt. Although in both cases there is a vertical wall to about the mid-height that then curves in to form a half arch, in the Yūsuf ibn Kuthayyir crypt the half-arch form supports the flat ceiling with a central octagonal oculus (fig. 12). In contrast the crypt in Kemah has a full arch supported by a central octagonal pillar in the manner of the later Mu'mina Khātūn tomb in Nakhchivān (582/1186-7) (fig. 18). Another unique feature of the Yūsuf ibn Kuthayyir crypt is the outer brick wall built below ground around the light shaft in the north of the crypt wall (fig. 12).

Fig. 11 – Yūsuf ibn Kuthayyir tomb Interior blind arch (L) and floor (R) © R.McClary

Fig. 12 – Yūsuf ibn Kuthayyir crypt interior (L) and outer wall around crypt light shaft (R)

© R. McClary

Mengücek Ghazi tomb, Kemah

The Yūsuf ibn Kuthayyir tomb predates the octagonal Mengücek Ghazi tomb in Kemah and the Anatolian example is very similar in form, scale and decoration, although the Kemah tomb does not have geometric strapwork decoration in the recessed rectangular panels. The closest similarities between the two structures include the decoration of the pointed arch over the door, which consist of lozenge shapes. Also, in both cases the blind panel over the door is decorated with hexagon-based strapwork with bow-tie forms[48] around a central seal of Solomon star. Both portals feature prominent, if slightly different, patterns of mortal incisions and they both have square

holes in the upper portion the projecting corners of the facets.[49] The tomb in Kemah appears to date from the last decade of the 6th/12th century,[50] making it about thirty years after the Nakhchivān tomb. In contrast to the other seven facets, which are quite austere in their decoration, the entrance facet is highly articulated as well as featuring more decoration. Another small difference between the two buildings is the use in Kemah of a bevel rather than cavetto frame around the entrance (figs. 14 & 23). As the comparison of the two tympana shows (fig. 13), the geometric pattern employed is identical in nature. A larger portion of the pattern is employed in Kemah and there is a turquoise glazed bowl set into the middle of the central seal of Solomon, both of which give it a slightly more developed and sophisticated appearance. At Nakhchivān there are incised patterns in the plaster instead. The nature of the decoration of both tympana may be compared to the earlier entrance portal of the Gunbad-i Surkh in Marāgha.[51] The use of glazed bowls at Kemah appears to the earliest surviving example of the practice in Anatolia.[52] In addition the arch around the blind panel is decorated in both cases with inset unglazed lozenges.

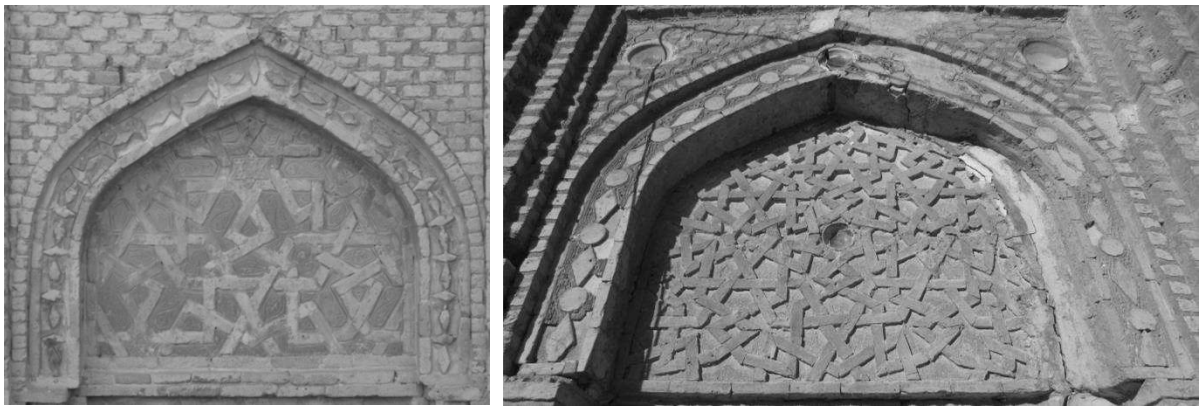


Fig. 13 – Portal blind arch comparison between Nakhchivān (L) and Kemah (R) © R.McClary

Fig. 14 – Mengücek Ghazi tomb, Kemah © R. McClary

Although the structure has been extensively restored in the last few years[53] enough of the original decoration remains in place to allow for an understanding of its relationship to other structures. The use of incised patterns in the mortar of the arch above the door can be clearly related to the techniques used on the earlier Yūsuf ibn Kuthayyir tomb. Taken together all these similarities suggest that the craftsman whose name is on the Kemah tomb, 'Umar ibn Ibrāhīm al-Tabarī, was trained within the same

milieu as Ajemī ibn Abū Bakr al-Nakhshiwānī, most likely within the lands under Ildegüzid control, prior to working in Anatolia.

Epigraphy

The Kemah tomb features three epigraphic panels, one in Kufic, executed in brick over the entrance and two in carved terracotta. One of these is cursive and the other Kufic, and they are located on facets 7 and 8.[54]

The funerary inscription over the door (fig. 15), executed in baked brick Kufic lettering[55] features the first part of Qur'ān 3:185[56] and reads:

"Every soul shall have a taste of death"

Kullu nafs dhā'ikat al-mawt

كلّ نفَسٍ ذآئقة المَوْتِ

Fig. 15 – Kufic epigraphic panel over the door of the Mengücek Ghazi tomb, Kemah © R. McClary

The same text can be seen over the entrance of the round tomb in Marāgha, built in 563/1168.[57] There are two panels of epigraphy on the Kemah tomb that are the only examples in Anatolia of panels carved into plaster rather than being built up with individual bricks, tiles, or being carved into stone. There is one in cursive script in the upper section of the north facet and a Kufic one in a similar location on the north east facet which appear to be unique in the context of Anatolia. The epigraphic panel at the top of the northeast facet (fig. 16) has fragmentary remains of the word *'amal* (work of) followed by the builder's name:[58]

‘Umar ibn Ibrāhīm al-Ṭabarī

عمل عمر ابراهيم الطبرى

His *nisba* indicates that he may have been from Ṭabaristān, the area of northern Iran that includes the Alborz Mountains and the southern shores of the Caspian Sea.

Fig. 16 – Signature panel on the northeast facet of the Mengücek Ghazi tomb, Kemah © R. McClary

The next facet, facing north, has an epigraphic panel of a similar size and location as the signature panel but is executed in a cursive script (fig. 17). Although cursive scripts can be found on earlier tombs to the east,[59] this appears to be one of the earliest examples in an architectural context in Anatolia. There are extensive lacunae but a reading suggested by Önkal is:[60]

معمار ابن سای سح المساح سهم الدين [?]

The text as given by Önkal does not make a great deal of sense but the presence of *ibn* suggests that the first word is a name. Ünal’s earlier reading makes more sense, as he omits the first section and gives:[61]

شيخ المشايخ سهم الدين

Shaykh al-mashaykh sahm al-dīn

It is possible that the panel refers to the patron[62] given the nature of the titulature, with the final part being ‘arrow of religion’.

Fig. 17 – Epigraphic panel on the north facet of the Mengücek Ghazi tomb, Kemah © R. McClary

There is a wide array of decorative incisions in the rising mortar joints on the exterior of the tomb and on the central octagonal pillar in the crypt, some of which are connected by lines incised into the bed joints. There are also several examples of a zoomorphic pattern that may shed some light on the nature of the patron. Either side of the door are engaged octagonal pillars that have a checkerboard appearance, alternating between square bricks and square mortar areas. The mortar areas are decorated with deeply incised, if somewhat stylized, eagles (figs. 21.A & 25). The prominent use of this long-standing imperial symbol suggests that the patron of the tomb may have been a leading member of the Mengücekid royal house, although the epigraphy does not correlate with any of the known titulature of the Mengücekid sulṭāns.

The octagonal column supporting a fan vault of the crypt is a unique form in the early funerary architecture of Islamic Anatolia. The nature of the decoration is also very unusual, with the rising joint decorated with repeats of the X-and-circle incised pattern (fig. 26), all connected by single lines in the horizontal mortar beds. The only other structure in Anatolia to feature such decoration is the ‘Izz al-Dīn Kay Kāwūs Hospital in Sivas. The use of a central brick column in the vault is another technique that appears to have been transferred directly from the Ildegüzid tombs of Nakhchivān (fig. 18). Although the upper portion of the tomb is very similar to the Yūsuf ibn Kuthayyir tomb, it is the crypts of the larger and later decagonal Mu’mina Khātūn tomb (fig. 18),

along with the Gīlān tomb, that feature central columns in the crypt. It is these which appear to have been the source of the form of the Kemah crypt.[63]

Fig. 18 – Mengücek Ghazi tomb crypt (L) and Mu'mina Khātūn tomb crypt, Nakhchivān © R. McClary

Although the upper sections of the Kemah and Niksar tombs have been extensively repaired in recent years they both had discontinuous double-shell domes. This was the most common type of roofing system for the tombs of Anatolia, as well as the surviving examples in Nakhchivān. It is a structural system that has a number of advantages over single dome systems. It makes possible a more imposing attenuated external appearance and weathering surface, coupled with a separate lower domed internal aesthetic. The use of two thinner shells also allows for a lighter structural mass when compared with an equivalent-sized single dome.[64]

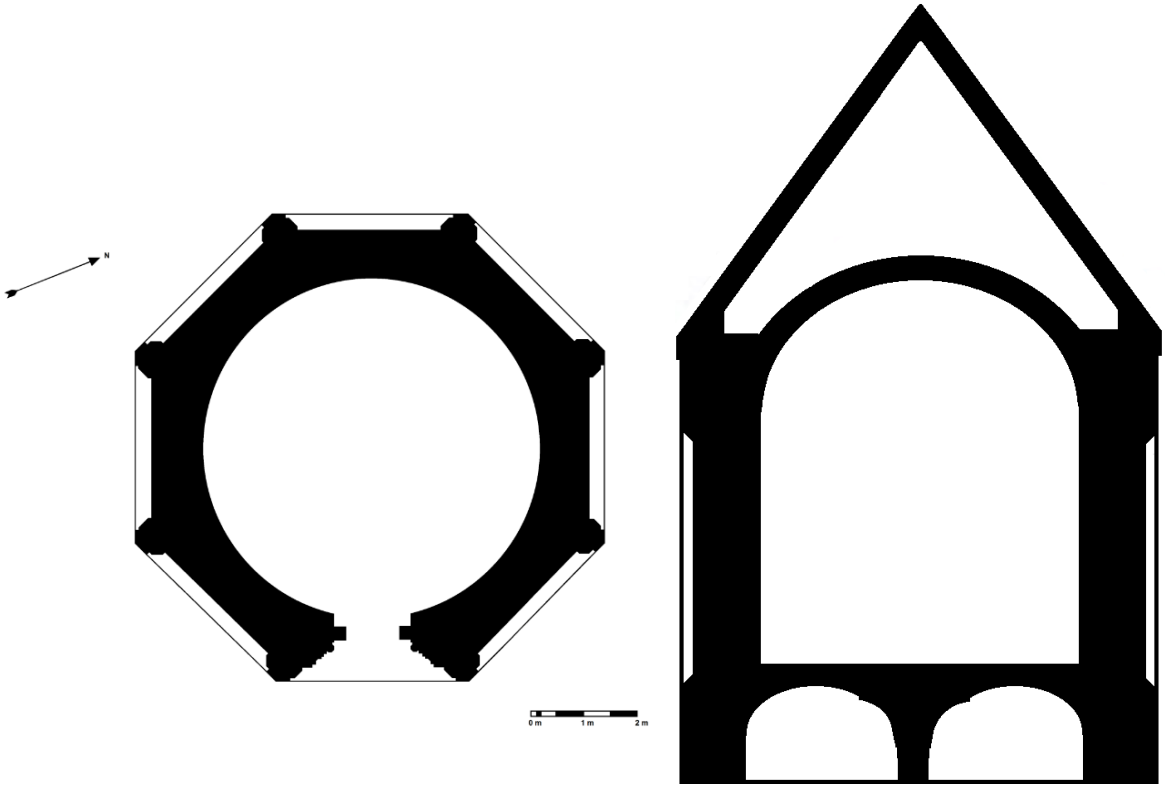


Fig. 19 – Mengücek Ghazi tomb, Kemah cross section @ 135cm above top step of entrance (L) and elevation (R) © R. McClary

The outer shell of the roof has recently been rebuilt, with a metal skin added and it is quite likely that the pitch of the roof was changed at the same time. These alterations, coupled with the lack of access to the upper areas of the tomb have forced a degree of conjecture with regard to the rendering of the area between the inner dome and the octahedral roof of the tomb in fig. 19.

Mortar incisions at Kemah

The Megücek Ghazi tomb in Kemah is one of only two buildings in Anatolia that feature incised patterns in the mortar beds. Although a description, plan and elevation have been published by Ünal, there is only a single mention of the presence of geometric incisions.[65] They occur in the rising joints between bricks as well as alternating horizontally between bricks on the bevelled facets of the portal. They are also set

vertically on the top bevelled facets of the recessed panels of the rest of the tomb as well as down the sides. The technique of decorating the wide rising joints between exposed bricks was developed in Iran, with the first examples employed at the Jāmi‘ Masjid in Iṣfahān.[66]

A C E B

Fig. 20 – North side of portal entrance of Mengücek Ghazi tomb, Kemah showing mortar patterns © R. McClary

Although clearly related, the methods employed in Anatolia and seemingly developed in Ildegüzid architecture were somewhat different, if not as common, as the ones employed in Iran in the 5th/11th century. In the Iranian examples the patterns are generally stamped into the mortar or consist of baked terracotta plugs inserted into the fabric of the building between bricks.[67] A close examination of the way the patterns were executed shows that the lines at Kemah were created by dragging a tool over the partially set surface of the mortar, while the triangular and circular incisions are the result of a pointed tool being inserted into it (fig. 26). As a result each individual repeat of a pattern is unique. The technique used in Kemah may be viewed as an adaptation rather than an adoption of the Iranian antecedents as there are innovative elements not seen in any of the surviving earlier examples in Iran. The patterns at Kemah are all executed in a rather haphazard and irregular manner, although the original appearance of most of the external patterns has been marred by extensive

weathering. A more sheltered example of the paired eight-triangle with central circle pattern (fig. 21.D), located on the upper bevel of one of the recessed panels (fig. 23) is somewhat better preserved than many of the ones on the more exposed portal facets.

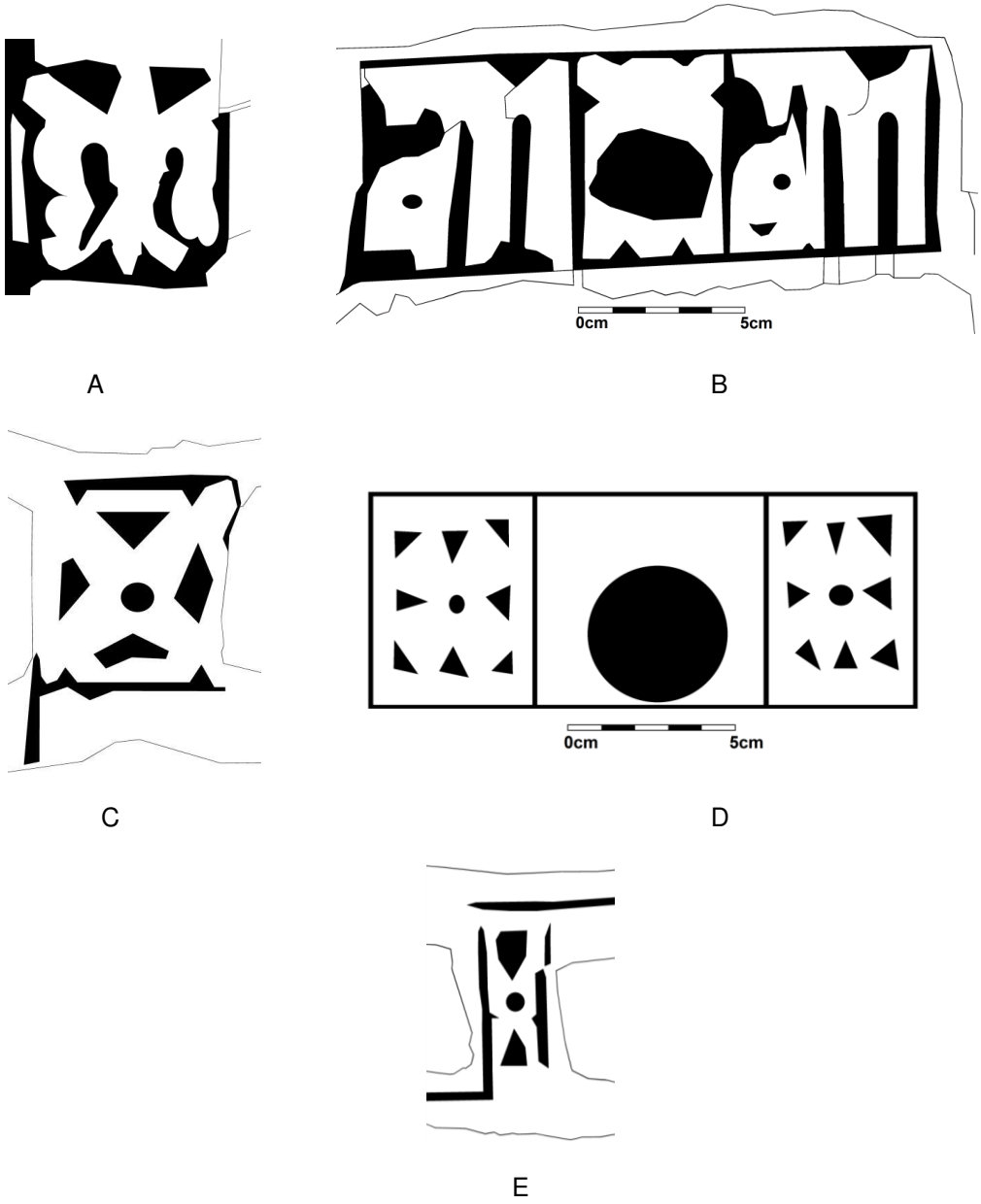


Fig. 21 – Mengücek Ghazi tomb mortar incision line drawings © R. McClary

Fig. 22 – Geometric mortar incisions on the portal exterior of the Mengücek Ghazi tomb © R. McClary

Fig. 23 – Geometric mortar incisions on the facet bevel of the Mengücek Ghazi tomb © R. McClary

In addition to the three patterns incised into the plaster bed of the entrance arch spandrels discussed below (fig. 27), there are five different patterns employed on the exterior of the tomb that are directly related to the brickwork. Two of them occur only in a paired form, with one being an epigraphic pattern (fig. 24), and the other consisting of eight triangular incisions around a small circle (fig. 21.D). Both types of the paired patterns are separated by a circular brick plug, in an inversion of the Iranian manner

of using baked plugs for the patterns. The entire compositions fill the space of a single brick face and are located on the bevelled facets of the portal. In addition the pattern in fig. 21.D is also used on the bevels of the blind panels of the other seven facets of the octagonal tomb.

The epigraphic patterns are located on the bevels on either side of the doorway of the tomb. (fig. 20). Extensive erosion, coupled with the variations in execution from one pattern to the next, makes a definitive transcription and translation extremely difficult. The most likely reading, and fitting for a tomb, is *Allāh*, with the upper section of the second *lām* bent forward (fig. 24).[68] The rather more abstracted representation in the line drawing (fig. 21.B) allows for a degree of reconstruction of some of the eroded elements. No other more plausible reading can be discerned in any of the variations of the pattern.[69] The inconsistencies and orthographic errors in the execution of the epigraphic incisions suggests that the craftsman responsible was illiterate.[70]

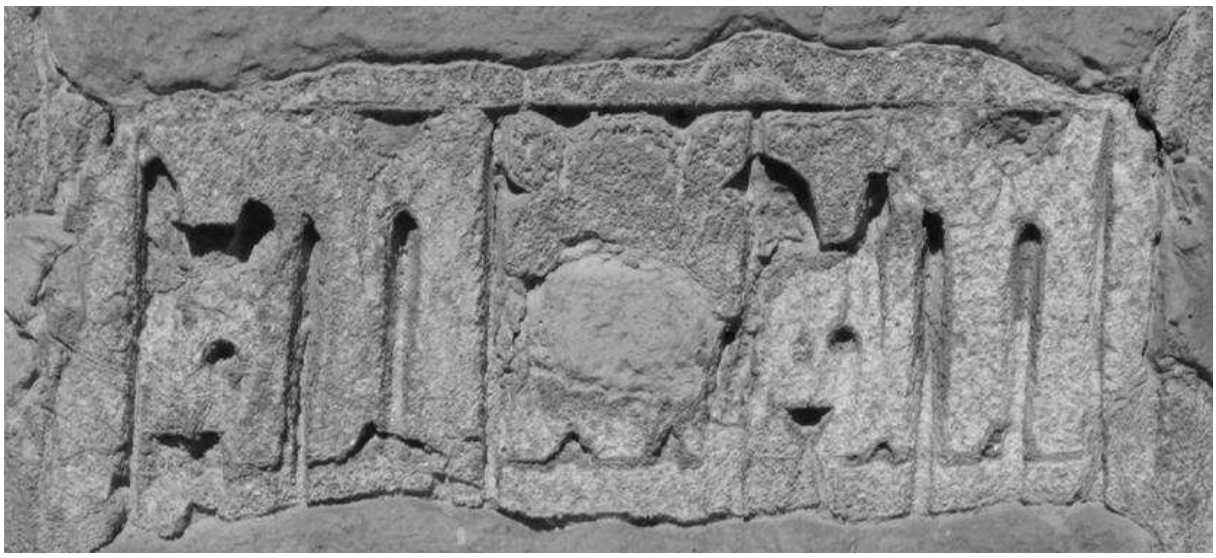


Fig. 24 – Epigraphic mortar incisions flanking the portal of the Mengücek Ghazi tomb, Kemah © R. McClary

The three patterns that occur singly consist of two that are roughly square, and one that is rectangular. One of the square patterns features what appears to be a highly

stylised eagle (figs. 25 & 21.A), perhaps indicative of some sort of royal connection for the tomb, while the other one consists of four triangles around a circle (fig. 25) like a simpler version of the twinned pattern in fig. 21.D. The roughly square geometric pattern consists of four incised triangles around a central circle, but the line drawing shows that the treatment of the corners make it possible to view it as an X superimposed on an octagon (fig. 21.C). The same style of corners can also be seen in the pattern around the central plug between the two epigraphic patterns as well. This use of the octagon connects the micro patterns to the macro plan of the entire structure.

Fig. 25 – Stylised eagle motifs on engaged column (L) and single geometric mortar pattern (R) on the Mengücek Ghazi tomb portal, Kemah © R. McClary

The narrow rectangular pattern consists of an X with a circle in the centre. Unfortunately the external examples are so eroded that they appear to consist of two triangles, one above and one below a small circle (fig. 21.E). The patterns look as if

they had been executed in a rapid, almost careless manner. It was the most common pattern employed across Iran[71] and is the only pattern seen on the Kemah tomb that is very similar to one found on the only other building in Anatolia that has incised rising joint patterns, the hospital founded by ‘Izz al-Dīn Kay Kāwūs I in Sivas in 614/1217-18. The same pattern is found on the octagonal central pillar of the crypt of the tomb as well (fig. 26).[72]

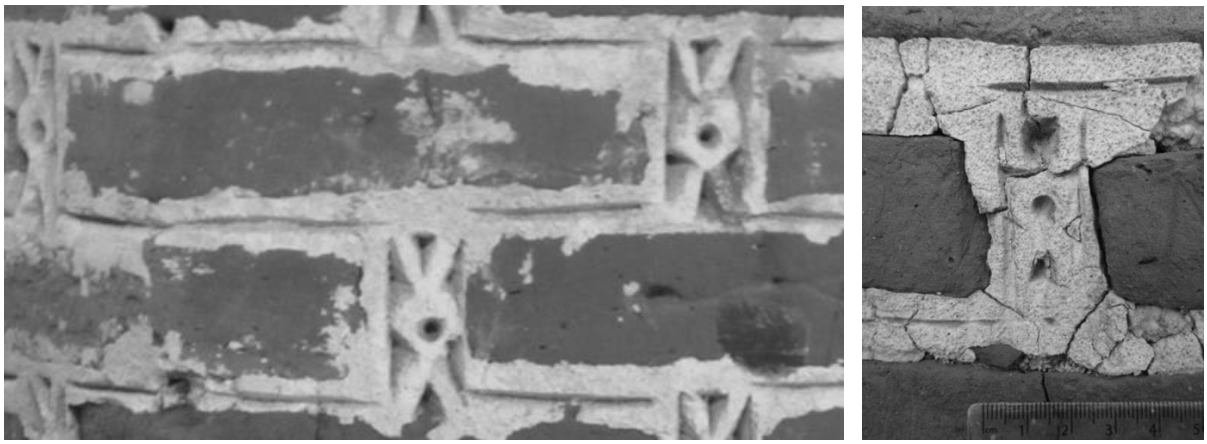


Fig. 26 – Narrow mortar incisions on the crypt column (L) and exterior (R) of the Mengücek Ghazi tomb, Kemah © R. McClary

Much of the form and decoration of the tomb structure owes a clear debt to the Yūsuf ibn Kuthayyir tomb in Nakhchivān. With regards to the mortar decoration, the picture changes somewhat, as the majority of the patterns on the earlier tomb are not only curvilinear, they are incised into a thin skim coat of mortar on the facets around the geometric brick decoration. There are a number of similarities, with examples of triangles incised in a similar manner to the ones around the framing band of the arch over the Kemah entrance (fig. 27).[73]

A comparison of figs. 27 and 28 shows that the three patterns used to decorate the Kemah spandrels can all be related to examples on the earlier Nakhchivān tomb. The curvilinear patterns are not unlike those in fig. 28.C. The only difference with the

pattern in fig. 27 and fig. 28.B is the shape that they are surrounding. The closest comparison can be seen in the pattern in the cavetto of Nakhchivān (fig. 28.A). It has had some restoration and may be described as an elongated version of the X-and-circle pattern used in the rising joints of both structures. The incised patterns in the sections of mortar in and around the spandrels of the entrance arch at Kemah do not decorate a structurally necessary feature, in contrast to the layers of mortar that bond the bricks together. There are two different aesthetics, as the latter is limited to the rising joints and bed joints and dominates in the Anatolian examples. In contrast, the majority of the incisions in Nakhchivān are in the manner of the ones seen in fig. 28.C and enliven the areas around the decorative, non-structural brick patterns in the seven blind facets of the tomb. These more curvilinear patterns occupy as much space as the brick strapwork and although now highly eroded they are in no way subordinate to the brickwork. The style that dominates the two surviving Anatolian examples, in Kemah and Sivas, is the decoration of the rising and bed joints of the brickwork, where the mortar incisions are entirely subservient to the brickwork.

As at Kemah, the Yūsuf ibn Kuthayyir tomb also features the narrow rectangular X-and-circle patterns in the rising joints which are connected by straight lines incised in the bed joints of the outer framing section of the portal. There are numerous differences, such as the lack of curvilinear patterns, the plain external facets and the use of bevels around their edges, along with the significant similarities. These suggest that the craftsmen responsible for the Anatolian building, including ‘Umar ibn Ibrāhīm al-Tabarī, most likely worked on structures built within the lands under Ildegüzid control, or at least have been trained by people who had, but subsequently developed their own individual style as they moved west. The patterns in Kemah, although not subsequently adopted across the region, provide tangible evidence of the close

architectural connections between northwest Iran and central Anatolia in the late 6th/12th century.[74]

Fig. 27 – Mortar patterns in the spandrel of the Mengücek Ghazi tomb © R. McClary

A B C

Fig. 28 – Patterns from the Yūsuf ibn Kuthayyir tomb similar to the ones on the spandrel at Kemah © R. McClary

Kırk Kızlar tomb, Niksar

The only other brick-built octagonal-plan tomb to survive from the late 6th/12th and early 7th/13th centuries in Anatolia is the Kırk Kızlar tomb in Niksar. The name, meaning forty daughters in Turkish,[75] gives no indication of the patron and the only epigraphic panel, located over the recessed blind pointed-arch in the south-east facet, gives the

craftsman's signature (fig. 29). Inside a border of rectangular turquoise-glazed tiles there is the following text which, although rather unusual in its execution, was almost certainly meant to be read as:

عمل احمد بن ابو بكر المد ... (?)

ʿ*amal* (work of) *Aḥmad ibn Abū Bakr al-Mad…* (?)[76]

Fig. 29 – Kırk Kızlar tomb, Niksar; epigraphy on south-east facet © R. McClary

The method of execution of the panels, with the epigraphy in low relief, is unique in Anatolia. The panel consists of six rectangular moulded brick tiles that, with the exception of the *kāf* in the middle of *Bakr*, do not split any letter forms. Elements of the decoration, as well as the name of the craftsman, are almost identical to that of the royal tomb of ʿIzz al-Dīn Kay Kāwūs I in Sivas (617/1220).[77] Perhaps surprisingly, given the quality of the decoration in Sivas, the Niksar epigraphy is rather poorly executed. The last part of the *nisba* is incomplete when compared with the example in Sivas, while the Sivas example does not have the *Abī* that is seen in the Niksar panel. The extensive similarities with the Sivas structure have led to the assumption that the tomb dates from around the same time.[78] There is no other firm evidence, such as the results of dendrochronological analysis of timber elements or the presence of a patron's name, by which to gain a more accurate date.

The structure has been extensively repaired recently, but the new bricks are a different shade of red, making it fairly clear which parts of the structure are original. The tomb

is built on a steep slope in the centre of Niksar. The geomorphology of the site obscures the back (north-west) side of the building. The facets of the tomb alternate between blind arch panels and decorated recessed arches over the door and windows (fig. 32), but there are only three decorated panels, as all the ones on the back side are plain. Two of the three recessed panels, over the door and one of the windows, are decorated with different variants of hexagonal-based interlace strapwork patterns. Unlike the two earlier tombs under discussion, the strapwork patterns alternate between unglazed and turquoise-glazed surface decoration (figs. 32 A and B), demonstrating the rapid development in architectural decoration that was underway at the time in Anatolia. Both panels have suffered losses as a result of the vicissitudes of time, but the recent restoration appears to have resulted in a change in the chemistry of the structure. Salts are being forced out of the surface of the bricks, including those in the panel over the door, causing further losses to the bricks, glazed tiles and mortar beds (fig. 33).[79]

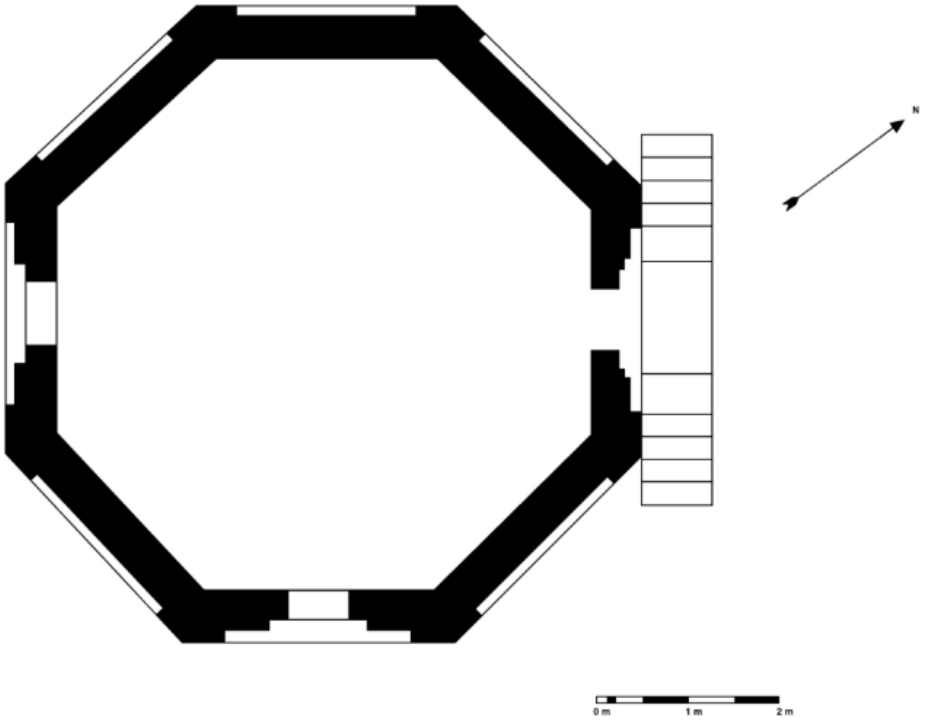


Fig. 30 – Kırk Kızlar tomb, Niksar (*c.* 611-17/1215-20); cross-section © R. McClary

Fig. 31 – Kırk Kızlar tomb, Niksar (*c.* 611-17/1215-20) © R. McClary

A: Panel above window in SE facet B: Panel above door in NE facet

Fig. 32 – Kırk Kızlar tomb, Niksar; blind arch decoration © R. McClary

Fig. 33 – Kırk Kızlar tomb, Niksar; exterior salt efflorescence damage © R. McClary

There are close similarities between the intersecting glazed and unglazed polygon patterns on the Kırk Kizlar tomb and those on the exterior of the Muʾmina Khātūn tomb in Nakhchivān. Although the Ildegüzid structure appears to be the origin of the visual aesthetic, there are differences in the method of execution. Close inspection of the larger areas covered in Nakhchivān shows that they were executed in a different manner. Large (*c.* 1m square) panels with repeating patterns were prepared on the ground and then installed.[80] In contrast, at Kemah the glazed and unglazed elements

appear to have been set into the plaster bed *in situ*. It appears that an aesthetic developed to the east was used on a smaller scale, and in a slightly different manner, in Niksar.

Niksar represents the westernmost terminus of the type of brick-built tomb that developed in north-west Iran and that proliferated, increasingly in stone rather than brick, across Anatolia during the 7th/13th century. The two brick Anatolian examples under discussion lack the all-over strapwork decoration on the recessed panels of the facets, but they both have smaller panels of strapwork of a similar nature over the door. Although the tombs in Kemah and Niksar have a number of similarities they are by no means identical. The most obvious differences are the rectangular panels in Kemah, in the same manner as the Yūsuf ibn Kuthayyir tomb, while the Niksar example has blind pointed-arches[81] and increased fenestration. All three are similar in size as well as in form, decoration and construction materials.

Melik Ghazi tomb, Pinarbaşı

Although the majority of the Muslim tomb structures in Anatolia are octagonal, either in brick or stone, there are exceptions. The Melik Ghazi tomb is an example of a brick-built square tomb with an eight-sided drum enclosing an internal dome on squinches (figs. 35 & 36). Judging by the style and the date of related structures in Iran, it is unlikely that it was built any earlier than the last quarter of the 6th/12th century and has been attributed, on stylistic grounds, to the end of the century.[82]

Unfortunately, where there was once probably an epigraphic panel with the date or the name of the patron, there is now just a shallow rectangular void in the south facet high above the entrance. Like the later tomb of ‘Izz al-Dīn Kay Kāwūs I in Sivas (617/1220), which also has a square body and polygonal upper section, the Pinarbaşı tomb is

cardinally orientated. Like the square-plan Gīlān tomb near Nakhchivān, (fig. 34) the tomb is located at the top of a hill in a remote location, in contrast to most of the other surviving tombs in Anatolia that are, or at least were, erected in an urban context.[83] Although primarily a brick-built structure, the Melik Ghazi tomb has a stone base that consists of two layers of grey ashlars that are stepped back.[84] There are engaged columns on the four re-entrant (notched out) corners and each facet consists of blind arches with narrow tall flanking panels. The use of engaged columns can be seen to have been employed on tombs since the earliest surviving square brick tomb, the Sāmānid tomb in Bukhārā (*c.*320s/930s),[85] through the Qarakhānid tombs in Uzgend, to the tombs at Kharraqān, Marāgha and Gīlān.[86] The flanking panels at the Melik Ghazi each have a shallow brick *muqarnas* hood[87] near the top and a small rectangle panel above. The main surfaces are covered with low relief geometric patterns executed in brick. There is a pointed arch over the door and the recessed doorway is flanked by shallow recessed rectangular panels. The overall form is similar to antecedent structures in Iran, such as the Gunbad-i Surkh in Marāgha (542/1147-8)[88] and the plan of the (undated) Gīlān Tomb in Nakhchivān. The tripartite façade with shallow, simple *muqarnas* is also particularly reminiscent of the Pīr Mausoleum in Takistān (6th/12th century).[89] The Pinarbaşı tomb has been extensively repaired, and all four of the engaged brick columns on the corners have been completely replaced, making any analysis of their current form somewhat problematic.[90] The absence/removal of mortar in select rising joints gives an enlivening decorative effect in a manner not dissimilar to the patterns in the wide rising joints at Kemah and Sivas.[91] The exterior features six different bonds, with all but one consisting of vertical and horizontal bricks and four of them employing a variety of brick lengths. The point of access to the crypt is currently blocked but there are two small windows letting light in,

with one in the east and one in the west side. The crypt has a cruciform plan and central cross vault that is of a similar nature to those at the brick and stone-built Selime Sultan tomb in Selime near Aksaray and the stone-built Quresh Baba tomb near Afyon, both of which date from the early 7th/13th century.[92]

The use of decorative brick bonds to enliven the appearance of the surface is not limited to the exterior of the building.[93] The interior of the dome is supported on semi-domed squinches constructed with bricks set at 45 degrees. The blind arches in between have tympana decorated with bricks in a horizontal offset bond between short vertical bricks. The arches at the cardinal points at the base of the dome have different patterns. The east- and west-facing ones have a V-pattern with the point facing down, and the north and south ones have the point facing up. The apex of the dome itself features small bricks meeting at 45 degrees to make a 'V on its side' pattern, then full size bricks making the same pattern on the lower part of the dome (fig. 36). Although the majority of the later tombs in Anatolia were built on an octagonal plan, the form of the Melik Ghazi tomb further demonstrates the dominance of the wider Persianate style of funerary architecture in the 6th/12th century in Anatolia.

Fig. 34 – Gīlān tomb, Nakhchivān (after Naxçıvan Ensiklopediyası (2005), p.208)

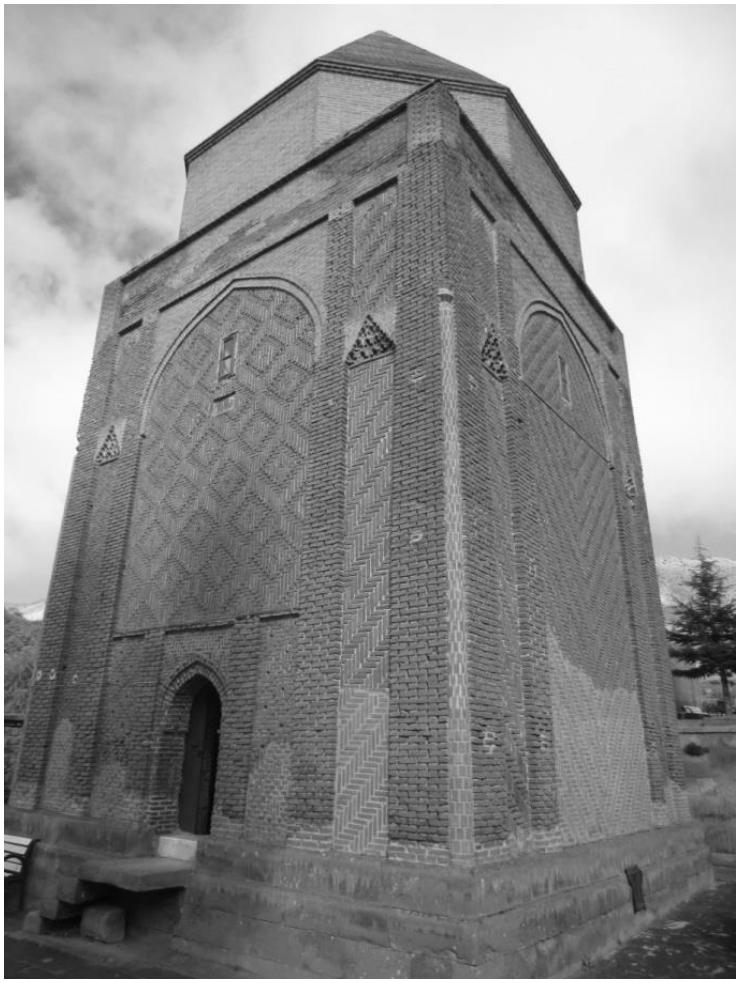


Fig. 35 – Melik Ghazi tomb, Pinarbaşı © R. McClary

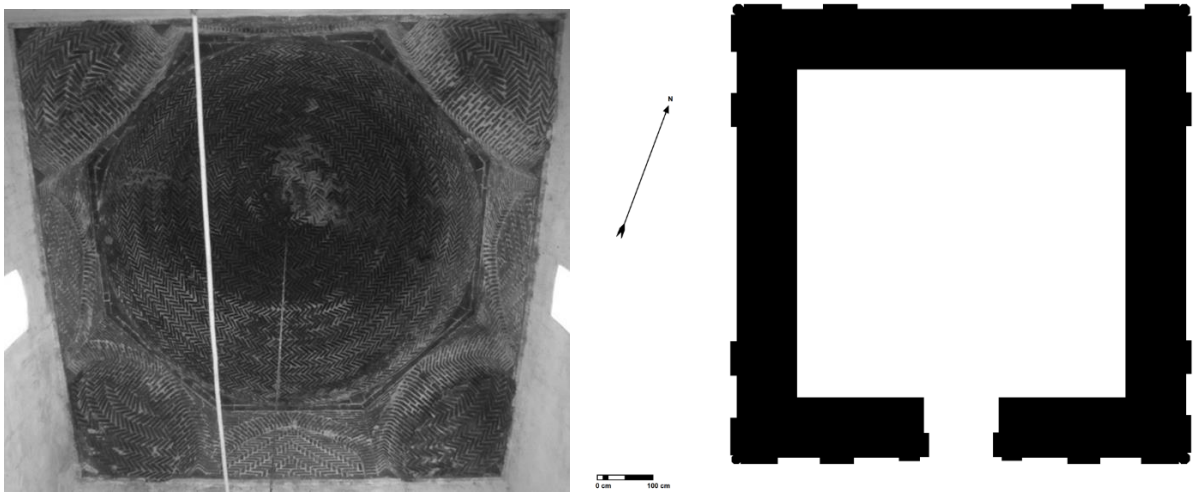


Fig. 36 – Dome interior (L) and cross section @ 110cm above current grade (R) of Melik Ghazi tomb, Pinarbaşı © R. McClary

Conclusion

The numerous close connections between the structures that are discussed here suggests the existence of a wider regional style, one that originated in the lands under Ildegüzid rule. Furthermore, the various differences in technique and decoration show that the Kemah tomb is not a mere copy of the Nakhchivān example, but rather an example of adoption and adaptation of many of the decorative and formal elements. Although many of the characteristics employed in Nakhchivān and Marāgha were subsequently employed in Anatolia, it is noteworthy that the deeply-incised curvilinear decoration, originally see in Qarakhānid tombs, did not migrated any further west than the Ildegüzid lands.[94] The Kemah tomb, like the Melik Ghazi tomb which also borrowed heavily from the Ildegüzid tradition, shows that the craftsmen and patrons in Anatolia were not content with just mimicking earlier structures. Instead they used them as a jumping-off point for the development of a new and unique Anatolian Islamic architectural aesthetic. This was an aesthetic that made increased use of stone, but employed forms and decorations developed in the lands to the east. This rapid process of development was largely synthesised into a recognisable regional style by the end of the second decade of the 7th/13th century, with deeply carved stone and an increased use of glazed tile decoration *in lieu* of brick decoration.[95]

The main difference between the Kemah and Nakhchivān structures is the plain brick bond used on the blind facets of the Kemah tomb rather than the geometric strapwork and incised plaster bed. In addition the style of plaster incisions is primarily curvilinear in Nakhchivān, where they enliven the large panels of rectilinear brick strapwork, and rectilinear in Kemah. It can be seen that the media, form and tympanum decoration of the Kemah tomb were clearly drawn from the school of Ildegüzid funerary architecture.[96] This study of geographically distant but structurally and decoratively

similar tombs forms part of a wider process of elucidating a better understanding of the development of Persianate funerary architecture prior to the Mongol period. During the 6th/12th century there was a relatively rapid movement of decorative as well as formal techniques across vast areas, from Uzgend and Urgench to Nakhchivān, Kemah and Niksar. This paper, while broadly comparative in nature, is an attempt to tie together a few of the numerous loose threads of formal and decorative connections, traces of which remain across vast areas of Asia. The ultimate aim, of which this is one small part, is to delineate the grand narrative of the development and diffusion of brick-built Persianate funerary architecture from Central Asia to Central Anatolia.

Richard Piran McClary, Edinburgh 2015

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[1] Although the earlier structures were built of brick, most of the subsequent tombs were constructed wholly of partially of stone. See Önkal (1996) for the full corpus of surviving tombs from the 6th/12 and 7th/13th centuries in Anatolia.

[2] Hillenbrand (2005), p.168. She goes on to write that it was the Turks that conquered Anatolia, but it was the Persians that brought Islamic religious and secular culture there.

[3] See Crane (1994), pp.263-268. The article discusses the powerful impact of Iran on the typology and planning of buildings and suggests that the reason was in part an attempt by the patrons in Anatolia to legitimize themselves through a connection with the Iranian past. The main problem with this hypothesis is how the local population would understand the Iranian aspect, being largely indigenous to Anatolia.

[4] For the best overview of the causes and consequences of the nationalist Turko-centric approach to the study of the Islamic architecture of Anatolia see Pancaroğlu (2007), pp.67-78.

[5] Combe, Sauvaget & Wiet (1937), p.30 have a transcription and translation of the brick epigraphic panel in Kufic over the entrance to the tomb. It gives the name of the patron and the date, Shawwāl 557/September-October 1162.

[6] The Yūsuf ibn Kuthayyir tomb is located at: Lat: 39° 12' 07" N Lon: 045° 24' 50" E.

[7] The Mengūcek Ghazi tomb is located at: Lat: 39º 36' 30" N Lon: 039º 01' 58" E. Kemah is 670km west of Nakhchivān.

[8] The tomb, dated on stylistic grounds to 611-17/1215-20, is located at Lat: 40º 35' 26" N Lon: 036º 57' 13" E.

[9] Luther (2001), p.110. The Sulṭān and the *atābeg* were closely related, as the Sulṭān's mother was Ildegiz's wife and mother of his two sons.

[10] *Ibid.*, p.111.

[11] Although the mosques, tombs and minarets of Anatolia built in brick from the mid-6th/12th to the mid-7th/13th century draw on the wider Persianate brick tradition, this paper examines the particularly close connections to the Ildegüzid school of building.

[12] Bosworth (1996), p.199.

[13] Bosworth (1993), p.922 states that the limited survival is due to the devastation of Nakhchivān City during Mongol rule, according to an eyewitness report by Rubruck that is based on his visit in 1253 AD.

[14] See Godard (1936), pp.131-134 and Pope (1936) vol. IV, pls.341 A & B.

[15] See Pickett (1997), pp.23-24 and pls.9 & 10. As the Gonbad-i Kabūd postdates the main structures under discussion in this paper no further comments on it will be made.

[16] Although the tomb is round it has a flat entrance facet that is very similar to the ones in Nakhchivān, Marāgha and Kemah. The Urmia tomb is closest in style to the earlier Round Tower in Marāgha.

[17] Jacobsthal (1899), p.20 suggests, based on the titulature in the foundation inscription over the door, that Yūsuf ibn Kuthayyir was a minister of state with high social standing.

[18] Bosworth (1996), p.217.

[19] *Ibid.*

[20] Bosworth (2011), p.1 states that al-Jibāl, also known as 'Irāq-i Ajam by medieval Muslim geographers, refers to the area roughly contiguous with modern day Azerbaijan and the north west of Iran.

[21] Two of the most important examples are in Kharraqān, built in 460/1067-8 and 486/1093-4. See Stronach & Cuyler Young (1966), pp.1-20.

[22] Schroeder (1938), p.1024. Examination of the patina of the bricks on the roof suggests that they are original.

[23] Bosworth (1996), pp.182-183 suggests that he was the first of the Qarakhānid (also known as Ilek or Ilig Khān) Qagans of Ferghāna, based in Uzgend.

[24] The tomb is located at: Lat: 40° 46' 08" N Lon: 073° 17' 52" E. Uzgend is now part of the Kyrgyz Republic, also known as Kyrgyzstan. See Michailidis (2007), pp.77-82 for a detailed study of the extant literature on the building, including most of the Russian scholarship.

[25] Cohn-Wiener (1930), p.17.

[26] In the context of the brick tombs the definition of strapwork is as given in Wilber (1939), p.34; he describes it as a "pattern formed of thin strips of material which are raised somewhat above the level of the surface they are embedded [into]". See Cohn-Wiener (1930), pl.XI for an image of the surviving section of strapwork in Uzgend.

[27] Presumably the tomb predates the Khwarāzmian conquest of the region in 622/1225 by the last khwarāzmshāh, Jalāl al-Dīn Mengübirti (r.617/1220-628/1231). After the Khwarāzmian victory in

622/1225 there does not appear to be any major construction in the former Ildegüzid lands until the later part of the 7th/13th century. For more details of the conquest see Bosworth (1996), pp. 180, 199.

[28] Yazar (2007), p.105 states that the tomb was discovered in 1976, and publications that mention it are the Naxçıvan Ensiklopediyası (2005), pp.208-209, which includes unattributed images from an earlier publication, along with Nizami (1991) and Salamzade & Memmerzade (1985), all in Azeri, and Yazar (2007), in Turkish. Naxçıvan Ensiklopediyası (2005), p.209 shows a plan and drawing of the crypt interior. Fragments of the exterior decoration of the tomb are held in the Ordubad Museum (see Yazar (2007), p.466, pl.303, and pp.468-470, pls.304-307, several of which are very similar to the decoration found on the exterior of the Yūsuf ibn Kuthayyir tomb. The Gīlān tomb is located in a remote mountaintop location, and owing to the political situation and proximity to the Iranian border it is currently inaccessible.

[29] See Yazar (2007), pp.461-462, pls.293-295.

[30] The tomb is located at Lat: 39º 46' 40" N Lon: 040º 23' 11" E. The dating is based on the stylistic attributes of the building. Bakırer (1983), p.100 suggests that the tomb dates from the third quarter of the 6th/12th century.

[31] Sarre (1910), p.9, fig.1 shows the tomb in a remarkably similar condition to today, with the exception of the missing strapwork decoration on the lower sections of the exterior.

[32] Drawing based on measurements made on site and corrected elements of Ashkan (2010), p.205, fig.18.

[33] Combe, Sauvaget & Wiet (1937), p.31. Two inscriptions from the tomb, naming the craftsman and the patron are included, but there is no mention of the band of epigraphy around the top of the tomb.

[34] Combe, Sauvaget & Wiet (1937), p.30.

[35] Blair (1992), p.9. Her text gives 3:16-18 but the description of the content of the verses, especially with regard to the true religion being Islam which is at the beginning of 3:19, suggests that it was meant to say 3:17-19. It is 3:17, 3:18 and the beginning of 3:19 that are on the Nakhchivān tomb.

[36] The Arabic text is transcribed as it is displayed on the tomb, with the addition of *i'jām* (dots). There are a few letter forms that vary from the Qur'ānic text but the differences tend to be to add clarity to the reading in the absence of any diacritical vowel markers which suggests that they were conscious decisions rather than orthographic mistakes. An example is the last word on facet 4 which has عِنه for

عِندَ. In addition full *alif* letter forms are introduced where the Qur'ān has only a dagger *alif,* such at the beginning of 3:17, with الصابر & الصاد.

[37] The translation is from Abdel Haleem (2004), p.35.

[38] The translation of المُنفِقِينَ is from Abdel Haleem (2004), p.35.

[39] For drawings showing the underlying geometry of the patterns used on the exterior of the tomb see Yazar (2007), pp.549-554, figs. 154-161.

[40] See Sarre (1910), pp.10-11 and p.11, fig.3 for a suggested method by which wooden forms were used to construct the panels.

[41] See Bakırer (1983), p.110, pl.10 for a black and white image of one of the facets with triangular sections.

[42] A manganese black glaze is employed on the glazed sections of the strapwork pattern.

[43] See Gink & Turánszky (1979), p.8.

[44] The variations from one section to the next are not consistent with the use of a stamp.

[45] The bi-chrome aesthetic is echoed in the crypt by the use of a single course of lighter bricks at the stepped point of transition from wall to roof vault, 78cm above the floor. See fig. 17. A number of the arch bricks are set vertically and face-on, unlike the rest of the bricks in the structure.

[46] The stylistic similarity between the Kırk Kızlar tomb and the 'Izz al-Dīn tomb (617/1220) in Sivas, as well as the fact that the same craftsman signed both structures, suggests that they were both built at around the same time. Meinecke (1976), pp.20-21 suggests a date of 1215 AD while Mayer (1956), p.41 dates it to around 1220 AD.

[47] One of the most decorative surviving examples is the interior of the Shāh Fadl tomb in Safed Buland, dated to 447-51/1055-60 in Blair (1992), p.128. See Cohn-Wiener (1939), pp.88-91, figs.2-9.

[48] See Gink & Turánszky (1979), pl. 44.

[49] Each facet of the Kemah tomb features a square hole at each side that measures c.13cm x 13cm. They are located at 145cm above the current ground level, being about the mid-height of the facet. The Kırk Kızlar tomb in Niksar has four small rectangular holes in each facet measuring 16cm high x 13cm wide. Their function remains unclear but they may have been putlog holes for scaffolding in order to repair the roof, or they may be for ventilation. Similar openings may be also seen on the exterior of the square-plan Gunbad-i Surkh in Marāgha (542/1147/8). See Pope (1939), Vol.IV, pl.341.

[50] Pancaroğu (2013), p.42 gives a date of *c.*1190s, while Meinecke (1976), p.188 is more definite, arguing for a construction date of 1191, although he does not provide evidence for the attribution of such a specific date.

[51] See Bier (2012), pp.258-9 for a detailed description of the interlaced nonagons, hexagons and dodecagons on the tympanum of the Gunbad-i Surkh, along with fig.7 on p.259.

[52] The slightly later, and stone rather than brick-built, Kamereddin tomb in Divriği (592/1197) is another early example of the technique. It features a band of green glazed bowls set into the upper portion of the body of the tomb. See Pancaroğlu (2013), p.43, fig.2.11. Earlier examples of exported Fāṭimid bowls, called *bacini,* may be found set into the walls of churches in Italy. See Payne (2013), p.239, fig.9 for an image of the Church of San Piero in Grado, Pisa (late 11th to early 12th century AD).

[53] The upper section of the tomb shaft above the epigraphic panels, as well as the roof are almost entirely new.

[54] The facet with the entrance is facet 1, then counting up clockwise.

[55] The panel measures 32cm x 125cm and has damage to the right-hand side. The interior of the panel measures 25cm x 116cm and it is located above what appears to be the original wood lintel.

[56] The phrase is also a funeral *du'ā'* (supplication), further reinforcing its suitability in a funerary context. Later tombstones in the Ahlat cemetery, dating from the mid-7th/13th century onwards employ the same phrase. See Rogers (1988), p.116.

[57] See Godard (1936), p.136, fig.93 & p.137, fig.94.

[58] Önkal (1996), p.51.

[59] See Cohn-Wiener (1930), pl.XIII for an image of the epigraphy on the entrance arch of the Jalal al-Dīn al-Husayn tomb in Uzgend, dated 547/1152.

[60] *Ibid.* gives a partial and rather implausible reading and cites in a footnote an earlier (undated) transcription by Ali Kemal that corresponds somewhat closer but still gives a rather problematic reading that does not reflect much of the surviving text.

[61] Ünal (1968), p.158.

[62] *Ibid.,* p.158 suggests it could either be another name of the architect, presumably due to the first word looking a little like *mimar*, or the name of the patron but suggests that it cannot be known either way with any certainty. The latter option appears to be the far more likely of the two.

[63] Although the Gīlān tomb is square above ground, it has an octagonal subterranean crypt. The same style of crypt construction was subsequently employed in the Gunbad-i Kabūd in Marāgha (593/1196) as well.

[64] Ashkan (2010), p.289. *Ibid.,* p.290 states that the style is a Saljuq innovation of the 5th/11th century. See *ibid.* for a detailed analysis of the mathematics behind the design of discontinuous double-shell domes, particularly pp.298-303.

[65] Ünal (1968), p.157 simply refers to "*décor géométrique gravé*". The tomb is also included in Önkal (1996), pp.46-53 but no mention is made of the extensive array of unique mortar patterns.

[66] Hillenbrand (1972), p.51 states that the earliest dated plug is in the south dome of the Jāmi' Masjid in Iṣfahān. Blair (1992), p160 gives the date as 479-480/1086-7. See Bakırer (1983), p.92, pl.2 for an image of a section of the east iwan with square plugs between the rising joints of bricks and the shallow voids where some are missing. For a wider discussion of the use of brick-end plugs and line drawings see Pope (1939), p.1289 and Schroeder (1939), p.1042.

[67] *Ibid.,* p.48. See also Stronach & Cuyler Young (1966), p.5.

[68] The top of the *kāf* at the beginning of the brick epigraphic inscription over the door of the tomb is bent forward in a similar manner.

[69] Stronach & Cuyler Young (1966), p.8 notes that the easternmost, and older, of the two tomb towers at Kharraqān in Iran (460/1067-8) has an early example of the decorative use of the word *Allāh.* There are also examples of the common X and circle rising joint pattern. *Ibid.,* p.15 states that the Kharraqān tomb has vertical and horizontal lozenges around the entrance. A similar pattern can be seen on both the Yūsuf ibn Kuthayyir and Mengücek Ghazi portals, demonstrating the continuity of motifs across time and space in the Persianate tradition of funerary architecture.

[70] My thanks go to Professor Robert Hillenbrand for the suggestion that illiteracy may be the reason for the unusual and almost unreadable nature of the incised words.

[71] Hillenbrand (1972), p.51. Fig.3 on the same page shows a very similar pattern from the Pīr Mausoleum in Takistān, thought to date from the last quarter of the 6th/12th century.

[72] There is evidence of extensive repair and cleaning of the mortar patterns in the crypt so to what extent the existing patterns are the same as they were when the tomb was originally built is unclear.

[73] The best preserved sections of the curvilinear and the triangular incisions are located immediately below the overhang at the top of the external recessed panels where they are protected from weathering.

[74] Although the Kemah tomb was built quite soon after the Mu'mina Khātūn tomb (582/1186-7) in Nakhchivān City and has a similar shaped crypt, there are not any obvious connections between the styles of the mortar decoration of the two structures. The Mu'mina Khātūn tomb is also a much larger and more highly decorated structure than the Kemah tomb. See Yazar (2007), pp.90-104 and pp.419-450, pls.247-281.

[75] This may be compared with the name of the earlier Chihil Dukhtaran (forty daughters) tomb (446/1054-5) in Damghan, Iran.

[76] The final word actually reads: *al-Mad* [sic] with a *rāʾ* or *nūn* above the ligature between the *mīm* and the *ḍād,* indicating the true reading to be *al-Marandī,* as indicated in Mayer (1956), p.41. As with signature on the Yūsuf ibn Kuthayyir tomb in Nakhchivān, the *Abī* is written as ابو rather than ابي, which is used on the Muʾmina Khātūn tomb.

[77] Mayer (1956), p.41.

[78] Meinecke (1976), p.20-21 suggests a date of 1215 CE, while Mayer (1956), p.41 suggests around 1220 CE.

[79] Ashurst & Ashurst (1988), p.2 explain the process of salt migration and the associated surface damage caused by crystallization. Ashurst & Ashurst*, ibid.,* p.72 describe the result of the same process under a glazed surface, called subfluorescence. For more details of the processes involved in the efflourecence and crystalisation of salts on medieval buildings see Arnold & Zehnder (1991), pp.109-120. In particular see p.115, figs. 4-7 for scanning electron microscope images of the types of salt crystals that form on ceramics. Arnold & Zehnder, *ibid*., p.111 state that salt systems consist of many solutes and that the more soluble ions move further up buildings.

[80] The same method, but without the glazed elements, was also employed on the external facets of the earlier Yūsuf ibn Kuthayyir tomb.

[81] The external blind pointed-arches are very similar to the ones on the interior of the Yūsuf ibn Kuthayyir tomb (see fig.11), and suggest a somewhat closer connection between the two structures than might first appear.

[82] Önkal (1996), p.234.

[83] The Bekar Sultan tomb in Gülağaç is currently standing alone in a large field, but unauthorized excavations by members of the local population have revealed a large number of finds in the area. These finds, including Rūm Saljuq coins, indicate the tomb was erected in the midst of a large urban area.

[84] The first step back is 5cm, the second is 8cm, including a 45 degree bevel.

[85] Blair (1992), p.25.

[86] See Yazar (2007), p.457, pl.285.

[87] See McClary (2014), p.6 & p.7, fig.10 for a detailed study of the Melik Ghazi tomb *muqarnas* cells.

[88] See Pope (1939), Vol.IV pls.341 A & B. The similarities between the Gunbad-i Surkh (542/1147), which is the earliest of the Marāgha tombs, and the Pinarbaşı structure include the engaged columns on the corners (smaller in the later example), voided mortar joints, decorative brick bonds, square plan with octagonal lantern and squinches in the zone of transition. The main differences are the use of glazed highlights, lack of muqarnas, the bipartite nature of the blind facades and the single arch on the entrance façade at Marāgha. Overall the two structures have a very similar appearance.

[89] Daneshvari (1977), p.152 suggests the structure dates from the latter part of the 6th/12th century, rejecting the date of *c.*494/1100 given in Hillenbrand (1972), p.53.

[90] The lighter coloured bricks are the recent replacements.

[91] The external rising joint voids are *c.*4cm deep and *c.*25mm wide. The bed joints measure 15mm to 20mm. The interior features irregular rising joints that are between 5mm and 15mm wide, with bed joints between 20mm and 30mm.

[92] See Özgüç & Akok (1954), pp.331-335 for further details of the Melik Ghazi tomb in its pre-restoration state. The article is somewhat dated and does not have any discussion of the nature of the *muqarnas* or the internal brick bonds. The authors note the similarity in form to the tomb of ‘Izz al-Dīn Kay Kāwūs I in Sivas. Plan 1 shows the crypt plan and section along with the six different decorative brick bonds used on the exterior of the structure. Fig. 1 shows the tomb in it pre-restoration state.

[93] The internal walls of the tomb are plastered and the section below dado height features new panelling.

[94] There is only a small amount of curvilinear incised plaster decoration in the spandrel at Kemah (see fig. 27), and there are no subsequent examples known to have survived in Anatolia.

[95] A comprehensive study of the formative period of Islamic architecture in Anatolia remains to be published.

[96] In addition to all the other similarities, the Kemah tomb and both Nakhchivān structures all have the access to the crypt located immediately below the entrance to the upper portion of the tomb.