

## Ark-e-Alishah; the Largest Domed Structure in Continuation of Large Scale Building Movement during Mongol's Era

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### ABSTRACT

General mentalities which overshadowed medieval architecture during Mongol's ages, is pregnant in innovative frameworks that their inclination of experience the largest dimensions against previous architectural specimens should be considered as the main character of them; to fulfill this attitude which supreme structures have always been made by dignitaries and aristocracies Mongolian architecture has followed the sequence of three mega structures comprising Ghazaniyeh, Sultaniyeh and Ark-e-Alishah<sup>1</sup> which designing and execution process of them should be spotlighted as a Mongolian recalcitrant architectural reaction against available specimens since that times. Although geographical nature beside political position of Sultaniyeh preserved the architectural appearance of tomb, but regarding to two others, clarifying the overall volume of the building will be indebted to analyzing historical contexts and adopting studies based on archeological investigations.

This project is aimed to explain the architectural form of Ark-e-Alishah and its application according to analytical-descriptive method also reviewing historical documents and archeological remnants about this monument. According to the results, in contrary with scholars, not only the biggest man-made brick vault, but also the most massive domed area related to Medieval Islamic world was made in Alishah's monument.

**KEY WORDS:** Alishah's mosque, Historical contexts, Mongolian architecture, Azerbaijan area.

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### INTRODUCTION

The archeological excavation of 1972, headed by A. Sarafriz in Ark-e-Alishah's site, had opened up new horizons about Alishah's monument in Tabriz –the capital of Mongols monarchy and Islamic world-which architectural remnants had prompt new hypothesis around its identity and application (Mansori & Ajurlo, 2003). This investigation had started from the central apron including Qajar's remains (Omrani & Ismaili, 2006: 172). In all reports, goes back to Qajar's era, this building had named as "City Castle" or "Tabriz's Castle" (Ajurlo & Nemati, 2013). According to the existence evidences, in front of the altar, there were brick units which probably have been destroyed by earthquakes or abscission of arch's apexes; then, after tabulation of fallen bricks -which was a stratum with approximately depth of 1 meters- Qajar's structures containing vaulted volumes had been erected (Same). It sounds that, the site has been abandoned for a long time, then construction restarted by stablishing foundations of a food storage buildings during Qajar period. Nader Mirza wrote that: "...guns and ammunitions beside state grain have stored in Alishah mosque..." (Nader Mirza, 1972: 107).

Because of political tensions and necessities regarded to defense policies during Qajar dynasty, Alishah's building was influenced by new demands whit accepting new interventions and erecting iron melting kilns plus weaponry equipment during this period of time (Omrani & Ismaili, 2006: 174). After mentioned layer, the existence of architectural remnants located on Northern part of Alishah structure -including a rectangular plan with two thick walls with about 12meters width- is shaped the most valuable archeological discoveries related to Alishah's monument (Mansory and Ajurlo, 2003).

Although the results of archeological excavations are revealed a spatial conjunction of today's remnants with unearthed plan, but the explanation of architectural appearance of whole complex, beside adopting studies around archeological evidences with historical and pictorial contexts is a subject that has been paid less attention. On the other hand, the variety of probable comments presented by historians have added to this complexity. In this way, clarifying the true face of Alishah's monument would be among the prior investigations around this monument.

#### Backgrounds:

Although Pope had tried to introduce the existance remnants of Alishah's monument as Alishah's mosque (Pope, 1969), but his descriptions around position of school and convent which were flanked the building, are not

matched with Ibn Battuta's reports (Mansory and Ajurlo, 2003). In the course of 1937 to 1939, Wilber had assumed this building as a part of Alishah's mosque through his investigations (Wilber, 1987:158) but his revitalized schematic of Alishah's building was only based on historical contexts not architectural evidences. As a result, Wilber was not succeeded in solving the problem of minaret's location which constantly have pointed out through historical documents, beside his imagination about this building does not obey from common symmetric plan of Islamic mosques, it's because there exist no visual relations between surrounded accommodations –Hojre-, a large yard and nonsignificant entrances with a huge central architectural mass in the middle of southern side.

On 1997 J. Qiyasi, a faculty member of Azerbaijan's science academy, had compiled his Ph.D. theses about Alishah's monument titled " Memar Xaca Alishah Tabrizi: Dovru & yaradicilig" (Qiyasi, 1997) & (Mansory and Ajurlo, 2003). As same as Wilber, he had assumed the existance remnants of Alishah's monument as a part of architectural complex which the main structure has surrounded by two lateral applications on southern elevation which accommodation areas –Hojre- rounded interior space; nevertheless, schematic revitalization of lateral units, also the location of two lofty minarets are totally accidental without any reasoning (Qiyasi et al., 1997).

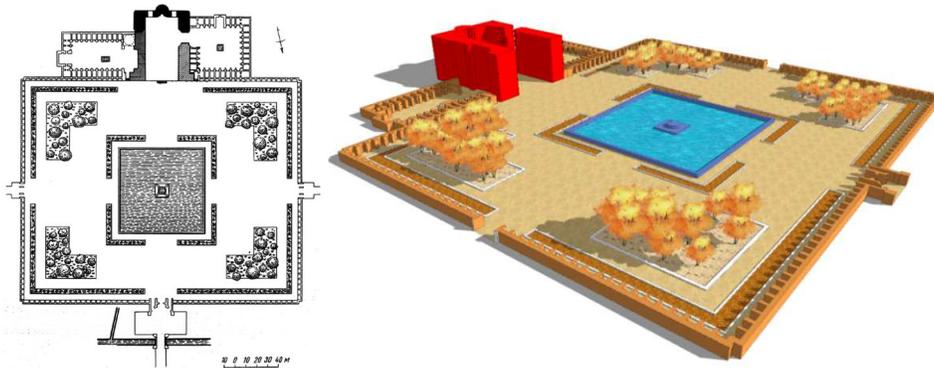


Figure 1: left: presented sketch of Alishah's monument by Wilber (Wilber, 1987:308).  
Right: 3D design of Alishah's monument based on Wilber's map (Authors, 2016).

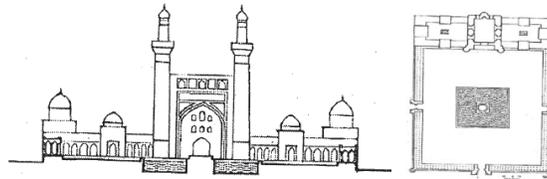


Figure 2: Presented sketch of Alishah's monument by J. Qiyasi (Mansory and Ajurlo, 2003)

According to the recent studies around Alishah's monument by Mansory and Ajurlo, this building had been shaped by connection and unifying of two separate units which construction process had been thwarted because of Alishah's untimely death (Mansory and Ajurlo, 2003). On the other hand, mentioned scholars have introduced the spatial relationship of Alishah's monument lacking of any characteristics defining a mosque, a school or a convent; in this way, the accompaniment of this building -with a school and a convent beside huge dimensions of its mass- have encouraged scholars to assumed the application of this building as a tomb for its founder, Alishah. Eventually, they came to this conclusion that, the existance remnants of Alishah monument is the additional sector to Alishah's unfinished tomb which was located on northern part with a rectangular plan and two minarets faced to the Mecca direction. Because of obscure reasons, the total plan of tomb has been reorganized by adding a lofty porch into southern side and joining to the new structure which it is remained to this time. It sounds that, after finishing the construction process, in order to honoring Alishah's attempts, Abu-Saeed had developed Alishah's funeral complex by adding southern part to his tomb (same).

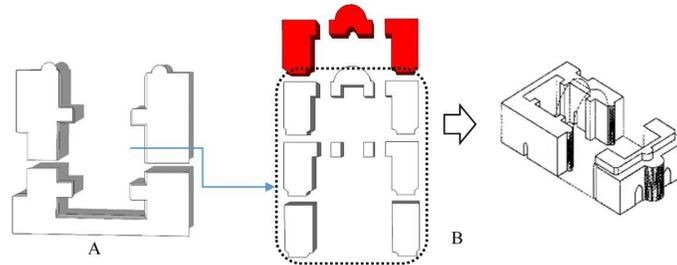


Figure 3: A: The unearthed plan of northern structures of 1971 excavations. B: shaping process of Alishah's building according to Mansory and Ajurlo which the today's remnant –red area- had added to primitive building (Mansory and Ajurlo, 2003).

### Analyzing the historical contexts around Alishah's building in Tabriz:

Wilber on his precious book titled "The Architecture of Islamic Iran; Ilkhanid Period", by investigating the previous information related to Alishah's monument wrote that: "... nearby Tabriz's main square there exist collapse of walls were belonging to a huge building which is the location of theater now. Several years ago, this building was utilized as a city castle. To imagine its stability, it would be enough to mention that the powerful canon's bullets which were fired toward it during 18<sup>th</sup> century, had caused considerable damage on its walls. Natives named it 'Castle', but its true name is Alishah's mosque, which this name was common till late 7<sup>th</sup> century. 'Taj-ed-Din Alishah Jeylani', the minister of 'Oljayto'<sup>2</sup> was one of the main supporters of architectural movements; He had decreed in stablishing a mosque in new capital –Tabriz- between 1310-1320 A.D. One of the resources have revealed that Alishah had designed the plan by himself. ...Mostofi-e-Gazvini, which had compiled his book around 1335 A.D mentioned that the interior of Jame mosque which had made by Alishah in Tabriz was bigger than Tag Kasra's<sup>3</sup> porch. Shardin, which had compiled his itinerary before 1673 A.D, had described Alishah's monument and named this building as 'Alishah's Jame Mosque' in a pictorial representation which had drawn with extra details" (Wilber, 1987: 158).

Ibn Battuta wrote that: "...for a man who is standing in front of Alishah's Mosque, faced Mecca direction, the school is located on his right and the convent is on his left". He continues that: "... The extensive apron of Alishah's mosque comprising a vast area covered by shiny marbles with a fountain beside picturesque tile works on its surrounded walls" (same, 160).

Venetian merchant described the apron through this word: "...there exist many vaults made by high quality stones protected by marble columns. These marvelous columns are as transparent as crystal which their thickness and height are unified in all positions with approximate elevation of five or six 'Gadam'<sup>4</sup> ...nearby the main entrance of this mosque, a raceway passing under stone arches. there is a stone foundation in the middle of the apron with 100 Gadam for its length and width with 6 Gadam for its depth" (same). Regardless widespread explanations of Wilber about Alishah's mosque, his efforts to clarify the position of minarets were in vain. He wrote that: "...the historical reports which considered the location of two minarets and three main entrance is not comprehensive nor clear. It is possible that, there was a minaret on top of each walls connected to main porch. Shardin mentioned that: "...Alishah's mosque is totally deteriorated; only a small part, which is used for praying beside the super eminent tower which is visible at a glance for a traveler who is coming from Yerevan has been restored"(same,161).

Italian merchant described the facade of the main entrance in this words: "...this mosque has three entrance which two of them is utilized nowadays. That's about 4 Gadams for their width and 20 Gadams for their height. The main arch of vaults is made by stone and other parts including stucco decorations. ...there is a marble manuscript on top of the vaults which are visible from far distances..." (same,161).

Dieulafoy wrote that: "...this mega structure which is about more than 20meters, attracts the attentions before entering to the city; ...the building which centralized in a vast square with irregular surrounded polygon area including lofty towers beside a deep width moat which partly is filled by collapses..." (Dieulafoy, 1969: 55).

Nadir Mirza<sup>5</sup> wrote: "...Nowadays it's called "Castle"...the cellar of cereals, food and weapon... this mosque is made by Alishah... he had made it by orders of the king hastily... when the dome had been erected, its foundation was new and feeble, it's because the mortar was not firmed yet... [dome] had fallen down and broke..." (Nadir Mirza, 1972: 105). In his reports, he had pointed to a "dome" apart from the vault. According to historical contexts, by introducing the application of Alishah's monument as a mosque, the lack of a dome –the main characteristic of a mosque- would be controversial. Regarding to spatial relationship of the mosques and their combinations in formation of a mosque's typology, Hillenbrand explains that: "...Although the mosque was able to demonstrate its duty in Islamic society without utilization of main elements, but undoubtedly their conjunctions in mosque's design caused the multidimensional development through all aspects; these elements comprising "Altar", "Pulpit" and the "Dome" which are remained on equal significance" (Hillenbrand, 2012: 44-45). Then, he continues about the position of the dome on top of the altar through early Islamic specimens: "...Roman

architecture had been stabilized the honorable role of the dome decisively by spotlighting its position through palaces. It's not accidental that the greatest religious architecture of Rome –Pantheon- had centralized the dome as its focal point. On the other hand, the dome was a firm unit in cathedrals and convents, so its placement through the mosques specially on sensitive positions is a natural transition into Islamic palaces. It's inevitable that the presence of a sterling dome if is not an expression of political or religious symbolism, it would be an emphasize to a focal adorable point. According to this fact that the altar mainly including one part of interior disciplinary system of a mosque which its situation is not recognizable through the exterior view of a mosque, the role of the dome as its external expression would be essential; it's because the dome has been clarified the direction of Mecca and this would be the most precious factor through compressed urban fabrics which are totally deprived from navigator elements. The dome in the mosque had proven that, it's the most durable and comprehensive element during Islamic architecture which its advantage as an indicator had gradually reached to such a validity that caused the application of this element in large scale" (Hillenbrand, 2012: 53). In this way, the dome should be considered as the most precious unit and identifier of religious architecture (Snyder, 1989: 201) which its shortage would influenced the spatial organization of sanctuaries (Grupico, 2011).

#### **Pictorial Documents around Alishah's Monument:**

In field of analyzing Tabriz's historical urbanism and architecture, pictorial documents drawn by Matragchi<sup>6</sup> plays a key role regarding to recognition the primitive form of urban fabric as well as architectural specimens in high definition details (pic no.4); On his map, which is goes back to 940-942 A.D, with the orientation of Northwest to Southeast, in front of the blue mosque there exist a mega structure -which its excessive height is out of imagination- that should be considered among the highest buildings while its position is matched with nowadays location of Alishah's mosque on Southeast of the city (pic no.5). It sounds that, the circumstances of mentioned building- nearby rampart and close to the city gate- caused the manifestation of this building and its minarets at a glance for a traveler who is coming close to the city in accordance with Shardin's explanations (Shardin et al., 1970: 96).



Figure 4: Tabriz' miniature drawn by Matragchi during Suleiman's campaign on 940 – 942 A.D

(Matragchi, 2000: 86)



Figure 5: Architectural units on Matragchi's miniature and their location through nowadays urban map of Tabriz. A. Ghazaniyeh; B. Hasan Shah complex; C. Blue Mosque; D. Alishah's Mosque.

Although according to the traveler's descriptions, two lofty minarets had been joined to Alishah's mosque, but the position of minarets would not be explicable unless Matragchi's pictorial documents. In his miniature, it sounds that the stems of two minarets have been fallen down through earthquakes in compliance with Shardin's gravure (pic no.6). Although Nadir Mirza's descriptions around a vault and a dome -which is broken down through a hastily construction process- is intangible in compare with existance archaeological remnants, but the location of the building which introduced the position of Alishah's mosque through Tabriz's historic fabric demonstrates a massive building with a lofty porch beside a dome covering the vast quadrangular space of its behind area (Nadir Mirza, 1972: 105).

Martagchi's miniature has proposed two hypotheses about Alishah's mosque: the former is, the dome was reconstructed during 10<sup>th</sup> century before Suleiman's campaign to Northwest Iran; the second is, by assumption of destruction which had happen to the dome and vault, Matragchi had tried to reconstruct the dome on his miniature. Apparently the first hypotheses would be acceptable because Matragchi had never illustrated the facts by interfering through current situation of buildings beside his reappraisal of urban fabric and architecture was based on direct pictorial descriptions.

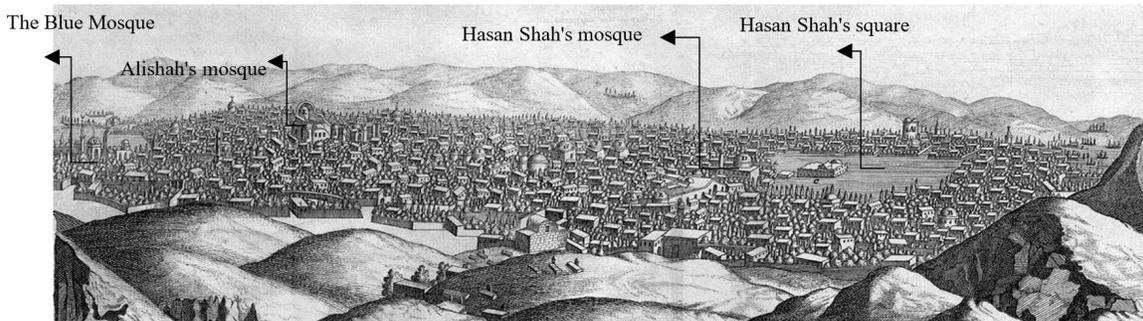


Figure 6: Historical structure of Tabriz and the location of Alishah's mosque, drawn by Shardin (Zoka, 1989: 51).

Analyzing all descriptions around Alishah's monument reveals the fact that the application of this building was a mosque which had been reused as a defensive castle during Qajar's dynasty. In this way, the dome should be assumed as the most important factor which improved the perfection of this huge mosque and the designer was totally aware of this phenomena to introduce a masterpiece; it's because, the mosque containing the world's biggest porch (Wilber et al., 1987: 158), biggest altar and probably highest minarets –which had been destroyed through earthquakes- could not ignored the necessity of a dome in its structure.

**Archaeological evidences in complementing the historical documents:**

Matragchi's miniature included a surrounded area by crenate walls, flanked by two minarets which their large diameter represents the extra altitude of them. There exist two entrance on two sides of middle tower on the main facade which these gates would confirmed Venetian merchant's reports that "... there are three gates to the mosque which only two gates including stable vaults are used..." (Wilber, 1987: 161).

The miniature is drawn on a single-point perspective ended to the mosque's structure on the center point of a rectangular area. As stated earlier, Dieulafoy had mentioned that the position of Alishah's mosque is on the middle of a grate square (Dieulafoy, 1969: 55). It sounds that, after gradual demolition of Alishah's mosque, surrounded accommodation areas which had been described by Venetian merchant (Wilber, et al. 1987: 160) had perished and only the main structure –the Mosque's building- have been preserved as a single form till this age. On the other hand, Matragchi's miniature depicts a creek in front of main gates parallel to Venetian merchant's descriptions (Wilber, et al. 1987: 160); "...after crossing the main gate, there appeared a quadrangular pool with an octagonal fountain which the view of the main porch (the earlier covered area A) is visible form this point (Venetian, 1963: 54). After mentioned area, the circulation route continued to sector "C" which was a domed area that had been destroyed and Nadir Mirza had explained its structure, at the end, the plan ended to adjoined part "D" which was designed in order to more development of Alishah's mosque (Mansory and Ajurlo, 2003) (pic no.7).

The remnants of robust columns with approximate diameter of 5 meters would probably proof the mentality of creation of the domed area, because they were set to hold the heavy loads of the dome beside to fulfill the challenges facing the architects to transfer the forces to foundation through vertical porter units. In other words, the challenge of covering an architectural space with the vault system was solved by pointed arches; in this way, the concept of columns among clear span would be absurd.

Although Ibn Battuta had pointed to other architectural units such as a school as well as a convent nearby Alishah's mosques, but they are not represented through Matragchis' miniature<sup>7</sup>. Anyway, according to archeological evidences, the connection of mosque, school and convent were prepared by doorways "H" and "B". the pressure of the dome at that scale was restrained by half column "F" on southern part of domed area; as far as one of the main reasons which caused the destruction of the dome and the vault was the lack of same unit on opposite site. Shardin's gravure would be sufficient to explain this phenomena, because the demolished area is the Northern sector of adjoined part "D" not the connected part to the protector half column.



Figure 7: Right: a part of crenate surrounded wall of Alishah's mosque, Middle: Alishah's mosque in Matragchi's miniature whit crenate rampart (Matragchi, 2000: 89). Left: the spatial organization of Alishah's mosque according to archaeological evidences (Mansory and Ajurlo, 2003).

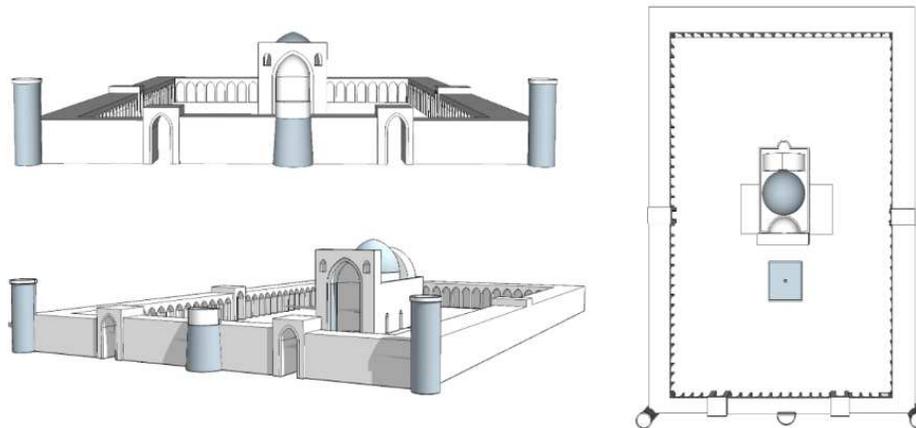


Figure 8: The presented schematic of Alishah's mosque according to historical documents, archaeological evidences and Matragchi's miniature (Authors, 2015).

**The spatial relations between porch and dome through mosque's architecture:**

As Hillenbrand mentioned, "the main characteristic of Iranian mosques should be considered the conjunction between porch and the domed area" (Hillenbrand, 2012: 97). It sounds that, this relation was firm from early Islamic mosques to modern specimens; The porch has always been established in front of the domed

area to spotlight the entrance of a sacred bound. In other words, the plan of a domed area without any porch - which emphasizes to the specific direction- would be miserable through the unifier structure of Muslims called "Mosque" (Ettinghausen & Grabar et al, 2008: 9).

Regarding to Alishah's mosque, the spatial conjunction of porch and domed area should not be taken into account as an architectural innovation, but the improved dimensions is a fact that Islamic architecture had never been reached before. On the other hand, except Neiriz mosque (10<sup>th</sup> century) – which was a maintained pre-Islamic temple that has been reused as a mosque during Islamic era- there exist no mosque based on a single porch without a domed area through cultural region of Iranian architecture.

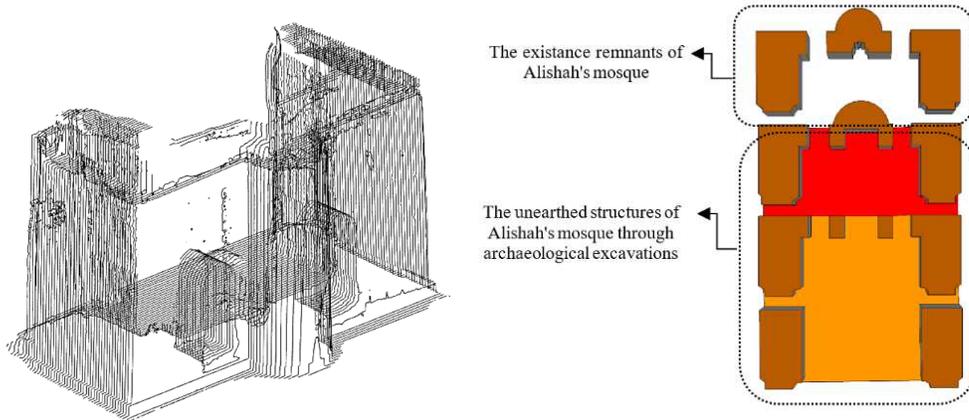


Figure 9: the plan of Alishah's mosque



Figure 10: the existence remnants of Alishah's mosque (Authors, 2016)

Golpayegan's mosque (12th century)	Ardestan's mosque (12th century)	Zavvareh's mosque (12th century)	Ardabil's mosque (11 <sup>th</sup> century)

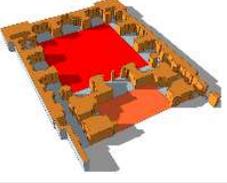
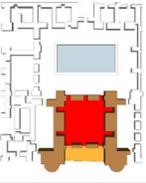
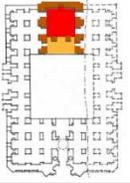
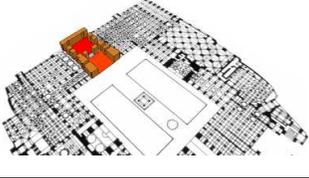
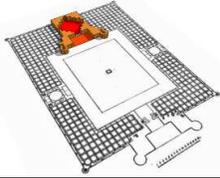
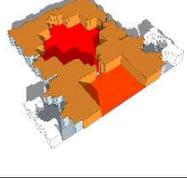
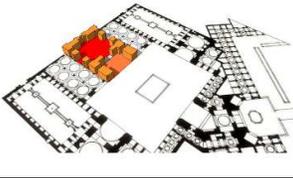
			
Motalleb Khan's mosque (14th century)	Shikh Shahab's tombs (14th century)	Varamin's mosque (14th century)	Eziran's mosque (14th century)
			
Isfahan's jame mosque (12th century)	Bi Bi Khanum's mosque (15th century)	Molana's mosque (15th century)	Isfahan's Imam mosque (17th century)

Figure 11: The conjunction of porch and domed area through Islamic architecture (Authors,2016).

## Conclusion

Recognition the architectural appearance of Alishah's monument has always been supposed as one the most controversial subjects related to Islamic architecture. Although prior to archeological excavations headed by A. Sarafraz., Pope, Wilber and Qiyasi had tried to propose their imaginations of Alishah's monument within a framework of a Mongolian mosque, however, underestimating archeological evidences caused serious uncertainties around its spatial organization, specially the position of two minarets, entrances, accommodation areas and etc. according to the latest studies made by Mansory and Ajurlo, the suggestion of a royal tomb has been proposed for Alishah's monument; but the lack of crypt in combination with a upper room which mainly reflected the tradition life of Middle Asia's nomads that are putted into architectural words, would overshadowed this hypotheses (Hillenbrand, 2012: 257); it's because, Mongols ancestors have proposed the corpse visible to everyone which mourners rounding around it during funeral ceremonies; then, buried the corpse at a molehill named Kurgan (Новосельцев,1990: 264).

Tent-Tombs are included crypts carried the corpse which its conjunction with an upper room is interpreted as funerary architecture (Руденко, 1953: 404). With this pre-assumption, the attribution of Alishah's monument adopted with Mongols customs would be failed and the interior of the domed area would have not followed up the combination of crypts and upper room (Калоев, et. Al.1964: 8). To spotlight this phenomena, it would be enough to mention that, all of Mongolian tombs prior to Alishah' monument –such as Ghazaniyeh, Sultaniyeh, Maraghe's early Mongolian toms and etc.- have been reached to spatial relation of crypts and domed area.

According to Shardin, Venetian merchants, Careri and Dieulafof, the location of a building which is drawn by Matragchi on Southeast of Tabriz nearby rampart is in compliance with Alishah's mosque. On the other hand, archeological evidences, Nadir Mirza's descriptions and Matragchi's miniature are focused on a domed area behind a porch to meet the target of a medieval Islamic mosque. Apparently, a single vault covering the whole plan of Alishah's mosque was not able to fulfill the requirements of a mosque category on that scale and importance. Based on the results, with a direct referring of historical documents, Alishah's monument was a mosque with two lofty minarets on the corners of surrounded area, the highest man made altar, the biggest domed area with approximate diameter of 30 meters and a high raised vault which was covering a part of inner section.

## Appendixes:

<sup>1</sup> - Öljeitü, Oljeitu, Olcayto or Uljeitu, Öljaitu, Ölziit (Mongolian: , , Ölзийт хаан), also known as Muhammad Khodabandeh (Persian: محمد خدابنده - اولجايتو, khodābandeh from Persian meaning the "man of God" or "servant of God"; 1280 - December 16, 1316), was the eighth Ilkhanid dynasty ruler in Tabriz, Iran from 1304 to 1316. His name "Ölziit" means "blessed" in the Mongolian language.

<sup>2</sup> - Öljeitü, Oljeitu, Olcayto or Uljeitu, Öljaitu, Ölziit (Mongolian: , , Ölзийт хаан), also known as Muhammad Khodabandeh (Persian: محمد خدابنده - اولجايتو, khodābandeh from Persian meaning the "man of

- God" or "servant of God"; 1280 - December 16, 1316), was the eighth Ilkhanid dynasty ruler in Tabriz, Iran from 1304 to 1316. His name "Ölziiit" means "blessed" in the Mongolian language.
- <sup>3</sup> - Meaning Iwan of Khosrau; is a Sassanid-era Persian monument located near the modern town of Salman Pak, Iraq. It is the only visible remaining structure of the ancient city of Ctesiphon. The archway is the largest single-span vault of unreinforced brickwork in the world.
  - <sup>4</sup> - Each 'Gadam', which was as equal as the defined distance of two legs during length measuring, is about 100-120 cm.
  - <sup>5</sup> - Nadir Mirza Afshar was great-grandson of Nader Shah the founder of the Afsharid dynasty of Persia. He was the fourth son of Shahrukh Afshar emperor of Khorasan.
  - <sup>6</sup> - Nasuh, known as Matrakci was a miniature painter who accompanied King Suleiman Kanuni during his campaign to Iran in 940-42 AH/1533-36 AD and he has drawn many miniatures from lots of Iranian cities including Khoy, Tabriz, Zanjan, Soltaniyeh, Hamedan, and Ghasre Shirin to Baghdad and Shahre Zur, Baneh, Bukan, Maraghe.
  - <sup>7</sup> - It sounds that in compare with the scale of mosque, also the attitude of the rampart, the school and the convent are not visible for painter.

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