RECOGNITION OF ARG-E ALI SHAH, ALSO KNOWN AS ARG-E TABRIZ (ALTAR OF JAMA MASJID OF TABRIZ BUILT IN ILKHanATE PERIod I)

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ABSTRACT:
Arg-e Ali Shah or Jama Masjid of Tabriz is a very significant historical building; although it has almost lacked a complete roof but a wonderful symbol of resistant and durability during the history. Evidently, many visitors visited the blemished historical Arg building but never had it seemed lonely, and quiet, as it seems today! It has been a mosque, mausoleum, an ammunition factory or constitutionalist’s shelter; it has always resisted round the clock, day and night against harshest earthquakes; yet it is a hard structure after 7 hundred years. The investigation process has convinced the writers to develop different conclusions on vault shape of altar of Masjid Ali Shah; prepared images and maps illustrate that how Arg-e Ali Shah was built and how it was changed and transformed during the history. Accordingly, it is reviewed them and the recommendations of the previous investigators for structure analysis of Arg-e Ali Shah; also shape and form of demolished vault of the altar have been illustrated. It has been simulated it as a three-dimension structure; then we recognized the design of vault based on the field and library studies and proposed the final maintenance design for the great and inestimable historical building.

KEYWORDS:
Arg of Tabriz, Porch, Altar

INTRODUCTION

1. Preface

Arg-e Ali Shah established in Tabriz many years ago; but its walls demolished between 1981 & 1982. The firm campanile developed in an urban space as mausoleum, square, arsenal Arg, garden, a memorial, and a national work; it is registered as a national work and it is a dynamic place too.

The roof of mentioned building demolished in early years of establishment but the dynamic space between the two walls (Fig. 1) is a principal feature of the historical work for almost all know and identify the place in such a way.


Fig. 1: Space between the two walls, Arg-e Ali Shah


It is located downtown of Tabriz; at 650 meters distance of Saat square between Imam and Taleghani Avenue and Arg Street.

Frontage, enclosure and entrance of the mosque and Arg are going to be demolished for different causes, inaccessibility and inappropriate view of the neighboring structures. Surrounding avenues of the Arg are showing moving cars through the avenues.
2-1 Tabriz role in maintaining Arg-e Ali Shah in different periods of history

Arg of Tabriz or Msjid Ali Shah is a very important historical architecture work; it is worth mentioning that although 1 Din Ali Shah had Gonbad-e Soltaniyeh built as another historical building but Arg and Masjid Ali Shah are a more remarkable historical buildings.

Tabriz is definitely a great city from economic and geographic viewpoint- Silk road passes through Tabriz; it is remarkable from sociopolitical aspect- the city has been capital of Iran several times; it is neighboring city of Russia and Turkey. Tabriz fully destructed many times by harsh earthquakes and fearful domestic and foreign wars but the city thrived very soon; accordingly, Arg of Tabriz has never had constant situation but it has always been dynamic. Unfortunately, previous researchers have not focused on dynamic conditions of Arg of Tabriz.

3. Summarized events of the Arg

1297: Ghazan Khan had a mosque and bathhouse built in every city (Wilbur)
1297: construction operation in Shanb- e- Ghazan by Ali Shah; wall and enclosure of Tabriz (Ibid)
1298: chancellery of Sad al Din and subrogation of Rashid al Din Fadhl-allah (Mashkoor)
1298-1302: Taj al Din influenced on Ilkhanid rulers definitely not as a Jeweler but for he built the tomb of Ghazan Khan). Sad al Din was frightened and he was deported to Baghdad; consequently Ali Shah encounters great architecture works of Sassanid era including Taq Kasra – Rashiadieh bazar is built in Baghdad and then he returns to Soltanieh and constructs a nik bazar (Mashkoor)
1302: walls of Tabriz fully constructed and Ghazan khan encouraged people participating in urban development process (Mashkoor)
1304: Tabriz developed more, Ghazan Khan died and there occurred an earthquake and Oljaito became the ruler (Mashkoor)
1306: Ghazan Khan copula finalized, and Ali Shah had Soltanieh, the city developed (Poop)
1311: construction commencement of Azim Mosque outside Arg-e Ali Shah Street; Oljaito killed Sad al Din and Ali Shah became the king (Mashkoor)
1313: Construction of Soltanieh building finalized (Wilber)
1316: Oljaito died and Abu saeid who was 12 years old became the king (Wilber)
1316: Taj al Din Gilani began construction of Masjid Ali Shah (Raeis pour)
1318: Rashid al Din murdered (Wilber)
1322: A group of politicians from Cairo visited Masjid Ali Shah (an Egyptian youth reported that Masjid Ali Shah has an altar with Gothic arch; on two Andalusia copper columns ; there is an square pool ; two Minarets with 70 cubits height and 5 cubits width (Mansouri)
1323: Mahmoud Ibn-e Mohammad reported on Masjid Ali Shah and compared it with Jama Mosque in Damascus
1323: Peace treaty with Egyptian government was read in great mosque of Tabriz; it was 1323-1324 when porch of the mosque superior in every aspect of length, width and height than that of Ivan Madain demolished possibly due to subsidence of western wall . Then they incorporated half of the dome to the end of porch to create an altar and to reconstruct the hall of great porch. That was not finished during reign of Ali Shah. (Mansouri: 1380, p)
1324: Ali Shah died and they buried him in a tomb within the established mosque (Wilber)
1325: Ali Shah codified a book named Nasaem Al -Ashar and a report was given on the book.
1327: Ibn Battuta delivered a report on enclosure of Tabriz Mosque including four porches; entrance to alter and a school as well as a convent located at the opposite side. Unfortunately, the great investigator Donald Wilber has viewed the mentioned school attached to the porch in his drawings and he has confused the next investigators; even his east-west view resembles a northern- and southern plan.
1340: Mustofi reported on arena dimensions of Arg-e Ali Shah; and the demolished structure for hastily accomplished work
1345: Earthquake in Tabriz although not so severe.
1356: Jani Beig Khan occupied Tabriz.
1385: Khan’s Attacking are mosque.my destructed Masjid Ali Shah and it turned to be a camp for his army.
1485: Ahmad Khafi delivered an eloquent report on burial of Ali Shah within altar of the Masjid Ali Shah (Mansouri)
Evidently he meant that they buried Ali Shah in the central part not just where Imam stands for prayer. Thus, it does not support what other investigators deemed it to be against Sharia.
1514: Merchant of Venice delivered a report on high vault and unfinished building (Mansouri)
1547: painting of AlMetrakchy is a key for solving the issue of Arg e Ali Shah. Yet former investigators have not focused on it enough; the painting illustrates constructed wall of the city by Ghazan and the gates (Fig.4) right part of the map illustrates how the city was developed at the south part of river; the gate named Mahad Mahin is viewed at the south part of the city. Arg-e Ali Shah is close to the gate, frontage of the porch is demolished but rear part of the altar is viewed the same as painting of Venice merchant.

1567: Ibn Karbalaei Tabrizi issued a report on Masjid Ali Shah and the massive vault although the entrance to the mosque is uncovered (Mansouri).

1635: Ottoman army destructed campanile and fort of Tabriz and Masjid Ali Shah but half of high altar of the vault remained intact.

1635: A bookmaker of Chapl reported that Minarets of Masjid Ali Shah demolished by earthquakes and army attacks.

1640: earthquake destructed the looted city, Tabriz and Masjid Ali Shah (Mansouri)

1641: Again Metrakchy drafted a painting of Tabriz, unfortunately former investigators did not pay attention enough to his painting; some of them are even confused. Recurrent image of the city illustrates many minarets but there is not Masjid of Ali Shah.

1647: Alya Chalbi delivered a report on historical buildings in Tabriz and pointed to the abandoned Masjid Ali Shah among other ruined places. (Mashkoor)

1672: Gerloo map of Tabriz is a report from Chardin, he pointed to a high campanile rather than a high minaret of Masjid Ali Shah viewed from remote distance. Image shown by Gerloo illustrates vault of altar as a half-dome; internal parts are sharp, northern and southern walls of the Arg are viewed demolished on the map. But the map is viewing all parts of the city although the Arg is just a
part of the map and it is drafted in a dark room. In a book named Iranian architecture methodology or stylistic written by Mr. pirmia and Gholamhusain Memarian they have illustrated a wrong image of Chardin, never it is true ; the building is viewed smaller than it is , vault of the altar is viewed as a cradle where the side walls are sloped . Northern entrance gate is drafted and evidently the investigators, readers and public have different ideas on the Arg; accordingly it must be modified as soon as possible.

1694: Care Ree reports that "There are demolished roof remnants of a high building named "Vault of Ali Shah". There is an extensive square with firm walls made of brick. Thy hold religious and public ceremonies" it is supporting the drafts of Chardin; Care Ree has focused on back gardens of the altar and then the high vault as well as interior part of the mosque they held religious ceremonies contrasting to illustrations of Dr. Mansoori. (Mansoori)

1721: An earthquake destructed Tabriz and people abandoned the city.

1780: Very destructive earthquake damaged more vault of the altar; continuance process of earthquakes in1780 fully transformed the city in a year frontage enclosure of the mosque changed too.

1785: Najaf Gholi Khan formulated a new design for Tabriz and the enclosure

1785: Abbas Mirza developed a ditch surrounding the enclosure and fortified it more

1806: Masjid Ali Shah became an armory, then it was named Arg.

1817-1820: Specific tiling, and brickwork specific glazed brick implemented; Mr. Saeid Raeis Pour and Mr. Nejad Ibrahim (the engineers) took some photographs of the wall in 2002.

1825: A group of Russian engineers drafted a map of fortification of Tabriz; the wall constructed during Qajar dynasty including high campanile of the Arg and surrounding ditch although the map is less focused.

1834-1840: Eugene Flandin & Pascal Coste mentioned in a logbook on the famous Arg as a palace of prince; they have discussed on remnants of the destructed mosque too. Realistic image of the logbook seems misgiving and dubious, as if the printed image is symmetry because the eastern wall is more demolished than the western one. Palace of Zobeideh Khatoon and palace of Solaiman, the king of Ottoman are other names of the Arg, possibly ottoman dynasty reigned in Tabriz. (Mansouri)

1815: Other walls of Masjid Ali Shah are almost 25meters high; photo taken by Flandin and Coste is compatible too.

1853: They reported that a death sentence issued to throw someone down from the top of the campanile (Mansouri)

1857: Two images of southeast and northwest of the Arg illustrate that it has just linked to the end parts of the city from north and east. (Mansouri)

1881: Madame Diallo’s published some photos in her logbook concerning to Nasr Al Din, the king of Qajar

1883: Inscriptions of Holy Koran seen were engraved on sidewalks of the mosque

1885: Nader Mirza said that the building resembled an altar rather than a roofed mosque; it supports the mentioned conditions and situations before and during Chardin. (Mashkoor)

Twentieth century: also the post century increased more notability of the Arg and it is always a noteworthy historical architecture work; it has had a unique role during the constitutional movement. In short, after constitutional movement and during Pahlavi reign, the first king of Pahlavi and the second one transformed the upper part of Arg to a garden and then monument of the Unknown Soldier. Then Late Pahlavi regime constructed hall of the Arg. Finally archeologists began studying enclosure of the Arg in 1357 AH they discovered more ancient walls of the main porch to the altar ; these projects reveal more things concerning the Arg that leads the investigators to know more and find better solutions.

Unfortunately the demolished ancient wall of the eastward of the Arg, where remnants of 8th century

plasterwork are viewed has made invisible the last codes of Taq Kasra. Disregarded site of Arg, during excavation, foundation and erection of the irrelevant metal structure and vault construction of Masjid Ali Shah reveals commencement of such style; in other hand, they did not find an effective solution to vitalize dynamic urban space of the Arg; and we are trying to somewhat modify its façade with an irrelevant style to the main structure. Shaft of the Arg made with brick. Vertical and horizontal gaps between the bricks are orderly and firm and currently the Arg resembles the usual Qajar buildings of Tabriz with the same style, soon the old monument and concerning structures are forgotten! Remember that we have to reconstruct the Arg or else the damaged Arg is ruined as soon as possible.

4. Structure of The Arg
Structure is an important part of the building. Definitely we must focus on different aspects such as firmness of foundation, pillars and vaults and brickwork, tailing as well as plasterwork. Its historical and innovation aspects, its relation to previous models of Iranian architecture, its architecture linked to later eras need more investigation i.e. form of the vault and the half dome and the dome as well as their linked structure always need more research.

4-1 Arg of Tabriz dome height compared to huge domes of the contemporary world

Height of semi dome of Arg e Ali Shah is comparable with that of huge buildings of the world. Fig.8 is comparing the dome to that of 6 highest buildings of the world. Height of Arg of Tabriz is almost 57 meters based on studied logbooks of the historical buildings and demonstrated models.

Unfortunately, width, depth and height of the destructed walls are greater are greater than that of Taq Kasra, thus, position identity and thematic of the splendid Taq marred. Other architecture elements illustrate the fully damaged structure and remnants of altar of the mosque due to two severe earthquakes of 18th century Tabriz; today we are suspicious whether the vault form was tapered, parabolic, cylindrical, or spherical! Even some investigators are suspicious to position of vault, mosque and minaret, they tell their legendary stories and they have their imaginations.

4-2 proposed choices of former investigators
We introduced the Arg in short and we mentioned what happened during seven century whereas there are main texts in Arabic, French, and English and there are some ambiguous words; for instance, Jean Chardin named the visible structure from Yerevan road a campanile rather than minaret. Some object that why he illustrates one minaret on the map but his friend views two minarets on the map! Some researchers including professor Minorsky have translated it to campanile; also Chardin said: Tomb of Ghazan Khan is located inward the campanile; then he meant campanile of Shanb Ghazan and minaret is an irrelevant word.

Although former investigations have not got definite conclusions on Arg of Tabriz, Dr. Mansouri's investigation project has been more scientific based and he has tried sorting historical accounts of Arg too. We have utilized them in our research, but he has not introduced Masjid Ali Shah effectively, he has just illustrated remnants of the mosque somewhere else; in his research, he has narrated different contradictory accounts and its faults become more evident through this research. In other hand, architecture choices abandoned very fast by utilization of structure technology and knowledge.

4-2-1 Dr. Mansouri's design
Review of Dr. Mansouri's design through some figures.

Fig:6 Main image of Jean Chardin's logbook in1673AD, Jean Chardin was a famous French explorer

Fig:7 North and south elevation of renovation of barrel vault of Arg, design by Ajourloo, Source: Mansouri
Fig. 8: half-dome of alter of Arg in comparison with Kasra vault and other hug domes of the contemporary world
Proposed design is more similar to façade design of Taq Casra; there are some faults, only the massive pillar and concerning arc are different from false Figure printed by Chardin in Iranian stylistic architecture book. Unfortunately, repair workers of the Arg viewed an image of ceiling track of the vault that was not sharp!

The design is three-dimensional project of the previous page; there are some more questions, why such a massive brickwork drafted? Why upper part of vault is 2 meters thick?

Ajourloo's design illustrated via Fig.7; plan of the Arg site during Ilkhans

The above-mentioned structure is very heavy and the heavy load transfer to the rear wall of the vault is neglected ; it is contrary to those figures illustrated by Chardin and Metrakchy

4.2.2 Professor Ghiasi's design

For the reasons already mentioned, the writers have reported some faults for entrance space, neighboring structures, form of altar, and its shape, the disregarded structure in two previous eras.

According to the writers, the altar and adjacent building illustrated wrong. Firstly, east-west view of enclosure of the mosque is opposite. Secondly, position of the school and the convent must be at east-west side of the enclosure. Thirdly, the framework must continue to the end of porch.

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4.3 Shape of the dome

We are simultaneously acceding some appropriate choices based on Iranian history and according to descriptive narrations of the building by focusing on aesthetic topics, architecture history, earthquakes, regional wars, climate, and archeological activities; specially efforts done by Dr. Ali Akbar Sarfaraz – available images and maps knowing more primary and secondary conditions of the building. The investigators are going to develop research hypothesizes; in fact, they are getting impartial conclusions trying recurrently to analyze occurred events of the Arg and Tbriz to propose some theories in this regard. Then, resolved puzzle does not need answer.

4.3.1 Vault technology

There are some vaults defined below:

First Sample: Eminent porch of Jama Masjid in Semnan. It is 21 meters high. Fredrick established it in 828 AH, during reign of Timurid Shahrokh. It is the best sample for changed x wall to half-dome.

Figure 19 is to compare structure of Taq Casra with that of Arg Ali Shah

According to the authors, older walls are connected to the altar, it is just continued such as Taq Casra, never it is to illustrate position of the entrance frame and notions of professor Ghiasi et al were wrong.
Second Sample: Gonbade Sorkh Maragheh
Below is figure of Gonbade Sorkh Maragheh; enameled bricks are more similar to those implemented to construct main façade of Masjid Ali Shah.

4.3.2 Computer modeling based on historical documents
Computer modeling of the following images developed based on accomplished investigations. Vault of the altar drafted proportionate to chained curves and vaults of building. Generally, section of the building is more similar to that of Gonbad Soltanieh. Concerning images and Image of Gonbad Soltanieh are continued and it is better to wright more in this regard.

Great and glorious Gonbad Soltanieh constructed by Soltan Mohammad Khotabandeh in 703–713 AH.
Fig.22: Conforming section of the building with that of curved hanging chain is an indication of effective distribution of compressive stress to weight of the building.
4.3.3 Final patterns
Second dimension and third dimension models drafted. Afterward there are illustrations of concerning images (Samimi, 2002).

Fig. 22: Drafted vault of altar. Source: Author

Fig. 23; 3D models, source: authors
5. Treatment design

Investigators observed that they are going to revitalize and make Arg Ali Shah of Tabriz dynamics. It must always be a dynamic and vital structure. It is only consecrated to mosque. Ayatollah Malakouti Imam Jomeh of Tabriz said “Arg is 700 years old but 500 years it has been a mosque” and less than 200 years it has been named Arg. (Asre Azadi Newspaper, 6th year, issue 339, April, 17, 2003)

Its neighboring structures must transform to mosque too. It’s historical limit must be maintained and reconstructed, the project must include entrance of the building (Ferdousi Avenue).

Regarding the climate conditions, remember that front space of Masjid Ali Shah has not had a roof even for centuries, today we may implement various techniques; we may use tent or unstable structures; open or close structures. There are many solutions but disregarded.

Regarding to skeleton of the project, erection of walls of the main porch are wider, more depth and higher than that of Madain; even half-dome of the sharp skyward altar may be utilized as a symbolic structure to add more value to the newly built structure based on architecture criteria.

Enclosure of the mosque may transformed to urban walking space with revitalized historical and religious domains of activity, to reconstruct the Arg.

Yes, we should solve Homelessness issue not homeless one.

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REFERENCES


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APPENDICES

I. Ilkhans reigned in Iran since 1256 to 1335 AD, they were children of Chengiz Khan of Mongolia

II. Taj Al-Din Ali Shah Gilani, named Khajeh Ali Shah, was minister of Soltan Mohammad Khodabandeh Oljaito & Soltan Abu Said Bahador Khan, Taj Al-Din Ali Shah Gilani Tabrizi was firstly a Jewelry dealer and auspicious gems. He was unlettered, but capable and bright; he knew most of kinglets and grandee due to his business relation and then became a bosom friend of Soltan (M. Mashkoor, history of Tabriz to the end of 9th century AH)

III. Shab Ghazan is a district in Tabriz. It is an indication to concerning complexes and building located at west Tabriz. Shahn means dome and Ghazan is adopted from Ghazan Khan.

IV. Oljaito, Soltan Ghiyas Al-Din Mohammad Khodabandeh 1281-1316 AD

V. Soltan Mohammad Khodabandeh Oljaito is the 8th king of Ilkhans dynasty; he sat on the throne in Iran when Ghazan Khan died. Oljaito adopted Islamic Title of Mohammad Khodabandeh for himself. He developed established Soltanieh, the city established former by his father Arghun and the city became capital during his reign. He conquered Gilan for settlers of the region were not submissive after 50 years of Ilkhans reign.

VI. Ibn Battuta Mohammad Ibn Abdullah Tanji was born in 703 AH in Morocco. He departure to Mecca, Egypt and Syria in 725 AH; then he returned to morocco and visited Abi Anan the king of Ban Marin. His journey took 27 years and he died in 779 AH in Morocco. The famous explorer traveled to Iran 5 to 6 times and he spoke Persian language with those
who were not Arab. He travelled to Persian Gulf and some cities including Shiraz, Khuzestan, Shoushtar, Tabriz and Khorasan. His logbook is an inestimable geography book in the middle ages.

VII. Donald Wilber was an investigator of Iranian Islamic architecture and an American intelligencer. He was an expert of Iranian rug and carpet. He died in 1997

VIII. Francesco C. Karrer, born in Italy in 1651. He graduated in June, 14 1693 and took journeys all over the world. It took 5.5 years when he visited Egypt, Constantinople, Armenia, Iran, India, China, and Philippines. He died in 1725 when he was 74 years old.

IX. Eugene Flandin, the French painter visits Iran in 1840 when Mohmmad Shah of Qajar dynasty reined in Iran, an architect named Pascal Coste accompanied him. They were missioned by academy of French art to prepare reports and images of Iranian historical buildings. Court and local authorities supported them and they were fully coordinated with Iranian government. Their journey took more than 2 years, they wrote a book named en voyage Perse in several volumes and they published the books in 1851 in Paris.

X. Emil Louis De Hoys was an artillery officer during Naser Al Din, the king in 1848-1896, the king had recruited him as a French officer to train military forces of Iran and to support them in reconstruction process of Iranian artillery. The French government missioned a group under leadership of Victor Francis Brown, the artillery colonel To Iran.

XI. Pahlavi dynasty 1304-1357 reigned in Iran after dismissal of Qajar.

XII. Jean Chardin 1643-1713, the French jeweler and explorer wrote a book in 10 volumes named Journeys of Sir. Jean Chardin that is the best investigation work of western researchers on Iran and the Middle East.

XIII. The orientalist Vladimir Fedorovich Minorsky (1966-1877) Best known for his contributions to the study of Kurdish and Persian history, geography, literature, and culture. He was a professor of London University. He abandoned Russia during 1917 revolution and he began to teach Persian language, literature, and history of Iran in London school of oriental languages. He was professor of Persian language in 1937 in London University.