On the Origins of the Shrine of ‘Abd al-Samad in Natanz: The Case for a Revised Chronology

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Abstract

This article proposes a re-examination of the phases of construction and decoration at the shrine of ‘Abd al-Samad in Natanz and demonstrates that the core fabric and elements of architectural revetments of the shrine are datable to the Seljuq period (431-590/1040-1194), or slightly later. The structure was repurposed and redecorated, including the addition of extensive lustre tiles and stucco, for ‘Abd al-Samad by Zayn al-Din al-Mastari in the early years of the fourteenth century in a series of separate phases. Particular attention is focused on the nature of the original decoration of the shrine, revealed beneath the mortar which held the, now largely removed, Ilkhanid tilework in place. Scrutiny of the decorative interventions illustrates that the application of lustre revetments in the shrine also determined a major change of the function of the monument, from a simple burial structure into a pilgrimage centre in its own right.

Keywords: Natanz; lustre tiles; Ilkhanid architecture; Seljuq architecture; stucco

Introduction

The aim of this article is to demonstrate that the core fabric and elements of the decoration of the funerary structure of ‘Abd al-Samad in Natanz pre-date the early fourteenth century, with some elements probably dating back to the Seljuq period (431-590/1040-1194), or slightly later, and to refine the chronology which saw the structure repurposed and redecorated. A new ceiling and extensive lustre tiles were modifications added to the pre-existing structure of the shrine of the Suhrawardi Sheikh Nur al-Din ‘Abd al-Samad and were sponsored by the Ilkhanid amir Zayn al-Din al-Mastari in a series of separate consecutive interventions in the early years of the fourteenth century. Particular attention is dedicated to the

1This article is dedicated to Sheila Blair, who has done so much to increase the understanding of this complex, and upon whose shoulders all who follow must stand.
characteristics of the original architectural revetments of the Shaykh’s shrine, revealed beneath the mortar which held the, now removed, Ilkhanid lustre tile revetments in place.\(^2\)

The complex reached its most complete form under the Ilkhanids, and consisted of four main structures, namely; the mosque, incorporating the earlier octagonal domed structure, the shrine of ‘Abd al-Samad, the minaret, and the khanqah with a monumental pishtaq entrance portal (Figures 1 and 2). Each of these structures was built in different phases and modified over time, by a number of different patrons. While the complex is understood as an Ilkhanid masterpiece of architecture and decoration, its earlier phases, with the exception of the octagonal domed structure,\(^3\) are often only mentioned in passing, while later phases tend to be seen as renovations. However, these ongoing interventions attest to the significance of the monument, and show constant patronage of the site from the tenth century all the way through to the Qajar period and beyond.

The ‘Abd al-Samad complex is located in the historical centre of the settlement of Natanz,\(^4\) which is located between Isfahan and Kashan in central Iran. The complex consists of a series of interconnected structures which have been altered, extended, rebuilt and restored numerous times over the course of the last millennium. Although several articles and one monograph have been published about the monument, from the 1930s onwards,\(^5\) significant elements of the constructive and decorative sequence of the complex remain unclear. The accepted chronology, most coherently elucidated in a number of publications by Sheila Blair,\(^6\) gives a date of 389/998-99 for the construction of the domed octagonal structure, now incorporated into a larger four-iwan plan congregational mosque, with the square shrine of the Shaykh added in around 707/1307-08, the portal and (no longer extant) khanqah added in 706/1306-07,\(^7\) and the minaret between the shrine and the khanqah built shortly afterwards in 725/1324-25, by Shams al-Din.\(^8\)

Natanz is located on the ancient trade and pilgrimage routes between Isfahan to the south and Kashan and Qum to the north, and is mentioned in Mustawfi’s Nuzhat-al-Qulûb.\(^9\) Several of the monuments in Natanz testify to its past, with the fire temple located near the complex in question being the oldest known structure, and indicating occupation of the

\(^2\)This research is, in part, related to the ongoing research project Stucco and Tiles, funded by the Deutsche Forschungsgemeinschaft (DFG). Research work for the article has been possible thanks to the generous financial support of the Studienstiftung des Deutschen Volkes and the DFG.

\(^3\)The development of the structure and the decoration of the octagonal tomb structure has been fully and clearly elucidated by Blair (S. S. Blair, ‘The Octagonal Pavilion at Natanz, A Re-Examination of Early Islamic Architecture in Iran’, Muqarnas 1 (1983), pp. 69-94), and there is no need to repeat or summarise her findings concerning the earliest phase of development on the site.

\(^4\)The complex is located at 33.5202490 N, 41.9129227 E.

\(^5\)See A. Godard, ‘Natanz’, Athrê-ı İran 1, 1 (1936), pp. 75-106 for the earliest study of the complex. Nineteenth-century travellers also commented on the site, including Count Julian de Rochechouart, but such accounts do not provide a detailed academic study of the monuments within the complex. For the best overview of the earlier scholarly literature on the complex, see S. S. Blair, The Ilkhanid Shrine Complex at Natanz, Iran (Cambridge, 1986), pp. 2-4. See also S. H. A. Waqifi, Cultural Heritage of Natanz: Historic Monuments—Literature and Traditions and History of Natanz (Natanz, 1995) for detailed discussions of the historic monuments of Natanz and its surroundings.

\(^6\)See Blair, ‘The Octagonal Pavilion’, pp. 69-94. Blair, The Ilkhanid Shrine, and S. S. Blair, ‘A Medieval Persian Builder’, Journal of the Society of Architectural Historians 45, 4 (1986), pp. 389-395.

\(^7\)Blair, The Ilkhanid Shrine, pp. 66-67 states that 706/1306-07 is the most likely reading of the date for the khanqah, although it is not certain, as this portion of the inscription is damaged, and it was incorrectly restored at a certain point.

\(^8\)Blair disagrees, and argues that Shams al-Din was only responsible for repairing the minaret (ibid, p. 29).

\(^9\)H. Mustawfi, The geographical Part of the Nuzhat-al-Qulûb translated by G. Le Strange (Leiden and London, 1919), p. 73. See also H. Naraqî, Historic Monuments of the Cities of Kashan and Natanz (Tehran, 1969), pp. 382-387.
settlement in Zoroastrian times. Later structures, including the Kuche Mir mosque as well as the Complex of 'Abd al-Samad, testify to the significance and expansion of the settlement under the Buyids, Seljuqs and Ilkhans. The town acquired specific importance during the Safavid period, especially under Shah 'Abbás I, who often travelled to his estates in Kashan.

Fig. 1. Pre-restoration image of the shrine of 'Abd al-Samad in Natanz viewed from the south, taken by André Godard before 1936.

10 For information regarding historic monuments in Natanz, see Waqfi, Cultural Heritage. The exact date of the fire temple remains unclear.
passing Natanz on the way. This resulted in the construction of Safavid monuments in and around Natanz,\(^{11}\) as well as a renewed interest in the complex of ‘Abd al-Samad itself. Further significance of the complex is also evident from the numerous Safavid restorations and modifications to the ‘Abd al-Samad complex.\(^{12}\) These modifications comprised, above all, minor repairs to the structure and application of architectural revetments on its surfaces. The domed area of the octagonal structure incorporated into the Friday mosque was redone with wall paintings. Additional wall paintings and stone slabs with historic inscriptions concerning modifications were placed on architectural surfaces within the mosque. Furthermore, tile revetments were added to the base of the minaret of the complex and the shrine of the Shaykh was redone. Whitewashing of the Shaykh’s shrine and the mutilation of the avian elements of the lustre tiles also seems to have been executed in this period.\(^{13}\)

The monument has a long and complex history, and over time its function changed from first one, then two, simple domed tomb structures into an extensive pilgrimage complex, located on one of the main routes to the holy city of Qum.

The construction phases of the monument have been elucidated by Blair, based on the existence of several dated historic inscriptions.\(^{14}\) However, additional sources of evidence regarding further constructive and decorative interventions in the shrine remain in situ, and so far have only received very scant scholarly attention. The oldest structure of the complex is the domed octagonal structure, with an historic inscription in fired brick and stucco giving the year 389/998-99, located around the base of the dome. The inscription was discovered during the restoration program that took place between 1970 and 1978.\(^{15}\) The octagonal structure appears to have been incorporated into a larger mosque during the Seljuq period, of which no traces remain, and it was later rebuilt into a four-iwan type Ilkhanid mosque.\(^{16}\) Historic inscriptions on the monument suggest that the mosque of the Ilkhanid period was constructed between 704/1304 and 707/1307-08, and that this was an intervention of mosque re-building. The most problematic area of the complex with regards to dating is the shrine of the Shaykh. This is currently assumed to have been built in a single phase in 707/1307-08, based on the date in the stucco inscription, which runs along the base of the muqarnas dome of the shrine. However, a closer look at the shrine structure and the remains of its revetments illustrates that the shrine was constructed and decorated in several stages and that structurally it largely predates the year 707/1307-08.

The Shrine of ‘Abd al-Samad: its features and their chronology

The ground floor plan of the funerary structure is cruciform and it consists of a square room which originally had an entrance on each side, with eight shallow blind recessed arches, one either side of each of the four central openings. The one on the southern side was closed off

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11For the Ribat-i Sangi caravanserai, see Waqifi, *Cultural Heritage*, pp. 111-117, and M. Siroux, *Anciennes voies et monuments routiers de la région d’Ispahan : suivis de plusieurs autres édifices de cette province: à Tidjen, Varkand, Qomscar, Ob-Yanech, Chapour-Abid, Hafchouyeh, Káy, Echkarand, Sanech-Yadesand, Fakhand, Ab-Garm, Vendid-Der et Ispahan* (Cairo, 1971), pp. 179-172, pls. II-III.
12Waqifi, *Cultural Heritage*, pp. 53-106.
13For detailed information regarding these revetments, see ibid.
14See Blair, ‘A Medieval Persian’, pp. 394-395 for the most succinct version of the current accepted chronology.
15Blair, ‘The Octagonal Pavilion’, pp. 70-72.
16Blair, *The Ilkhanid Shrine*, pp. 47-48.
at the time of the installation of the mihrab, and the building is topped by one of the finest surviving muqarnas domes. The most remarkable aspects of the interior were the revetments, which were applied in several stages and comprise carved rising joint plugs set between fired bricks in the walls, carved gracile engaged stucco columns, lustre tiles, which are dispersed in different museum collections, and the monumental stucco inscription

17 After Godard, ‘Natanz’, p. 84, Fig. 56.
18 Unlike in Iraq and the Kuzistan region, where muqarnas domes are widespread, at Natanz the dome also comprises an outer tiled shell, which protects it from weathering. This type of roofing system is exceptional in Central Iran and it might point towards the fact that its builders migrated to Natanz from the south-western region.
band, which runs along the top edges of the supporting walls. Close study of the shrine reveals pieces of evidence that show that its construction consisted of several phases, rather than there having been a single intervention in 707/1307-08.

The two important landmarks for understanding the nature of the patronage and chronological development of the shrine are the death of the Shaykh, and the death of the main Ilkhanid patron of the complex. The Shaykh passed away in 699/1299-1300, and it would be logical for the construction of his shrine to have begun immediately after his death, as in the case of the Pir-i Bakran mausoleum, where the exact date of Pir-i Bakran’s death is mentioned in historic inscriptions, and the same date is found in several parts of the mausoleum. It is therefore probable that at least some of the interventions on the Natanz site took place before 707/1307-08. Moreover, the inscriptions in the mosque of the Natanz complex mention repairs and refurbishments, in place of construction ex-nuovo, suggesting the existence of an earlier structure on the site, which would make the existence of an earlier shrine on the site more plausible. The second important date is the year 711/1312, when ‘Ali al-Mastari was executed. The death of the patron signalled a break in continuous patronage of the complex, with the 37-metre-high minaret being the result of a slightly later construction phase under Shams-al Din Muhammad.

Additional evidence for the pre-Ilkhanid, and probably Seljuq-era, dating for the beginning of the construction of the shrine structure can be found at the nearby Kuche Mir mosque, which comprises both Seljuq and Ilkhanid phases of development. This mosque was enlarged and decorated with an exquisite stucco mihrab during the Ilkhanid period (probably contemporary to the ‘Abd al-Samad shrine), but the main structural core of the mosque dates to the Seljuq period. It is also probable that the main core of the ‘Abd al-Samad complex was already constructed in the Seljuq period, when the domed octagonal structure was made part of a Seljuq congregational mosque. Given the qibla variation, it is likely that the mosque was built earlier in the Seljuq period, and the original iteration of the shrine was built somewhat later, following an advance in the calculation of the direction of Mecca. In the Ilkhanid period, the entire complex was rebuilt, enlarged, and refurbished, with the addition of the khanqah, and the minaret after the death of al-Mastari. Such a pattern would not be unusual, as several other tombs and pilgrimage complexes in the wider region all underwent numerous refurbishments and continuous patronage for the purpose of

19 Blair, The Ilkhanid Shrine, p. 5.
20 The core structure of the Pir-i Bakran mausoleum pre-dates the death of the Shaykh Bakran. His death was the reason for the second constructive and decorative interventions in the monument. In total the mausoleum witnessed at least three decorative and constructive interventions. For a detailed discussion of constructive and decorative interventions and their relationship to the death of the Shaykh of the Pir-i Bakran mausoleum, see A. M. Grbanovic, ‘The Ilkhanid Revetment Aesthetic in the Buq’a Pir-i Bakran: Chaotic Exuberance or a Cunningly Planned Architectural Revetment Repertoire?’, Muqarnas 34 (2017), pp. 43-83. See also C. Hardy-Guilbert, Le mausolée de Pir-i-Bakran et le Décors Il-Khanide (unpublished PhD Thesis, Université de Paris-Sorbonne Paris IV, 1992), and H. Aslani, and Y. Hanzawi, Architectural Decorations of Pir-Bakran Mausoleum (Isfahan, 2012).
21 The existence of a Seljuq mosque at Natanz would, in all probability, have determined the position of the shrine of ‘Abd al-Samad in relation to the domed octagonal pavilion, which is now part of the mosque structure.
22 The Kuche Mir mosque structure was investigated by the Italian mission in Iran (IsMEO) team, but the finds by Eugenio Galdieri suggesting that the mosque comprises Seljuq and Ilkhanid phases were not published until 1995, by Waqifi. See Waqifi, Cultural Heritage, pp. 46-50.
23 It must be assumed that the earlier qibla orientation of the octagonal structure was, in part, retained for the mosque owing to the restrictions of the site.
pilgrimage over the *longue durée*. Moreover, it was not only shrines that received ongoing patronage through different historical periods, as the same pattern can be seen at a number of congregational mosques. Studies of several monuments which have been known as Seljuq or Ilkhanid have revealed that the majority of them were founded at an early stage, and were then modified through time by different patrons.

The original structure was almost certainly built as a funerary monument, but the closing off of one entrance, and the installation of the lustre *mihrab* and tiled dado, signalled a transformation of the shrine chamber into a prayer space for pilgrims, notwithstanding the proximity of the nearby mosque. This is very similar to the parallel case of the Pir-i Bakran mausoleum, where a stucco *mihrab* was installed to close off the funerary iwan and therefore to transform the funerary iwan into a pilgrimage structure consisting of the burial chamber with the tomb of the Shaykh and the adjacent prayer space. Both examples, at Natanz and Pir-i Bakran, exemplify the change of a simple tomb into a true pilgrimage site. This is in line with the fostering of pilgrimage activities by Ghazan Khan (d. 703/1304) after his conversion to Islam, as well as later during the time of Ŭljeitū (d. 716/1316).

In her monograph on the complex, Sheila Blair dismisses the possibility of the shrine having been built prior to 707/1307-08, based on the lack of any mention of other figures associated with the site in the sources. While it is in theory possible that the interior decoration was executed in an anachronistic monochrome manner, and rapidly covered over with mortar and tiles, the construction break around the *mihrab* (Fig. 3) and the variance in qibla alignment from the Ilkhanid mosque (Fig. 2) are more problematic. If the entire shrine complex, with the exception of the earlier Buyid octagonal domed structure, was the result of a single campaign by Zayn al-Din al-Mastari in the first decade of the fourteenth century, then the reason for the construction break at the side of the entrance portal accessing

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24These include the Imamzada Yahya in Varamin, the Pir-i Bakran mausoleum in Linjan, as well as the Baya-zid Bistami complex in Bistam and the Turbat-i Jam complex in Turbat-i Jam. See Blair, *The Ilkhanid Shrine*, p. 23. See also L. Golombek, *The Cult of Saints and Shrine Architecture in the Fourteenth Century* (Beirut, 1974), pp. 419-430.

25Some of the best examples are the Haftshuya Friday mosque near Isfahan, which was built in at least four constructive stages, the Gar Friday mosque, which was built in the Seljuq period and subsequently rebuilt under the Ilkhans, and the Sava Friday mosque, which was funded in the early Islamic period and rebuilt under the Seljuqs, Ilkhans and Safavids. For the most complete discussion of constructive phases of the Haftshuya Friday mosque, see Siourx, *Anciennes voies et monuments routiers*, pp. 229-235. For the most complete discussion of the ruined Gar mosque, see Siourx, *Anciennes voies et monuments routiers*, pp. 267-270. Different constructive phases of the Sava Friday mosque have been discussed by several scholars; for an overview, see A. Farhangi, ‘Structure of the Western Iwan of the Sava Friday Mosque’, in *Proceedings of the First Congress of History of Architecture and Urbanism of Iran*, Vol 2 (Tehran, 1993), pp. 380-398; M. Taleqani, ‘The Early Mosque of Sava’, in *Proceedings of the First Congress of History of Architecture and Urbanism of Iran*, Vol 3 (Tehran, 1993), pp. 157-187; M. Mehriyar, I. M. Taleqani and A. Farhangi, ‘The process of Architectural Evolution of the Friday Mosque of Sava, Based on Research of Remains of Architectural Elements of Spaces of the Mosque and Scrutiny of the Northern Part of the Domed Chamber’, in *Proceedings of the First Congress of History of Architecture and Urbanism of Iran* Vol 2 (Tehran, 1993), pp. 760-811; S. Moazen, ‘Study of Historical and Constructional Evolution of the Save Jame Mosque’, *Marz-e-i Mi’ram-yi Ism 7*, 7, 13 (2017), pp. 35-49. For stucco *mihrabs* from different phases in the Sava Friday mosque, see Paknejad Mehdi, ‘Study of decorative elements of mihrabs of the Sava Friday mosque’, (in Persian) *Hasar va Mi’ram* 7 (2008), pp. 111-132.

26Blair, *The Ilkhanid Shrine*, p. 25. Shani, *A Monumental Manifestation*, p. 154.

27Blair, *The Ilkhanid Shrine*, p. 23. Ibid., p. 17 states that the only extant brick part of the complex that remains from an earlier period is the octagonal Buyid structure.

28Such a hypothesis does not fit with the argument that Zayn al-Din al-Mastari commissioned both the shrine and the lustre tiles upon the death of the Shaykh (ibid, p. 35).

29Ibid., p. 30.
the shrine and the mosque also becomes rather difficult to explain. Furthermore, joints between the stucco revetments and remaining lustre tile adhesion mortar also testify to the fact that the revetments of the shrine structure were applied in a series of consecutive interventions, rather than a single decorative undertaking. The hand-carved decoration incised into the rising mortar joints of both the shrine and the portal have been published by Blair, in which she describes them as stamped plaster end plugs.  

Donald Wilber has challenged the early-fourteenth century date for the core of the building based on these visible areas of incised patterns in the rising joints inside the shrine.  

Evidence for the Multiple Phases of Construction and Decoration

There are a number of elements that provide evidence of a much earlier phase of construction than the early-fourteenth century date, to which the whole building has been generally attributed in the literature, based on the date of 707/1307-08 given in the upper stucco inscription band inside the shrine. The internal structural and decorative evidence is analysed chronologically in order to demonstrate more clearly the order in which the different

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30Ibid, p. 16, p. 20 and pp. 134-135, pls. 48-50. In actuality they are all individually hand carved, as opposed to stamped.  
31D. Wilber, The Architecture of Islamic Iran: The Ilkhanid period (Princeton, 1955), p. 133.
interventions took place. This is followed by an assessment of the somewhat more limited external evidence. This evidence includes the entrance portal between the mosque and the shrine, as well as elements of the octagonal section of the shrine itself. Among the key elements that will be examined in detail are the areas of rising mortar joint decoration on the qibla facing wall of the shrine. These were subsequently covered up by the glazed tile dado and the decorative engaged columns. They were only revealed following the removal of these tiles in the nineteenth century, along with subsequent restorations, alterations and other interventions. Establishing the nature of the possible phases of construction between the late tenth and early fourteenth centuries is the focus of the following discussion.

There is a clear vertical construction break all around the area from which the mihrab tiles have been removed (Fig. 3). This area features the traditional Seljuq-style X-and-O rising joint decorations in the section around the construction break, but none on the later mihrab section, with the internal surface covered in a smooth fine coat of plaster. There is evidence of a door indicated on Godard’s plan (Fig. 2), and an image of the exterior appearance of the wall in his publication of the complex. This, alongside the construction break around the mihrab, the existing entrance, and the opposite side of the structure only recently having been bricked up, all prove that in its original iteration the building had four openings. This would place it firmly into realm of the chahar taq structures found across the wider Iranian world. Earlier examples include the two Ghurid ones in Chisht and the tomb of the Samanids in Bukhara. The no longer extant Imamzada Rabia’ Khatun in Ushturjan, which had a stucco mihrab dated 708/1308 that is now in the National Archaeological Museum of Tehran, appears to have featured a similar ground floor plan. The later Imamzada Baba Qasim (1340-41) in Isfahan also features a similar ground floor plan. Such a layout would also have fitted in with the earlier Buyid octagonal tomb right next to it, which was originally a free standing octagonal domed structure with an ambulatory open on all sides, and is considered to be the earliest dated dome structure in Iran.

In addition, attention must be focused on the lack of axial alignment between the shrine structure and the later khanqah façade and the minaret, added during various phases of construction over the course of the first quarter of the fourteenth century. Beyond the shrine itself, there is a shift in alignment and a clear construction break between the minaret and khanqah façade, and the earlier portal to the entrance corridor located between the octagonal domed building and the shrine. This entrance, which is flanked by tall recessed panels with pointed arches, also features slightly different, and more standardised, rising-joint decorations.

32See R. P. McClary, ‘Re-contextualising the Object: Using New Technologies to Reconstruct Lost Interiors of Medieval Islamic Buildings’, International Journal of Islamic Architecture 7, 2 (2018), pp. 263-283 for details of the removal and dispersal of these tiles, as well as their appearance and present locations.
33Godard, ‘Natanz’, p. 102, Fig. 69.
34R. Hillenbrand, ‘The Architecture of the Ghaznavids and the Ghurids’, in Studies in Honour of Clifford Edmund Bosworth Volume II The Sultan’s Turret: Studies in Persian and Turkish Culture, (ed.) C. Hillenbrand (Leiden / Boston / Köln, 2000), pp. 124-206, especially pp. 166-186.
35See M. S. Bulatov, Mavzolëi Samanidov – zhenduzhzhina arkhitektury Srednee Azii (Tashkent, 1976) for the most complete study of the Samanid tomb.
36Wilber, The Architecture of Islamic Iran, p. 138, pl. 25.
37Ibid., p. 182, Fig. 59.
38See Blair, ‘The Octagonal Pavilion’, pp. 72-74 for details of the original appearance, and the inscription band with the date 389/998-999. See pp. 83, 89 of the same work for a convincing case that the octagonal structure was originally built as a tomb.
Regional Comparanda

Another square plan structure which is open on all sides is the northern domed structure at the Masjid-i Jami‘ in Isfahan, commissioned by Taj al-Mulk in 481/1088-89. In addition, the internal mural decoration of several north-western Iranian monuments of the Seljuq period, such as the Friday mosque of Sujas, the Friday mosque of Qurva and the Pir mausoleum at Takistan, can be compared with the interior of the square shrine, as well as with elements of the decoration and form of the lower portion of the entrance portal to the octagonal and square structures.

Given the convincing case made by Blair for the octagonal structure having originally been an imamzada for a descendant of the Prophet, it is not surprising that another tomb would subsequently have been built in close proximity. The questions remain: when was it built? and for whom was it built? Unfortunately, both these questions will in all probability never be definitively answered, as there does not appear to be any information pertaining to this period in the written sources. The hope of some baraka being gained from the dedicatee of the octagonal tomb may well have influenced the original patron of the square tomb to build it in such close proximity. Despite the well-known Sunni orthodoxy of the Seljuqs, there remained a large Shi’ite population in the region around Kashan, which only lies a short distance to the north. Over time the tomb became part of a large pilgrimage complex, which appears to have been Shi’ite from at least the Ilkhanid period onwards.

It is important to note the almost ten-degree change in qibla alignment from the octagonal Buyid tomb and the later square one. What is more surprising in Natanz is that the later mosque is built on the same alignment as the earlier octagonal domed structure to which it was connected at several points, rather than that of the square-plan shrine. This variance is especially problematic if one were to accept the argument that the mosque and shrine were part of the same phase of construction. Misaligning the qibla of a mosque simply to integrate an earlier octagonal structure, which is awkwardly executed anyway, and then highlighting the misalignment by building the shrine right next to it with a clear variance of nearly ten degrees would be unprecedented and seems highly unlikely.

The Seljuq gateway in the north-eastern corner of the Masjid-i Jami‘ in Isfahan, dated 515/1121-22, features the same simple X-and-O rising joint decoration incised into the mortar, as well as a very similar style of the more complex variant, located in the two panels just above the capitals in the background of the short inscription on either side of the door.

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39R. Hillenbrand, ‘The “Pir” Mausoleum at Takistan’, Iran X (1972), pp. 45-55; R. Hillenbrand, Saljuq Monuments in Iran: III: The Domed Masjid-i Gami at Sugas’, Kunst des Orients 10, 1/2 (1975). pp. 49-79; R. Hillenbrand, Saljuq Monuments in Iran: I. The Masjid-i Jami at Qurva’, in Studies in Medieval Islamic Architecture Vol II (London, 2006), pp. 123-139.
40Blair, ‘The Octagonal Pavilion’, pp. 83, 89.
41Blair, The Ilkhanid Shrine, p. 23.
42This is indicated by several of the inscriptions in the complex.
43Blair, The Ilkhanid Shrine, p. 20. It is worth considering the examples of the Great Mosque, the ‘Izz al-Din Kaykawus I hospital and tomb, and the Gök Madrasa, all in Sivas, for examples of increasingly accurate qibla orientation in the same city over the course of less than a century, from the late twelfth to the late thirteenth century. (R. P. McClary, Rum Seljuq Architecture 1170-1220, The Patronage of Sultans, (Edinburgh, 2017), pp. 97-98.)
44See O. Grabar, The Great Mosque of Isfahan, (London, 1990), p. 101, Fig. 15 for a pre-restoration image of the gateway.
These patterns, alongside the presence of square epigraphic *Allah* patterns and the same complex variant of joint pattern on the seemingly coeval east iwan of the Masjid-i Jami' in Isfahan, indicate that the core of the Natanz shrine may well date from the twelfth century. There are also rectangular epigraphic sections between bricks, at least one of which clearly reads *Allah*, while another ends with *Allah*, but features a preceding word, which is too effaced to be certain of the original reading.\(^{45}\)

A comparable site for understanding the multiple phases of Ilkhanid interventions can be seen at the Imamzada Yahya at Varamin, south-east of Tehran. In this case a shrine, formerly part of a larger complex with a portal and other structures, most of which are now lost,\(^{46}\) has evidence of a series of different phases of decoration under the Ilkhanids. A phase in the 660s/1260s saw the application of a tiled dado, with sixty of the tiles bearing dates between 661 and 662/1262 and 1263. Two years later a *mihrab*, now in Honolulu and dated 663/1265, was added.\(^{47}\) There was an additional phase of decoration in the early fourteenth century, which may have included the installation of the lustre tile revetments for the cenotaph of the Shaykh dated 705/1305,\(^{48}\) as well as a stucco inscription band which was added above the tile dado shortly afterwards, in 707/1307-08.\(^{49}\) This final addition covered part of the earlier brickwork with rising joint decoration, and corresponds with the later addition of an inscription band above the polychrome star and monochrome cross tiled dado at the Natanz shrine. In the latter example the new band was in lustre tiles, but, as discussed above, a similar, if somewhat larger, stucco band was also added at the base of the *muqarnas* ceiling. The interior at Varamin also features a series of rising joint plugs, including, but not limited to, the X-and-O pattern, and the more complex variant seen in Natanz, as well as tip-to-tip triangles, which have yet to be found at the ‘Abd al-Samad shrine complex. In both cases the later interventions cover parts of the rising joint plug decorated brickwork, and at Varamin significant areas were deliberately left visible. However, this may also have been the case at the Natanz shrine, prior to the application of the *kahgil* (mud and straw) and plaster layers. The greater epigraphic evidence at the Varamin shrine for a series of separate phases of decoration,\(^{50}\) and the covering up of one type with another, is instructive for understanding the somewhat less well documented interventions that took place at Natanz.

It is clear that the early-fourteenth century additions to the building made a major difference to the internal appearance of the space. However, the vertical recessed panels above the dado height on all four walls are original, as a small section of missing *kahgil* and whitewash

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\(^{45}\) This section with an inscription can be seen to have been in better condition in Blair, *The Ilkhanid Shrine*, p. 134, pl. 48.

\(^{46}\) J. Dieulafoy, *La Perse La Chaldée et La Susiane* (Paris, 1887), pp. 148-150. See p. 147 for an illustration of the now lost buildings. Dieulafoy thought that the lustre tiles were added after the building was erected, and that parts of the earlier decoration were destroyed to make a place for them. She suggests that there were pre-Seljuq and Seljuq phases to the construction of the complex.

\(^{47}\) S. S. Blair, ‘Architecture as a Source for Local History in the Mongol Period: The Example of Varāmīn’, *Journal of the Royal Asiatic Society* 26, 1-2 (2016), p. 217.

\(^{48}\) Both Sheila Blair and Abdallah Ghouchani have recently expressed doubt that the three cenotaph tiles now in the Metropolitan Museum of Art (99,87) are from Natanz. It is possible that they are actually from Mahallat-i Bala (Sheila Blair, personal communication, 14 September 2019), although they may have come from the *mihrab* of the congregational mosque in Natanz, rather than the cenotaph of the shrine.

\(^{49}\) Blair, ‘Architecture as a Source’, pp. 218-221.

\(^{50}\) Blair also hints at an even earlier phase of construction for the Varamin shrine, using the term “(re)construction of the site in the 1260s” (Blair, ‘Architecture as a Source’, p. 226).
Fig. 4. Rising joint mortar decoration beneath the (lost) band of lustre tiles, ‘Abd al-Samad Shrine, Natanz.

Fig. 5. North wall and arch of the ‘Abd al-Samad Shrine, Natanz.
reveals the presence of the same basic X-and-O rising joint pattern as is found on the rest of the walls. Tall recessed panels of the kind seen on both the portal and the inside of the shrine can be seen on the northern dome in the Masjid-i Jami’ in Isfahan as well as the entrance of the Seljuq mosque in Ardistan.\textsuperscript{51}

**The Seljuq Incised Rising Joint Patterns**

The earliest surviving elements of the decorative programme of the building can only now be seen as a result of the removal of the glazed tiles from the dado and around the mihrab in the late nineteenth and early twentieth centuries. Large sections of the underlying brick wall feature an array of different incised patterns in the mortar of the rising joints between the bricks. These are typical of Seljuq work, and the following section examines the surviving examples in detail in order to better understand the earliest phase of the shrine’s construction and decoration.

A single brick-width return juts out into each side of the four former entrances to the building, with the ones on either side of what was to become the mihrab niche featuring alternating full bricks, and then two half bricks with an incised rising joint X-and-O plug in between them. Large areas of the visible brickwork do not feature any plugs, including the upper area of the wall to the right of the mihrab area, even though they are present at a similar level on the left. It is possible that the original dome and part of the upper walls fell at the same time as part of the dome over the octagonal structure nearby collapsed.\textsuperscript{52} The damaged walls would then have been rebuilt with plain brickwork, upon which the muqarnas ceiling was built, and the rest of the decoration except the lustre epigraphic frieze was applied. The upper exposed plug in the brickwork on the left of the mihrab area, as well as other sections on the edge by the construction break, shows evidence of the original brick surface being covered in a thin layer of white plaster, with paired or single lines incised to mimic the appearance of the mortar beds beneath (Fig. \textsuperscript{8}), and appears to have been used to fill the rising joint voids into which the X-and-O patterns were then carved.\textsuperscript{53}

A section of the mortar that held the Ilkhanid star and cross tiles in place has been removed near the corner to the right of the mihrab recess, revealing a section of the fired bricks laid up to the height of the beginning of the recess.\textsuperscript{54} This lower section has no wide rising joint gaps, and so no rising joint decoration, unlike the section above. This shows that the lower portion of the shrine, separated by a band the height of a single course

\textsuperscript{51}Wilber’s plan and description of the no longer extant Imamzada Rabia’ Khatun in Ushurjan, with a stucco mihrab dated 708/1308 (Wilber, *The Architecture of Islamic Iran*, p. 138 and Fig. 25), indicates that this Imamzada probably featured similar elements. Some remains of such elements are also found in the mausoleum of Mir Zahir near Sirjan, which has been dated to the early fourteenth century based on stylistic comparison of its stucco mihrab to other Ilkhanid examples. For one of the first publications on this monument, see Z. Rashidnia, A. S. Kahki and B. Taghavinejad, ‘Study of Stucco Decoration of the Mir Zahir Mausoleum in Sirjan and its attribution to the Kirmani Artisans’, *Matula* at *Bastanshenasi* 1 (2018), pp. 95-114.

\textsuperscript{52}There are no records of major earthquakes in Qum, Kashan or Isfahan in the period prior to the eighteenth century, and there appears to have been a genuine lack of serious events (N. N. Ambraseys and C. Melville, *A History of Persian Earthquakes* (Cambridge, 2005), pp. 6-12). As a result, the cause of the collapse remains unclear.

\textsuperscript{53}This is identical to the technique seen in the north iwan of the Sivas hospital of 614/1217.

\textsuperscript{54}The section of brickwork without rising joint plugs extends circa 60 cm up from the floor level.
of bricks, which may have been wood, was plain while the rest of the internal walls were decorated with incised lines and carved rising joint decoration.\textsuperscript{55}

The uppermost visible plug is inside the recessed niche to the left of the mihrab recess, proving that the shallow niches are contemporaneous with the first phase of construction, even though the engaged columns and capitals running up the sides are from a later phase of development. The clear construction break running in line with the edge of the recess in the eastern wall, behind the dado tiles to the right of the entrance, adds to the evidence for the recesses being part of the original phase of construction. The engaged column can be seen to extend behind where the lustre tile frieze ran, but not all the way down the side. Instead it sits on a later sill in line with the top of the star and cross dado. It is clear that the recesses were decorated with engaged columns and capitals, of the same form as seen in the cenotaph tiles now in the Metropolitan Museum of Art,\textsuperscript{56} presumably at the same time as the larger stucco engaged corner columns and the stucco inscription band were added.

On the right of what was to become the mihrab recess there is a partial square epigraphic plug with the last part of Allah (Fig. 8 (R)), but it is in a far more angular and square form of Kufic than the corresponding square plug on the right side, which also features Allah but in a somewhat more cursive script (Fig. 9). This is suggestive of at least two different craftsmen being responsible for the execution of the wall decoration in the initial construction phase of the structure.

On the left side of the mihrab there is also a more complex rising joint plug, the same size as the X-and-O plugs. In the same area the plugs can be seen to extend under the later stucco engaged corner columns. Vertical construction lines for laying out the pattern of the incised plugs are visible on the left side of the mihrab recess, just to the left of the first, presumably Seljuq, phase construction break marking the edge of the original opening. (Fig. 8 (L)).

In the earliest iteration of the building it would have been a pure white space, owing to the thin coat of plaster over the brickwork into which the lines were incised, with the appearance of vertical lines of rising joint brick plugs on every other course, as well as creating the appearance of diagonal lines, with thin incised lines connecting the plugs horizontally. In addition, there was a greater variation of plugs, including a square one with the name of Allah, in the qibla wall. It is not clear if the walls in the eastern half of the building lacked plugs from the start, or if the building was significantly damaged and major sections of the walls needed to be rebuilt.

The Ilkhanid Dado Tiles

The application of a thick layer of mortar over the lower portion of the brick walls and their attendant incised patterns allowed for the first introduction of colour and glazed decoration to the shrine. Six full bands and one half band of star-and-cross tiles were added to the walls to create a glazed dado, radically transforming the decorative aesthetic of the building.

\textsuperscript{55}It may be the case that the lower portions of the walls were constructed without stucco plugs because a tiled dado was planned for that lower section, but the fact that the mortar bed of the Ilkhanid-era dado also covers portions of the walls with carved plugs shows that the glazed tile dado was not part of the original decorative repertoire of the shrine.

\textsuperscript{56}McClary ‘Re-contextualising the Object’, p. 271, Fig. 4.
The length of the engaged columns in the pointed-arch topped recesses in the walls shows that they were added at the same time as the glazed star-and-cross tile dado, with the columns starting at the top of the dado, and the lower portion of the recesses filled in to allow a surface for the mortar to be applied (Fig. 7). These columns in the recessed niches are flush with the original, pre-kabgil covered wall surface. Subsequently, the famous lustre inscription band with the defaced birds was added at a later date. The fact that the main corner columns supporting the upper inscription band also extend to the top of the same dado adds additional credence to this observation57 (Fig. 6).

The tiles that were added over the brickwork and rising joint plugs consisted of plain mono-chrome turquoise glazed pointed-tip cross tiles, several of which remain intact,58 and corresponding eight-point star tiles, of which little is known but they were probably lustre star tiles. One small fragment of the bottom point of one half-tile in a comer remains in situ (Fig. 10), which shows that the stone paste tiles were on a white base glaze, with underglaze black and blue decoration, which could have been combined with lustre decoration.59

The multiple stages of Ilkhanid work have already been referred to by Blair, as the lustre tiles originally thought to be from the cenotaph, some of which are now in the Metropolitan Museum of Art in New York,60 have a partial date that has been read as Shawwal 709, being March 1310.61 The stucco band was presumably completed by 707/1307-08, while the lustre frieze is dated Shawwal 707/March 1308, based on the frieze tile in the Metropolitan Museum of Art.62 The aim here is to push the chronological range back for the underlying structure, based on the stucco plugs and the addition of a mihrab, and also to highlight the surviving evidence in the building. Such observations make it possible to prove the exact sequence of decorative additions, while acknowledging that the absolute dates of some of the stages cannot be determined through visual analysis alone, and that additional dated inscriptions are unlikely to be found.

The Stucco Corner Columns

The interior of the shrine features eight engaged stucco columns, two on each wall, with four different patterns. The two on either side of the mihrab niche are identical, featuring a knotwork pattern which is, perhaps, not surprising given the location, the most complex of the four variants (Fig. 11). A chevron pattern is employed on the two columns flanking the arched recess in the northern wall, (Figure 11 (R)) while the two columns flanking the current entrance, from the south, have something akin to a fictive brickwork pattern. This

57. The exception to this is the column to the right of the mihrab recess, below which the wooden enclosure screen is placed. In that example the original brickwork, with a rising joint plug, extends out beneath the later stucco column. This corner also shows that the earlier brick corners were cut away to allow for the stucco engaged corner columns to be added.

58. There were 59 full or partial sections of the monochrome turquoise cross tiles still in situ as of October 2017.

59. The surviving fragment has no traces of lustre decoration. However, a larger and mostly intact tile has been re-mortared into place on the north wall. Owing to the new mortar, it is far from certain that this is one of the original tiles, and so the use of lustre on the star tiles on the dado has yet to be proven conclusively.

60. Accession number 09.87.

61. Blair, ‘A Medieval Persian’, pp. 393-394. Only the words “Shawwal of the year nine and...” survive, so it is possible that the date was 699, being 1300, although Blair considers this reading unlikely.

62. O. Watson, Persian Lustre Ware (London, 1983), p. 195. The tile is acc. no. 12.44.
The columns cover sections of X-and-O plug decorated areas (Fig. 9), proving that the first stage of decorative brickwork did not include the corner columns. These columns were clearly built to line up with the protruding inscription band above, which is unquestionably from a later construction phase than the initial plastered and incised brickwork with rising joint plugs in the Seljuq manner. It is clear that the carved stucco columns, and the inscription topping them, can be securely dated to the Ilkhanid period, and signal the beginning of Ilkhanid interventions.

Fig. 12 shows the base of the column on the right of the eastern opening, with the basket-weave pattern. It is clear that the columns, which are produced out of grey gypsum-based stucco,^63^ needed some of the curvature to be chipped away in order to allow for the corner

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^63^The colour of gypsum, which is the main component of stucco revetments, usually varies depending on the geographical location of monuments, as the material is normally regionally available. The Isfahan area typically features dark brown coloured stucco. The best examples of grey stucco bodies are the columns of the Natanz shrine,
Fig. 7. Construction break beside the blind recess to the right of the mihrab, with the later engaged column extending down behind the (lost) lustre inscription band to the height of the top of the star and cross tile dado.

Fig. 8. Incised construction lines in the earliest phase of brick decoration to the right of the mihrab niche (L), and square Kufic Allah brick plug (R).
pieces of the lustre tile frieze to be installed, in the last of the Ilkhanid-period interventions in the decoration of the shrine.

The dated stucco inscription, which mentions the patron of the shrine as Zayn al-Din al-Mastari, was part of a modification to the original design of the building, and this may well have also included rebuilding parts of the walls and the construction of the muqarnas dome. An argument in favour of this is the fact that the inscription uses the term *qubba,*\(^{64}\) which appears to refer to the dome, rather than to the whole structure. Additional evidence for different phases of construction has already been seen in the way the stucco columns were applied.\(^{65}\)

![Fig. 9. Rising joint plugs to the left of the mihrab, including ones extending underneath the stucco corner columns.](image)

and the stucco *mihrab* of the main prayer hall of the mosque of the Bayazid Bistami complex in Bistam, which was also produced by Ilkhanid craftsmen.

\(^{64}\)Blair, *The Ilkhanid Shrine,* p. 62. This may, however, be a case of referring to the part for the whole.

\(^{65}\)The engaged columns were previously thought to be made up of terracotta sections (Wilber, *The Architecture of Islamic Iran,* p. 134), but damage to the body of the fabric, and their examination under UV light, shows that they are in fact made up of grey stucco.
Decoration of the Column Capitals

The signature split across the bands below each of the eight capitals is well known, and has been read as the name of the craftsman Hasan Ibn ‘Ali Babawayh. However, detailed images of all the columns were not available when this reading was published, and there are additional unclear elements at the end of the inscription. It appears to closely resemble the signature of the craftsman who signed the tiles in the Metropolitan Museum of Art and the stucco mihrab from Mahallat-i Bala, and reads:

\[ \text{Work of Hasan 'Ali Ahmad Babawayh banna Vidguli} \]

The inscription, which starts atop the column to the right of the mihrab recess, is arranged in a manner that is without parallels. The signature is spread across a series of bands below the capitals with a fictive brickwork design behind the lettering. The manner of signing this stucco work is truly unique, as generally it is stucco mihrabs that are signed, or the end of monumental stucco inscriptions. The signature of the craftsman was carefully designed

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66 Blair, *The Ilkhanid Shrine*, p. 62.
67 Blair, ‘A Medieval Persian’, p. 390.
68 Blair, *The Ilkhanid Shrine*, p. 14.
69 Part of the reading was kindly provided by Bruce Wannell. A new reading by Abdullah Ghouchani of the Mahallat-i Bala Imamzada inscription (kindly supplied by Sheila Blair, personal communication, 14 September 2019) provides the basis of the reading of the nisba Vidgul, which is a small city northwest of Kashan near Nushabad, meaning he was probably a local craftsman. The text on the column capitals is almost identical to that found on the cursive signature panel at the Mahallat-i Bala Imamzada (Blair, ‘A Medieval Persian’, p. 391, Fig. 4).
70 Examples of signed Ilkhanid stucco mihrabs include the ones at the Mahallat-i Bala Imamzada, the Kuche Mir at Natanz, the Bistam mihrab of the main prayer hall of the mosque of Bayazid Bistami, the Marand Friday mosque mihrab, the Imamzada Rabia’ Khatun mihrab (now in the National Archaeological Museum in Tehran), the...
Fig. 11. Engaged column details from the east (L), south (C) and west (R) walls of the shrine.

Fig. 12. Base of the column to the right of the mihrab recess.

mihrab of the Kirmani mosque of the Turbat-i Jam complex, and the Öljeitü mihrab in the Masjid-i Jami’ in Isfahan. Signed inscription bands can be seen at the mausoleum of Pir-i Bakran, on the stucco inscription of the North iwan of the Natanz Congregational mosque, and on the entrance portal ( Öljeitü portal) of the Bayazid Bistami complex.
to fit in the column capital spaces, and there is a mix of true and fictive hastae in order to retain the rigid knotwork pattern in the upper register of the band. It is only on the two sections on the north wall that the hastae tips have additional incised ornament (Fig. 13).

The decorative patterns along the top of the capitals have escaped the attention of previous scholars, and each pair of columns is topped with a different pattern. The four variants include an angular guilloche at the start, followed by an unusual arrangement of rectangles set flat and diagonally on the south side, with another two, different, continuous patterns on the east and north sides (Fig. 13).

The Stucco Inscription

The stucco inscription band runs along the area just below the muqarnas dome, but because it follows the profile of the wall below, it ties the upper and lower sections of the building together. Externally it can be seen to actually cover the lower portion of the octagonal zone of transition. The inscription has been whitewashed at some point in the intervening centuries, which has decreased the sense of relief and contrast between the inscription and the background scrolls, making the inscription appear flatter than it actually is. Traces of polychromy can be found on the vast majority of contemporaneous stucco inscription bands, and it is probable that the Natanz inscription band also featured polychromy, although any evidence for this is now hidden underneath the layers of whitewash. Such use of colour on stucco was inherited by Ilkhanid stucco craftsmen from their Seljuq predecessors. However, ongoing research demonstrates some difference in the use of pigments and stucco colouring principles between the Seljuq and the Ilkhanid periods. The inscription is written in cursive Naskh script, which is large enough and sufficiently clear for it to be read without difficulty when standing in the shrine.

The background scrolls of the Natanz inscription band feature different floral ornaments mimicking palmettes and half-palmettes, which are common motifs of the period. These elements have been heavily perforated in different patterns in order to reduce their visual weight. However, the extensive use of stucco perforation, also seen on the capitals below, reveals a greater richness of incised perforation patterns than is seen on other comparable stucco work from the period in central Iran. The capitals of the columns also retain traces of direct incisions in their design, which the craftsmen employed to outline the design prior to its carving. This frequently occurring phenomenon suggests that the stucco design was produced freehand rather than with the use of stencils. The inscription was produced by

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71 Examples include the old mosque of the Turbat-i Jam complex, the Öljeitü mihrab in Isfahan, the stuccos of the Pir-i Bakran mausoleum at Linjan and stuccos of the Ushtrujan Friday mosque. Traces can also be seen at the mihrab of the Marand Friday mosque, the stuccos of the Farumad Friday mosque, the mihrab of the Gar Friday mosque, the mausolea at Qum, and the stuccowork at the Hafshuya Friday mosque. See M. N. Isfahani, F. Hatabhash, M. Yazdani, R. Jabalameli, R. Osnrani and R. Eazami, ‘Research and Conservation of the Olejitu Mihrab in the Friday mosque of Isfahan’, in Collection of Articles of the Seventh Congress of Conservation of Cultural Heritage (Isfahan, 2009), pp. 428–251, and Grbanovic, ‘The Ilkhanid Revetment Aesthetic’, pp. 43–83.

72 For an overview of available information regarding the use of pigments through the history of the Iranian territory, see A. H. Karimy, ‘A Contribution towards the Delineation of the Evolution of the Development of Painting Pigments in Iran and a History of Research in this Field’, Tarikh-i Ibn 15, 2 (2019), pp. 233–249.

73 The double border of the inscription can also be seen in the inscriptions on the mihrab of the Hafshuya Friday mosque, and the monumental inscription band of the domed hall of the Varamin Friday mosque.
carving of at least two layers of stucco and the application of slightly protruding elements. This was a common mode of production of such inscription bands employed by Seljuq and Ilkhanid stucco craftsmen. A close parallel for this method can be seen in the monumental framing inscription on the Öljeitü mihrab in the Masjid-i Jamā′ in Isfahan, dated 710/1310.\textsuperscript{74} From the point of view of stucco carving techniques and the ornamental repertoire

\textsuperscript{74}See E. Galdieri, Iṣfahān: Maṣjīd-i Ğumā′ 1 (Rome, 1972), pl. 311. See also the stuccowork in Bistam, the Varamin Friday mosque monumental inscription, and at both Ushturjan and Haftshuya.
of the Natanz shrine, there are closer parallels in the Ilkhanid stucco of the Isfahan region, rather than Kashan or Qum. The style and technique of production of the monumental inscription band and the engaged columns of the shrine have little in common with the stucco band of the northern iwan in the Friday mosque of the complex, or the nearby Kuche Mir mosque mihrab. These three repertoires also contain different stucco craftsmen signatures, which shows that the three examples of Ilkhanid stucco in the city of Natanz were produced by three different, and presumably itinerant, stucco workshops, rather than by a single locally based one.

The **muqarnas Dome**

The fact that the stucco inscription band at the top of the walls of the shrine is almost flush with the surface of the thick coat of kahgil and plaster added over the original brick walls appears to preclude the possibility of it and the *muqarnas* dome above belonging to the same phase of construction as the lower, brick-built, walls. It is probable that the structure originally had a domed roof, but, perhaps due to its collapse at the same time as a large portion of the dome over the nearby octagonal structure collapsed, a new structural roof and the inner plaster *muqarnas ceiling* were probably added at the same time as the dated stucco inscription band, in the early fourteenth century. Extensive restorations on the shrine structure in recent decades have concealed any possible further evidence for understanding the construction of the dome interior. The engaged columns must be the same date as the stucco inscription, as the capitals line up perfectly with the outer edge of the inscription band. The *muqarnas* cells extend into the northwest corner recess, which is the only one that lacks a brick grille screen, and obscures the brick sub-structure. This can be seen from the outside to have been added at a later date to the original octagonal section of the structure, which adds further credence to the argument that the building originally had a different roof system, and that the *muqarnas* dome was an Ilkhanid addition that did not form part of the original iteration of the building. It is constructed on the same geometrical principles as the heavily restored *muqarnas* half-dome of the *pishtaq* of the *khanqah*, which provides further evidence for an Ilkhanid date for the *muqarnas* dome of the shrine, as the *khanqah* portal can also be firmly assigned to the Ilkhanid period.

The style of the plaster *muqarnas* dome is almost unknown in Iranian architecture, but it is a masterpiece, built in a style developed in Iraq and Syria in the thirteenth century, though with non-structural plaster inserts. It is of a clear design, employing only 90 and 45 degree angles, with a twelve-pointed star at the apex that has the same diameter as the arch over the larger windows. The stucco inscription immediately below it refers to the *qubba* and not the *buq’a*, which suggests that it refers to the building of the dome and the installation of the

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75This is despite the absence of stucco undercutting at Natanz, which is characteristic of the Isfahan region.
76Blair, ‘The Octagonal Pavilion’, p. 72 notes that almost half of the dome over the octagonal building has fallen and been rebuilt.
77For a study and drawing of the ceiling, see U. Harb, *Ilkhanidische Stalaktitengewölbe. Beiträge zu Entwurf und Bautechnik* (Berlin, 1978), pp. 53–58.
78E. Herzfeld, ‘Damascus: Studies in Architecture: I’, *Ars Islamica* 9 (1942), pp. 38–40. See p. 39, Fig. 27, for the most detailed drawing showing the plan and underlying design of the *muqarnas* ceiling in the Natanz shrine.
79Waqifī, *Cultural Heritage*, p. 82
inscription band, rather than to the whole structure, the lower sections of which are clearly earlier. Although it has been extensively rebuilt, the glazed ceramic tile *muqarnas* semi-dome in the entrance portal of the *khanqah* was built using the same *muqarnas* design principle as the dome in the shrine, adding additional credence to the Ilkhanid dating of the stucco *muqarnas* dome of the building.

**The Lustre mihrab**

No elements of the lustre *mihrab* and its associated framing tiles remain *in situ*, although numerous pieces are preserved in collections around the world, and the remaining mortar and grout lines give a clear idea of the shapes and sizes of the missing pieces. The most striking of the surviving pieces is the three-dimensional *mihrab* hood, now in the Victoria and Albert Museum in London, which features Qur’an 17:78 and the date 707/1307–8 (Fig. 14). It is seemingly unique in the corpus of Ilkhanid *mihrabs*, with the rest all being flat with relief decoration. Given the date, it may be assumed that the closing off of the southern entrance into the building and the installation of the glazed *mihrab* and surrounding tiles was all part of the same intervention as the dated stucco inscription of 707/1307–8 and the dado tiles. It is clear that the lustre frieze was not part of the original conception, given the fact that the stucco columns were finished down to the height of the top of the dado, but that within a few months at most, the decision was made to commission the frieze tiles, and thus the need to cut back the base of the stucco columns to incorporate several of them soon arose.

**Lustre Inscription Frieze**

The best known aspect of the decoration of the shrine in Natanz is the lustre tile epigraphic frieze that ran above the top of the tiled dado, and it is this inscription band that marked the final Ilkhanid decorative intervention in the interior of the shrine. The fact that the addition of the lustre frieze was one of the last phases of decoration can be demonstrated by looking at the lower section of the decorative engaged columns. They can all be seen to have been shaved down after installation and completion in order to create an angled corner over which the lustre inscription band of tiles could be applied, as can be seen in Fig. 12. None of these tiles remain *in situ*, and many of them are now dispersed among the major museums with holdings...

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80 For a study of the known tiles from the *mihrab* area of the shrine, see McClary, ‘Re–contextualising the Object’, pp. 267–266.

81 Alongside the rectangular border tiles in the Victoria and Albert Museum in London, and the two larger curved tiles from the area above the *mihrab* niche, now in Berlin and Lyon (McClary, ‘Re–contextualising the Object’, p. 269), there is evidence in the mortar lines for the edges and the upper section of the *mihrab* having been framed by 21 square tiles, each one of which was significantly larger than the ones from the lustre inscription frieze. Along the top were a further five slightly taller, and thus rectangular tiles. While some of these tiles may have survived and be held in collections around the world, none have yet been identified as definitively having come from the Natanz shrine.

82 Acc. no. 71.1885. For additional details of the *mihrab*, see Blair, *The Ilkhanid Shrine*, pp. 62–63.

83 It is impossible to be certain as to whether the tile frieze or the glazed *mihrab* and surrounding tiles were the last phase, or if they were both part of the same intervention. However, they were clearly done close together, as the *mihrab* also has the date 707/1307–8 on it.
of Islamic art around the world. The tile frieze features a monumental inscription band quoting verses of *Surat al-Insan*, but the feature that has attracted the majority of attention is the fact that the background of these tiles features numerous bird images, and that every single one of the birds has been defaced by chipping away the head (Fig. 15). Although there is no firm evidence concerning the date at which the birds were defaced, the fact that all the extant examples have suffered the same fate proves that it occurred while all the tiles were still *in situ*, and thus probably occurred prior to the middle of the nineteenth century. In addition, a *faran* of Shah ‘Abbas I, located in the mosque and dated 1615, refers to idolatry in both structures that had to be changed. In lieu of anything else, this is the closest thing to evidence for the actual date at which the birds were defaced. It is plausible to argue that the iconoclastic defacing of the bird heads occurred at the same time as the interior of the shrine was white-washed, as is suggested by the same inscription.

The Shrine Exterior

The upper portion of the exterior of the shrine featured extensive turquoise glazed intarsia forming a variety of patterns on the roof facets and the eight panels below. However, while the pattern on the roof facets appears to be faithful to the original, the most recent restoration has unfortunately resulted in the loss of most of the original patterns on the vertical panels and their replacement with far more simple patterns. Perhaps the greatest loss is the
boustrophedonic square Kufic repeats of Allah that were on the southeast facing panel,\(^{86}\) between the ones over the entrance and over the mihrab, and which are clearest in a photograph taken by Myron Bement Smith (Fig. 16). There is a marked difference in the brickwork of the upper section, with the glazed accents, and the lower section without, which is also indicative of the lower section being largely earlier in date, the numerous repairs and losses notwithstanding.

The first published plan of the site shows a set of stairs going up to the northwest corner of the shrine building\(^{87}\) (Fig. 2). There remains a mass of brickwork on the corner, which has a far shorter bevel than is seen on the other three corners, and this is the only corner with no brick fretted grille. There appears to be evidence of an additional staircase to a now lost structure, as there are step-like sections with wooden beams visible (Fig. 17).

The recess for the brick fretted grille over the west entrance has a clear construction break running down one side, with the upper half featuring the fretted opening, and the lower part plain brickwork. This section has the large stucco inscription band attached to the interior, which suggests that in an earlier iteration of the building this whole archway was open, allowing far more light into the building. The other arched sections with grilles in the upper half have either been repaired, or never had a construction break.\(^{88}\) There is an octagonal plan, and inside there is an opening, but it does not let in light owing to the brick structure on the corner, possibly added when the khanqah was built. In addition, the octagonal facet on the north-western corner has a low stepped section below the grille, as well as

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\(^{86}\)The east facing panel immediately next to it also featured a now lost pattern, which was far more intricate than the one it was replaced with during the restoration.

\(^{87}\)Godard, ‘Natanz’, p. 84, Fig. 56.

\(^{88}\)The eastern facet of the zone of transition has no evidence of the large bevelled corner facet, and can be assumed to be later in date than the northern one.
Fig. 16. Southeast facet of the shrine exterior with square Kufic inscription repeating *Allah*, prior to restoration. Detail of a photograph taken by Myron Bement Smith.

Fig. 17. ‘Abd al-Samad Shrine; northwest aspect of the zone of transition.
evidence for the lower section having been bricked up, both of which are features lacking from the two corner facets on the east side of the structure.

The Ilkhanid Mosque and Shrine Entrance Portal

There is a significant difference in the original ground level of the entrance to the mosque and the shrine, which also features X-and-O pattern rising joint plugs, and the rest of the façade to the west, which was added in the first quarter of the fourteenth century. The incised joints in the rising joints of the external brickwork around the entrance to the mosque and shrine feature a similar X-and-O pattern as seen inside the tomb, but the overall aesthetic effect is different as they are almost all identical, and are all connected to each other via double incised lines (Fig. 18). This creates a more unified pattern across the entire surface, and there are none of the square epigraphic patterns seen inside the shrine. Although there is a later glazed inscription band referring to the construction of the mosque by Zayn al-Din al-Mastari dated 704/1304-05 and mounted proud of the brickwork, the lower brick section, to a height of about two metres above the top of the doorway, appears to pre-date the façade built next to it. There is a construction break and a clear shift in alignment to the left of the recessed pointed-arch panel on the face of the entrance portal to the mosque and the shrine. The section of wall to the right of the door leans significantly towards the octagonal structure, and the surrounding sections of brickwork, including the entire upper section, are of late twentieth-century vintage. When Godard surveyed the complex the entire portal to the point of the construction break to the east was covered in white plaster, and none of the brickwork was visible.

The incised mortar bed and rising joint plugs on the façade of both the entrance portal to the ‘Abd al-Samad shrine, on the left of Fig. 18, and on the nearby Kuche Mir portal, on the right of Fig. 19, are very similar, but not identical. In both cases the pattern is incised into a layer of plaster, rather than the actual brick joints and mortar beds as seen in the earlier interior of the shrine. There are variations in the thickness of the fictive courses of brickwork at the ‘Abd al-Samad portal, as well as a single non-standard pattern near the top of the return on the left side of the entrance (Fig. 19 (L)). Although both examples have the same triangular section at the top and bottom of each repeating pattern, a detail which is not seen in earlier Seljuq work, the central circular elements are much smaller, and at

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89Blair, The Ilkhanid Shrine, p. 60.
90Comparanda for the type of connected mortar bed decoration on the portal can be found on a large number of twelfth and early thirteenth-century monuments across the wider region. Examples include ones on the exterior of the Yusuf ibn Kathayyr tomb in Nakhchivan (557/1162), in the crypt of the Mengüce Gazi tomb in Kemah (586/1186-91), and in the north iwan of the ‘Izz al-Din Kaykawus I hospital in Sivas (614/1217-18). They can also be found in a number of the Seljuq monuments in north-west Iran, including the Sujas Friday mosque, the Qurva Friday mosque, Madrasa Haydariyya, and the Pir mausoleum at Takistan.
91Godard, ‘Natanz’, p. 86, Fig. 54.
92The portal of the Kuche Mir Mosque has the same stepped arch form as seen at Varamin, as well as a fragmentary stucco inscription band on the intrados of the arch. See A. Hutt and L. Harrow, Iran I (London, 1977), p. 178, plate 122. The image is mislabelled as being the side entrance of the ‘Abd al-Samad complex, an error first noted and corrected by Sheila Blair (Blair, ‘The Octagonal Pavilion’, p. 90).
93This technique is seen in other Ilkhanid-era monuments with Seljuq-style brickwork, with the most famous example being inside the gallery at Olijeitú’s tomb at Sultanıyya (see S. S. Blair, ‘The Epigraphic Program of the Tomb of Uljaytu at Sultanıyya: Meaning in Mongol Architecture’, in Islamic Art II, (eds.) E. Grube and E. Sims (Oxford, 1987), p. 47 and pp. 85-87. Figs. 8-15).
Sometimes rather angular, in the Kuche Mir examples, as well as being proportionally narrower. The evidence of vertical incised construction lines and an incomplete pattern mistakenly carved in the wrong place suggest that the individual responsible for the Kuche Mir patterns was not the same person who executed the ones at the ‘Abd al-Samad portal, although they both appear to date from around the same time. It is the filling of actual voids between bricks in the Seljuq work, rather than the application of a fictive pattern imitating brickwork.

Fig. 18. Incised mortar bed patterns in brickwork on left side of the entrance to the mosque and the shrine in Natanz.

94 The upper section of the niche on the left inside the entrance of the portal retains traces of white paint on the mortar bed and rising joint decoration in order to provide additional differentiation and contrast.

95 As with the earlier patterns inside the shrine, the X-and-O patterns on the portal are all individually carved by hand, not stamped. This is clear from the numerous irregularities, in both the shape of the patterns and their size, as both the width of the joints and the height of the fictive bricks have a degree of variance from one to another.
in the plaster coating over structural brickwork beneath in the later Ilkhanid work, that that is the fundamental difference between the two styles.96

The similarity between the plugs and mortar bed decoration, but differences from the related patterns inside the shrine, suggest that both the aforementioned entrances are of similar date, and appear to be from the first Ilkhanid phase of intervention in Natanz.97 The construction of the new mosque incorporating the domed structure, and the reconstruction of the shrine, would have necessitated the new access point, as did the major reconstruction work at the Seljuq Kuche Mir mosque nearby. It is probable that the portal of the Friday mosque of the Natanz complex was therefore built during the first phase of Ilkhanid interventions at the site, prior to the construction of the khanqah and minaret. However, it is entirely plausible that it was added in an earlier phase, as the dated inscription runs over the decorative brickwork, and there is no guarantee that it refers to the initial construction, especially as the ground level of the entrance is considerably lower than that of the khanqah next to it.

**Post-Ilkhanid Phases in the Shrine**

The subsequent periods of modifications of the shrine under the Safavids and Qajars resulted in additional embellishment of the structure of the complex, and an overview of these later interventions is key to the emergence of a fuller understanding of the history of the complex, its function and meaning.

96 A notable exception to this can be seen on the exterior flanges of the tomb tower at Bistam, built for Öljeiti’s son in 768/1368-69, where there are true voids with the X-and-O pattern carved directly into the mortar. See R. Hillenbrand, ‘The Flanged Tomb Tower at Başam’, in *Art et Société dans le Monde Iranien*, (ed.) C. Adle (Paris, 1982), p. 244, Fig. 89.

97 The close similarities between the incised patterns on the smaller entrance portals in Natanz and several other Ilkhanid era structures, including Öljeiti’s tomb at Sultaniyana, the Imamzada Yahya at Varamin (Blair, ‘Architecture as a Source’, pp. 215-228), the Ushkurjan Friday mosque and the Pir-i Bakran mausoleum suggest they are all of a similar vintage.
The significant modifications of the Safavid period include the application of mural revetments. In this period the cenotaph of the Shaykh was renewed and given a Safavid look, with the application of *cuerda seca* tiles donated by Khadija Sultan in 1045/1635-6 (Fig. 20). The change of aesthetics for the focal point of the shrine with the introduction of *cuerda seca* tiles, which have a very different ornamental vocabulary, is indicative of the ongoing religious significance of the site to the Safavids.

The Application of *kahgil* and Whitewash

The *kahgil*, and the whitewashed layer of plaster over it, is only slightly recessed from the front edge of the stucco inscription band. Without the layer of *kahgil* the inscription band probably would have appeared to project a long way out from the wall and look as if it were overhanging. The column capitals that support the corners of the inscription band also protruded from the supporting walls, in the same manner as the shafts of the columns. The application of the *kahgil* diminished the contrast in planes between the column capitals and shafts, and the supporting wall surfaces. Originally, the columns did not appear to be engaged in the way that they do, due to the subsequent application of *kahgil* layers. In the same manner, the *kahgil* layer made the projection of the mortar bed and the thickness of the tiles less pronounced from the wall than would be the case otherwise. The evidence from the historic inscriptions in the Friday mosque of the Natanz complex suggests that the layers of *kahgil*, with white plaster covering them, could not have been applied on the surfaces of the ‘Abd al-Samad shrine prior to the Safavid period. However, there are some examples of monuments that testify to the use of layers of plaster on interior surfaces in earlier periods. The mosque of Baba Abdullah in Na’in preserves the interior domed chamber which was covered with layers of plaster, presumably in the Ilkhanid period. An additional argument in favour of dating the *kahgil* and plaster layers in the Natanz shrine to the Safavid or Qajar period is the fact that the octagonal

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98 Blair, ‘A Medieval Persian’, p. 393. The wooden frame and screen were subsequently added in 1064/1653-54 according to Blair (Blair, *The Ilkhanid Shrine*, p. 51).
domed chamber of the Friday mosque of the complex was also covered with plaster layers, perhaps in parallel to the redecoration of its domed area with wall paintings, which are clearly post-Ilkhanid. It is therefore probable that both the shrine and the Friday mosque of the Natanz complex were whitewashed and plastered (on kahgil) at the same time. If so, the kahgil and plaster application represents a fourth phase of intervention in the development of the internal appearance of the monument.

Outside the shrine itself, the northern iwan of the mosque was embellished with wall paintings, which comprise lengthy texts referring to patronage of the complex in the Safavid period and hint at the assertion of political power through patronage of these modifications. It is in this period that the interior of the octagonal pavilion of the Friday mosque of the complex, which already comprised an Ilkhanid lustre mihrab, now no longer extant⁹⁹ and probably contemporary to the tiles in the shrine, was covered with wall paintings.¹⁰⁰ These wall paintings explicitly covered the dated inscription of 380/998-99, suggesting that there was an attempt to visually unify the entire structure of the mosque using a contemporary Safavid aesthetic (Fig. 21).

Further modifications of the complex took place in the Qajar period as attested by historic inscriptions on the walls of the Friday mosque. Some sections of the lustre mihrab¹⁰¹ were still in situ in the shrine in 1915, according to Hussein Muhammad Ibrahim Khan Isfahani, who also noted that other sections were for sale in Isfahan for 20 toman each.¹⁰²

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⁹⁹A pair of Ilkhanid lustre tile spandrels, in the Victoria and Albert museum (Acc. no. 466-1888 and 724-1888) possibly formed part of the lustre mihrab in the Octagonal pavilion, as their dimensions correspond to the forms of the mortar left in situ. Evidence for the existence of the lustre mihrab in the octagonal pavilion derives from the Qajar period written sources. See Waqifi, Cultural Heritage, pp. 86-87.

¹⁰⁰Blair insists that only the shrine was decorated with lustre revetments. Blair, The Ilkhanid Shrine, p. 58.

¹⁰¹For a partial reconstruction of the appearance of the qibla wall of the shrine following the conclusion of the Ilkhanid phases of construction and decoration, see McClary, ‘Re-contextualising the Object’, p. 276, Fig. 9.

¹⁰²Cited in Waqifi, Cultural Heritage, pp. 86-87. Earlier, Jane Dieulafoy referred to a ruined mosque in Natanz that was formerly covered in lustre tiles, but she did not visit the site (Dieulafoy, La Perse La Chaldée, pp. 211-112).
It is clear that the octagonal building was originally a funerary structure, and later became part of a mosque, presumably in the Seljuq period. The installation of the lustre mihrab in the interior of this structure during the Ilkhanid period signalled a change in the functional role from a funerary building into a domed prayer hall. It is probable that the shrine of the Shaykh was a funerary structure from its beginning, but the interventions in the early fourteenth century, including the installation of lustre tiles and the lustre mihrab, transformed it into a proper mazar, with a prayer space for the pilgrims who visited the shrine. The new decorative programme, much like the one at Pir-i Bakran, signalled a slight, but nonetheless important, change to the function of the shrine. This change reflects increasing trends of pilgrimage, which were being encouraged by Ghazan Khan at the time.103

Conclusion

Despite all the things that remain unclear, a number of facts concerning the relative chronology of the internal decoration, and some aspects of the external appearance can be known with certainty. The building now known as the shrine of Shaykh ‘Abd al-Samad was originally a structure open on all four sides, with entrances of equal width, presumably datable to the Seljuq period. In this first phase the lower half of the interior wall surfaces featured rectangular X-and-O rising joint plugs, with a limited number of epigraphic square plugs also employed on the lower two meters on the southern and eastern walls. It remains unclear who the original patron of the building was, but it may be assumed that it was built as a funerary structure.

The building was subsequently transformed into the shrine of a renowned Sufi sheikh in the Ilkhanid era. This second phase of decoration consisted of the application of larger decorative columns on the corners of the main walls topped with capitals featuring the name of one of the craftsmen. At the same time the existing blind recesses either side of each entrance were augmented with smaller engaged columns. It was at this point that the southern entrance was bricked up, in order to fill the space with a glazed mihrab. During the same phase of construction the large openings in the octagonal zone of transition were bricked up to the halfway point and the large upper stucco inscription band was added. The other major addition in this phase was the glazed monochrome cross and the eight-pointed star tiled dado. Presumably it was not long after this point, as is suggested by the dates on the tile and the stucco band, that the lustre tile frieze was added above the dado tiles, covering the lower portion of the recently added corner columns and completing the main decorative programme of the shrine.

Subsequently, in the seventeenth century the Safavid tiles were added to the cenotaph, the walls were covered with kahgil and whitewashed, with the stucco inscription band probably being whitewashed at the same time. It was probably also during the same period that the bird heads were all defaced on the lustre tile inscription frieze atop the dado.

What remains less clear is the chronology of the construction of the muqarnas ceiling, which is almost certainly not Seljuq, and was probably added prior to, but in the same

20 toman was significant amount of money in 1915, and was equivalent to £3, 12s and 6d. The highest value gold coin at the time was a 25 toman coin.

103 Blair, The Ilkhanid Shrine, p. 25. Shani, A Monumental Manifestation, p. 154.
development phase as, the dated stucco inscription band of 707/1307-08.104 As with so many pre-modern sites in Iran, there remain far more questions than answers, but at least a little more light has now been focused on some of the aspects of the development of this enigmatic complex.

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104 Wilber notes that it is possible that the entire upper section of the shrine was rebuilt at the time when the existing interior decoration was applied (Wilber, The Architecture of Islamic Iran, p. 134).