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ADAPTIVE STUDY OF FACTORS AND PEOPLE'S SATISFACTION LEVEL OF PAST AND CONTEMPORARY MOSQUES (A CASE STUDY OF SAFAVID MOSQUES IN ESFEHAN AND CONTEMPORARY MOSQUES IN TEHRAN)

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ABSTRACT

In recent years, substantial and appearance differences debate of past and present architecture of Iran's mosques have attracted many attention. In this regard, one of the most important factors is the identification of satisfaction factors and investigation of the people's reason for satisfaction of the past and contemporary Iranian mosques and the adaptive compartment the desired mosques in these contexts. An Inseparable relation between Islam and the mosque has given a greater sensitivity to the field of contemporary architecture. It seems that the people's role as the main users of mosques should be observed in the area of the mosques. In the field of comparing of difference dimensions and union dimension of the past and present mosques in Iran, previously researches have been done which each of them compares one aspect of the mosque's aspect, but it is discussed less about the factors and people's satisfaction level of the mosque architecture. So, due to the admissibility debate of the mosques architecture with their audience, this issue is necessary. Therefore, the main research question is that how is the people's satisfaction rate from the past and contemporary mosques? However, the aim of this research is to provide guidelines

for the mosque designing, so, it seems that the obtained factors in this research can be useful for the designers and experts in the field of contemporary architecture. The overall goal is to answer some of the questions which are appeared in the mind of the architect and critics in the field of people's opinion about mosques and understanding the rate, the reasons for the satisfaction factors or lack of satisfaction are about the mosques architecture, and it is hoped that on the one hand, it should have the public satisfaction and on the other hand, it should satisfies contemporary architect's mind in the field of mosque designing with more acceptance.

Keywords: Comparing the past and contemporary mosques, The people's satisfaction factor of the mosques, People's satisfaction rate of mosques

INTRODUCTION

In the last decade there has been a recent rise of attention from experts in the debate for comparison of past and present Iranian mosques from different angles. In the written literature, the study and analysis of issues related to the architecture of past and present mosques and their comparisons have been with a wide variety of perspectives; the point is that, most of these researches are solely based on the opinions of experts in the field of architecture, and no account has been made for opinions of wider range of visitors and viewers – i.e. the general public has less effect in these articles. Hence, the objective in this article is to obtain the opinion of general public, and worshipers in past and contemporary mosques, and present them without any bias or prejudgment. The main intention behind authoring this article, is to identify the elements contributing to the satisfaction of people from mosques, and the quantity and quality of this satisfaction, as well as aggregating and categorizing, and finally comparing these factors in past and present mosques. Results and findings from this research, which is predominantly based on the mentality of visitors and viewers, is then presented without any manipulative analysis. At first, corresponding to the highlighted mosques of Isfahan Safavid era, and leading modern mosques of Tehran, the information that is based on the previous available literature and has the sole intention of brief introduction for these mosques, is provided. The opinions is gathered by close questionnaires. By being presented to the people that have experienced the atmosphere of these mosques for at least one time, or have detailed knowledge of them, these questionnaires try to pose questions about the level of satisfaction of people from past

and present mosques and the factors contributing to it.

As a result, in the very first part of this study, a brief introduction of architectural details of the Safavid era, especially mosques, is provided and next, three significant Safavid mosques i.e. Imam Mosque, Sheikh Lotfullah Mosque, and Hakim Mosque are introduced. In the next section, after a short prelude about the architectural circumstances of modern mosques, four contemporary mosques are shortly introduced: 'Al-javad' Mosque, 'Al-qadir' Mosque, Tehran University Mosque and Sharif University Mosque. In the next stage, preliminary information and findings Acquired by surveys and questionnaire-esque tools are exhibited and compared. Finally in the last part, a conclusion shall be presented.

Safavid era Mosques

The Safavid era, is an illustrious era of science, knowledge, philosophy, and architecture which rose in the Shia Iran after the prominence of Islam. Rulers of this era put all their endeavors in the building of religious structures, especially mosques, and left many noteworthy buildings as legacy. After the Institutionalization of Shia religion in this era, the Safavid rulers ordered the construction much bigger mosques **(Ansari,**

1378:145). A mosque that is build based on the Isfahani Framework, develops to such extent that every hajj-related rite is reflected in its context **(Ahari, 1384:175)**. In other words, the gloss of Iranian mosques in accordance the hajj rituals, peaks in the Safavid era **(Beheshti, 1389:146)**.

Rigid geometrical following in designs, submission to traditional patterns of structural and spatial designing, and frequent use of colors and figures in obtaining quality colored spaces, are all legacy of the experiences of the past. This era should be considered the era of final decision and not the era of innovations and inventions **(Hajiqasemi, 1387:336)**. In the Safavid art, religious mentality is blended with national identity, and has resulted the glorified Works of this era.

Mosques and other Religious remnants of Safavid era: as previously mentioned, in the Safavid era, numerous Architectural monuments were established in Iran with most focus being the city of Isfahan. Here are some details from some outstanding mosques of Isfahan.

Hakim Mosque: Hakim mosque, is a late Safavid mosque in the old region of 'Bab-al-dasht' in Isfahan which was funded by Hakim Mohammad Davood aka Tagharrob khan, the personal physician of Shah Abbas

the second and Shah Safi, and as a result is widely known by the name of Hakim, and since it is also in the neighborhood of a Mosque of 4th century origin in the old area of Jurjir renowned as Jo-jo or Jurjir Mosque – which was built by Saheb-ibn-Ibad – it is sometimes called as Jurjir Mosque (**Honarfar, 1350:615**).

Sheikh Lotfullah Mosque: Sheikh Lotfullah Mosque, is an architecting and tiling masterpiece (**Ahmadi Shelmani, 1390:226**). It is to popular belief that Sheikh Lotfullah Mosque is one of the most beautiful monuments of Isfahan and Iran. This mosque is built on the eastern quarter of Naghsh-e-Jahan square.

Imam (Shah Abbasid) Mosque of Isfahan: a fine mixture of glory and greatness of Islamic culture and Iranian tradition is clearly visible in the Imam Mosque of Isfahan, which is built on the southern quarter of Naghsh-e-Jahan square. The very peak of art from Safavid era, in which the simplicity of architectural techniques and freedom of choice in accepted solution is put into limelight, is observable in Imam Mosque. Imam Mosque, is the leading masterpiece of a millennium and final stride in the evolution of mosques in Iran (**Karim Zade, 1378:186**).

Tehran Contemporary Mosques

As mentioned in early parts of the article, the background of formation of mosques in Iran dates back to the early rise of Islam, and all the while these patterns were continually developing or evolving, either structurally, functionally or even conceptually, till this very modern era. Hence, after the aforementioned introduction of mosques from the past, here we turn our attention to some significant contemporary mosques of Tehran, which the satisfaction of people with Architecture in these mosques act as a basis for our later study.

Tehran University Mosque: Tehran University Mosque was built in years between 1336 till 1345 with Farmanfarmaian as its designer. This mosques is consisted of a dome, a courtyard and peripheral spaces (mosque office, pantry and toilets). All around the courtyard are porches surrounding it. The Courtyard and the Dome house are adjacent along the Qiblah axis (**Zomarshidi, 1389:483, 383**).

Al-Javad Mosque: in the Haft-e-Tir Square, the very first modern mosque of Iran still draws attention. The building of Al-Javad mosque was designed and developed by Engineer Ibrahimi. The chamber is built conical by intersecting edges, which gets wider from apex to base. The closest like-wise in traditional architecture is in fact the

form of Islamic tombs and shrines. It seems that the architect was inspired by fractal elements and windows of Gothic churches. The geometry of mosque chamber is in fact the form of the mosque itself, and in its prime, was one the boldest and most conceptual forms ever created (**Zomarshidi, 1389:489**).

This mosque, with its incomplete cone in its chamber, conveys a simultaneous appearance of dome and minaret, and focus on this formal element has caused negligence from other elements involved in the mosque, to such extent that, the relation between courtyard and functioning elements – such as men's and women's chambers that make up for a major part of the mosque – have been disturbed.

Al-Qadir Mosque: Al-Qadir Mosque is built in north of Tehran in years 1355 and 1356, with Jahangir Mazlum-Yazdi as its designer. This building is covered by brick with decorations of turquoise tiling. The major space of mosque, is 12-facet prism, which is placed with little recess from southern street. The dome is reminiscent of shrine-like buildings (**Zomarshidi, 1389:491,492**). By highlighting the main chamber, the dome and the minaret have switched places. The main chamber is 12-facet prism, that in combination with 6 other volumes, gradually

stratifying to an octagon, 2 squares, and a circle, which conceptually expresses the flow of Plurality to Unity. The number 12 is an emphasis of Shia's religious belief of the Imams. The inner space of Chamber is stretched height-wise to accommodate the needs (**Rahimi, 1391:67**).

Sharif University Mosque: this mosque, place on periphery of Azadi street, has a four-porch design and almost every single element of Iranian mosques, such as courtyard, courtyard pool, porch, dome, minaret, chamber, altar, and pulpit is recognizable (**Zomarshidi, 1389:489**). The University mosque is designed by inspiration of religious structures of the Safavid era. The most significant symbol of the mosque, is its dome which is consisted of two layer brick covering and is designed and executed by architect Reza Tabrizi. In this mosque, traditional architecture is blended with modern architectural concepts (**Shabestan news, 1390**).

A comparative analysis of satisfaction of people from past and present mosques

As the main and primary users of mosques, opinion of public is the basis on which this study is formed on, and there has been a respectable attempt to gather and classify the results of the questionnaires without any personal or professional comment. The

target population was selected from visitors and measure up to 1400 people – approx. 200 people for every mosque, and according to the Cochran formula, 300 questionnaires were distributed among the users of mosques. After this process, the answers were aggregated and categorized, and then information related to the mosques of present was summarized in a table, and the information related to those of the past were summarized in a separate table. Finally, to have a more comprehensive and comparative look, the details of the tables were merged to create a single table to facilitate the comparison phase. It is noteworthy that these questionnaires were mostly filled by persistent worshipers and users of the mosque –either in Tehran or Isfahan- or those who have experienced the atmosphere of the target mosque for at least one time.

In fact, in the last section of the research, significant mosques of architecture in past and present – whose details have been exhibited using information obtained from books, libraries, written literature and comments from experts- are put under comparison by the contribution of data attained from surveys and experimental methods, using tools such as questionnaires and interviews presented to the users of

mosques. In concluding the results and findings of this research, it has been tries to prevent any personal comment or bias, and the presentation, aggregation and comparison are solely based on the opinion of people from past and present mosques.

Every visitor in this research was provided by two questionnaires. The first questionnaire mostly dedicated its content to satisfaction of people from different architectural aspects of mosque and contained 24 items, and the second questionnaire was based on semantic differences of contradicting adjectives - meaning-wise – and is consisted of 17 items.

The level of satisfaction of people from past and contemporary mosques

To recognize and evaluate the level of satisfaction of people from past and present mosques, the information was gather via survey from seven different mosques. In this regard, questionnaires were mainly filled in mosques and usually after the prayers by users and people familiar with different architectural aspects of the mosque; for every mosque, the information obtained from questionnaires regarding the level of satisfaction in different issues related to the mosque architecture, is aggregated, at first. Next, the average percent of satisfaction of all contemporary mosques is analyzed and

presented in table, and those related to the Safavid mosques is aggregated and provided in another table. A summary of both tables is shown in the final table (**Table 1**) so that a comparative analysis of different architectural aspects of past and contemporary mosques would be observable in order to facilitate the discussion of data. Because of the high volume of table and questionnaires, only the more general tables. Which reflects the summary of data from 300 questionnaires is exhibited in this section and the rest is added as an appendix. Following is a sample of

	Questionnaire 1: level of satisfaction of people from patterns, elements and factors involved in the formation of mosque spaces	Very high	High	Average	Low	irrelevant
1	Form and space of outer mosque	☐	☐	☐	☐	☐
2	Space of inner mosque	☐	☐	☐	☐	☐
3	Decoration of outer mosque	☐	☐	☐	☐	☐
4	Decoration of inner mosque	☐	☐	☐	☐	☐
5	Peacefulness of inner mosque	☐	☐	☐	☐	☐
6	Quietness and noiselessness	☐	☐	☐	☐	☐
7	Spirituality of holy places (chamber, dome,…)	☐	☐	☐	☐	☐
8	Religious inscriptions of inner spaces	☐	☐	☐	☐	☐
9	Religious inscriptions of outer spaces	☐	☐	☐	☐	☐
10	Overall color of mosque view	☐	☐	☐	☐	☐
11	Luminosity of mosque	☐	☐	☐	☐	☐
12	climate peacefulness of inner mosque	☐	☐	☐	☐	☐
13	Facilities and accessories of mosque (audio systems,…)	☐	☐	☐	☐	☐
14	Side activities of mosque (library, training sessions,…)	☐	☐	☐	☐	☐
15	Position of toilet and WC					
16	Accessibility for the vicinity housing	☐	☐	☐	☐	☐
17	Access hierarchy to chamber and mosque	☐	☐	☐	☐	☐
18	Privacy and segregation of routes and activities of men and women	☐	☐	☐	☐	☐
19	Management and administration of mosque	☐	☐	☐	☐	☐
20	Side activity of mosques in different tasks (addressing people needs, welfare,…)	☐	☐	☐	☐	☐
21	Number, size, and distance of columns in chamber	☐	☐	☐	☐	☐
22	Relativity and dimensions of mosque space	☐	☐	☐	☐	☐
23	View of worshipper to altar and the prayer leader	☐	☐	☐	☐	☐
24	Fine connectivity of ranks of worshippers	☐	☐	☐	☐	☐

If there is anything else please cite: ………

questionnaire 1:

As can be seen in the **questionnaire 1**, the level of satisfaction of people is evaluated by 24 factors, each corresponding to a distinct architectural aspects of mosque and relevant task; all the same, because of the high number of factors, to facilitate concluding, some items were merged and gave birth to 8 ultimate factors.

Table 1: Comparative analysis of average satisfaction of people from modern and Safavid mosque (*)

Level of satisfaction	Level of satisfaction: High and very high		Level of satisfaction: Average		Level of satisfaction: low and very low	
Elements and factors	**Safavid Mosques**	**Contemporary mosques**	**Safavid Mosques**	**Contemporary mosques**	**Safavid Mosques**	**Contemporary mosques**
1 **Inner and outer decorations**	90 %	30 %	8 %	37 %	2 %	43 %
2 **Peacefulness, quietness and comfort in mosque**	72 %	60 %	21 %	22 %	7 %	18 %
3 **Facilities, functionalities and accessibility**	47 %	64 %	34 %	26 %	19 %	10 %
4 **Connectivity of ranks and good view of altar**	52 %	60 %	37 %	31 %	11 %	9 %
5 **Outer space of the mosque**	85 %	49 %	15 %	35 %	0 %	26 %
6 **Spirituality of inner mosque**	96 %	45 %	4 %	18 %	0 %	37 %
7 **Number, dimensions and distance of columns**	52 %	82 %	44 %	13 %	4 %	5 %
8 **Other items**	51 %	46 %	31 %	37 %	18 %	17 %

Answers to questions 3, 4, 8 and 9, is abstracted in item 1, questions 2, 5, 6 and 12 in item 2, questions 13, 14, 15, 16 and 17 in item 3, and answers to 23 and 24 in item 4; item 5, 6 and 7 are equivalent to questions 1, 7 and 21 of questionnaire, and answers to other questions are summarized in item 8; the details are available in the appendix.

Points obtained from Questionnaire number 1:

- According to this **Table 1**, high level of satisfaction from the majority of participants (more than 85%) for three elements of decorations, outer space and spirituality is visible in the Safavid mosques, while in contemporary mosques, less than half of people were highly satisfied with them.

- In the issues related to peace, quietness, and climate suitability – internally speaking – people were also a little more satisfied with the mosques of the past rather than modern mosques. However the majority of people have a satisfaction level of high or very high in

these elements of both types of mosques.

- The elements which have garnered more positive attention in contemporary mosques than mosques of the past are: less number of columns, connectivity of ranks, view of altar and side facilities and functionalities, access speed and major spaces.

- In overall, more than half of people were satisfied with past and present mosques.

- According to the participants, the biggest strength of older mosques is the more spiritual and heavenly atmosphere of the mentioned mosques, compared to the modern mosques.

- The biggest strength of more modern mosques that is acclaimed by users, is the long distances of columns and little volume of them, and the reason for this satisfaction is forming a better view, better connectivity of ranks, and better luminosity.

- More than half of the people have been satisfied with outer spaces of modern mosques.

Comparison of people's opinion about modern and Safavid mosques bases on the second Questionnaire (Semantic differences): a prevalent method for developing questions in a questionnaires is employing Semantic differences. As can be seen in the following lines and Questionnaire no. 2, 17 positive and negative properties or contradicting adjectives – bases on meanings – related to architecture of mosques, is presented to participant, fashioning a simple and understandable scale for general viewers. Same as the approach introduced for the first questionnaire, first these questionnaires are filled for every single sample past and present mosque, and finally the results of the above tables are summarized and shown in **Table 2** (for a better understanding it is like diagram), therefore facilitating the possibility of better comparative analysis and derivation of hints and tips. Below is sample questionnaire no. 2 and As shown in the second **Table 2**, there are considerable differences in level and quantity of different properties and elements involved in the architecture of past and contemporary mosques visible in different item; only 2 items of readability of patterns and suitability of climate have approximate similarities. Older mosques are at the highest order in numerous properties and elements such as: glory, privacy, familiar and memorable patterns, geometrical

discipline, unity, spirituality of the mosque and inner beauty of mosque, and for modern mosques, participants mostly consider these mosques to lack familiar patterns, privacy, spirituality and attraction. However, in some aspects like quietness, peacefulness, comfort, inner and outer beauty, luminosity and geometrical symmetry both types of mosques are rated average or above – albeit slight differences.

CONCLUSION

As mentioned in previous parts, the main objective of this research is to identify and to introduce quantity and quality of satisfaction of public visitors – as main users of the buildings- and elements involved in it, from different architectural aspects of the past and present mosques, as well as providing a comparative insight to this satisfaction of past and present mosque. However, it may seem that the results and findings of this article, that are previously mentioned, can help the experts and the designer to improve their useful knowledge of their customers and the mentality of the public visitor. The author wishes that, the article and further studies in the field of identifying elements affecting the satisfaction of people and the analysis of the effect of each of these elements on the satisfaction, would help current architects to have better and broader insight to the issue of mosque architecture and to release them of any bindings to styles or personal experiences and an over diversity which has nurtured due to the ego of the architect, so to reach a level of architecture, creative and acceptable at the same time. It seem that, without considering historical and religious roots, enriched values of the ancient architecture and the knowledge of past architecture in Islamic Iran, forming a mosque appeasable to the masses is not possible.

Questionnaire 2: level of satisfaction with properties of mosque based on sematic differences

	Properties	Three	Two	One	Zero	One	Two	Three	Properties
1	Beauty (outer mosque)								ugliness (outer mosque)
2	Beauty (inner mosque)								ugliness (inner mosque)
3	Simplicity of decorations								Luxuriousness
4	Readability and simplicity of design								Complexity
5	Peacefulness								Lack of peace
6	Quietness								Noisiness
7	Spirituality of area								Lack of spirituality
8	Introversion								Extroversion
9	Luminosity								Darkness
10	Climate suitability								Lack of fine climate
11	Privacy								Lack of privacy
12	Attraction								Lack of attraction
13	Memorable and familiar patterns								Unfamiliar patterns
14	Glory								Lack of glory
15	Relativity								Lack of relativity

| 16 | Geometrical symmetry of pattern and details | | | | | | | Disarray |
| 17 | Unity | | | | | | | Pluralism |

	Properties	Three	Two	One	Zero	One	Two	Three	Properties
1	Beauty (outer mosque)								Ugliness (outer mosque)
2	Beauty (inner mosque)								ugliness (inner mosque)
3	Simplicity of decorations								Luxuriousness
4	Readability and simplicity of design								Complexity
5	Peacefulness								Lack of peace
6	Quietness								Noisiness
7	Spirituality of area								Lack of spirituality
8	Introversion								Extroversion
9	Luminosity								Darkness
10	Climate suitability								Lack of fine climate
11	Privacy								Lack of privacy
12	Attraction								Lack of attraction
13	Memorable and familiar patterns								Unfamiliar patterns
14	Glory								Lack of glory
15	Relativity								Lack of relativity
16	Geometrical symmetry of pattern and details								Disarray
17	Unity								Pluralism

Legends

Safavid mosques

Table 2: Comparative analysis of mosern and Safavid mosques using Semantic differences

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