

Role of Architectural Historical Precedent in Aesthetic Design of Contemporary Architecture: Safavid Architecture

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ABSTRACT

This study essentially examined the architecture of historical precedent of Iranian architecture, and focused on Safavid Architecture from experts' perspective. The study is mainly qualitative in nature, and explained, why historical precedent is important and how it could be applicable to the formation of aesthetic design in contemporary architecture. We collected the data through semi-structured interview with experts, which were guided by the literature and theoretical foundation. The account of the interviews was recorded, transcribed and the content analyzed, examined and evaluated for evidence. Three themes emerged, including aesthetic design attributes, aesthetic design values and application of architectural precedent in the aesthetic design of contemporary architecture. We discussed the themes in the light of the research questions; following drew a conclusion, which recognized the most perceivable concepts as to be applicable in the design aesthetic of contemporary architecture. In addition, it has theorized that the reality and essence of a social phenomenon in the contemporary architecture is in the character of architectural precedent.

Keywords: *Aesthetic design, Architectural precedent, Contemporary architecture, Safavid Architecture*

INTRODUCTION

Safavid Architecture is one of the important eras in the evolution and history of Iranian architecture, which began with the rise of Safavid dynasty that ruled Persian territory between the years of 1501-1722 (Yalman, 2000). This prototype architecture recognized as the best-known example, in which some of the rich monumental architectural precedents have demonstrated an aesthetic contribution to the heritage of the nation's cultural identity (Eimen, 2004). Evidence often has shown, the use of historical precedents offer important reference points to the proper architectural design (Padovan, 1999). It is now broadly accepted that aesthetic design is changing to the delight of our surrounding environment after realizing that perhaps it is refreshing our soul (Shiner, 2007).

Due to the complexity and various components, which exist in the nature of aesthetic design, numerous studies have revealed important roles of history in architectural precedent in a variety of contexts. A body of scholarship indicates the importance of Iranian architecture. For example, Yemen (2000) summed up with views on the way that Iranian architecture has had a long history of civilization and an extensively patronized field of architecture since the era of the Achaemenid dynasty (522 – 486 B.C).

The signature of historical precedent concepts is missing in the design of contemporary architecture (Naderi, 1996). The significance of Iranian historical architectural precedent has been neglected and requires to be reintroduced through the concepts of architectural precedent. This is possibly can concern by structuring the values, which is found in the historical precedents as a paradigm for the implementation of the aesthetic design in contemporary architecture.

The purpose of this study is to explore the historical precedent of Iranian architecture through experts' opinion to elicit potentially applicable guiding concepts for the aesthetic design of contemporary Iranian architecture. Our study focuses specifically on the historical precedent of Safavid architectures (Fig.1) by posing the question of how historical precedent, particularly Safavid architecture can assist the formation of aesthetic design in contemporary Iranian architecture.

The significance of this study may arise because of the theoretical adaptation approach to the contemporary architectural design aesthetic based on historical precedent. Therefore, the eventual application of aesthetic design concepts from historical precedents in contemporary architecture may be a reality outcome from the evidence of this context. Although a multiple approach to data collection should be applied to a persuasive message to affect the outcome of this study, it is obvious that capturing experts' opinion is the critical in the first place.



Figure 1: Left: Dome of Masjid Shah (Imam) Right: Khaju Bridge
Sources: Left: (Stierlin, 2002). Right: (Astley, 2006). trekearth.com

The structure of the paper consists of six parts, includes an introduction, which is already introduced the overall context of study. Following paves the way for the review of literature as a comprehensive picture of issues in the subject (Creswell, 2009). Next, devoted to the methodology, results and findings, discussion of findings and lastly concludes with specify some recommendation for further consideration.

REVIEW OF LITERATURE

The historical precedent of Persian architecture traces back to the ancient history of architecture for more than 3,000 years. The most outstanding principles was marked of feeling for many concepts in scale, proportion, geometry, space, colour, calligraphy, texture, figures, and line. Additionally, some features such as the use of simplicity, massive forms, and courtyards are ancient common features (Pope, 1976). Alexander (1987) refers to the history of urban aesthetic and stated that, a greater force and a greater purity have been found through the earlier times. He gave an example of

his statement about the bridge of Isfahan, Khaju Bridge, Iran, which was built by the Safavid dynasty, (Figure 2).

Alexander (1987) believed the aesthetic design of the bridge is a product of visionary character in an earlier time when many people of the city would enjoy the aesthetic of urban space. Alexander (1987) considered the vision as a factual thing, felt in the mind's eye, perhaps as a dream, not a concept or an idea. The accumulation of evidence indicates that the necessity for social and psychological expression, profoundly affects the human desire to preserve the appearance because throughout architectural history, appearance was followed by custom and the evolution of the multitudinous styles of architecture (Allsopp, 1977). Alexander (1987) raised the issue of urban aesthetic design and stated that, this process is rooted in theoretical and practical innovation. He emphasized the significance of history in forming a pattern that indicates a special relationship of wholeness in guiding users to manipulate and take charge of their own environment.

The underlying principles of aesthetic designs of ancient architecture were found to produce a theoretical basis for the practical design of modern architecture Allsopp (1977). Such findings guide the research to explore factual evidence of aesthetic design sense through the process of time. Allsopp (1977) believed the evidence of architectural precedent should be examined through the history of architecture because one of the primary functional aspects of history is to examine the evidence and set it in a proper social context (Allsopp, 1977). The significance of history is in its aesthetic function, which be used to discover and examine the factual evidence in a disciplined theoretical manner. Thus, investigation of architectural precedents revealed the events of society over a long time span and provided an appropriate approach towards solving the problems in the aesthetic design of contemporary architecture. Allsopp (1977, p. 17) indicated that, the "History of architecture helps us to place the right interpretation upon the built evidence in looking for constants and variables in contemporary aesthetic design values and by trying to recognize the architectural fact of life" (Allsopp, 1977). Architecture precedent have placed the sense of aesthetic in a set of principles in the practical order (Winters, 2007, p. 149). This has been fundamental to architectural design throughout history. If any changes were made to the structure, materials and technique, then a social-emotional adjustment has to be made by preserving the idea of a usable

past to produce a new trend while a new transition takes place gradually over time (Allsopp, 1977, p. 26). In addition, Allsopp (1977) emphasized the importance of history as an intellectual instrument is tested and placing the building to discover its reflection of a cultural aspect of the particular period, and for the furthest development in technology of the time.



Figure 2: Khaju Bridge throughout history

Source: 1) <http://www.flickr.com>, 2) (Alexander, 1987), 3) Photo taken by the author, June, 2010, 4) Photo taken by the author, June, 2010

Although, aesthetic design in architecture has gone through many changes throughout history, it remains as architecture. Past aesthetic features will always continue to change, while we think about the events and needs of our times. The concepts of design in architectural precedent framed and achieved by enduring design values. By looking at the past, one may think that the objectives of architecture is to create great buildings (Allsopp, 1977).

METHODOLOGY

Understanding the experts' opinion on historical architectural precedent relative to contemporary Iranian architectures necessitate choosing participants purposefully in this study. Experts who agree to participate

in the interview were invited and considered as special knowledgeable people (Vicsek, 2010). The key participants who were involved in the interview were architectural practitioners, critics, and academicians, who was holding the position as former director of Isfahan's cultural heritage and director of the tourist and tourism.

The methodological procedure followed by semi-structure Interview as a mean for the process of exploratory findings to decide about the solution to the research questions. In order to enhance the credibility of the results, interview questions were addressed and framed around the five open-ended questions and prompted by supplementary questions with open character to adopt a qualitative data approach (Gillham, 2000, pp. 60,67). Interviews were conducted purposefully with the experts (Creswell, 2009, p. 178) to enhance the credibility of the results (Chan & Cheuk, 2009) in an informal manner and were personally one on one format (Stake, 2006).

Collecting data through a semi-structured interview gave the freedom to the researcher to probe the interviewee to elaborate on his response and generate more information to compile (Hancock, Ockleford, & Windridge, 2009). For accurately of evidence the data were transcribed into the written form. All interviews, regardless of setting, conducted in person, recorded on a digital audio tape and written in Persian language. We translated the most relevant items and wrote up the research results and findings in English.

Qualitative direct content's thematic analysis is used in this study to explore the latent concepts and themes that experts brought to the underlying structure of the research (Schwandt, 2007, p. 291), (Zhang & Wildemuth, 2009). We were reviewed the interview transcripts for a number of times. Throughout the review, re-occurring or domain's categories that emerged from the data were identified (Spradley, 1979). In order to find out which category appears to be more important, we identified the number of message sentences that referred to certain categories. Moreover, we considered the overall most frequent amount of space, which appeared on the particular category as well. The following steps were taken sequentially through the analysis of data. To know the data; the voice recorder was played for several times on different days. By listening to the voice, we identified the most relevant data. In addition, certain of the segments were standing out, felt and gave the impression of signing statements. The voices transcribed

verbatim and check for the quality to be complete and understandable. Furthermore, check to make sure collected in the unbiased. We read the transcript repeatedly for relevant and interesting information about the initial list of categories. As a result, substantial statements revealed through the transcript (Gillham, 2007, pp. 121-125)

The experts' opinion provided a supportive claim to the development of aesthetic design concepts as a high degree of validation. We established the accuracy of qualitative procedure to obtain evidence in the sequential linear and hierarchical approach as illustrated in (Figure 3).

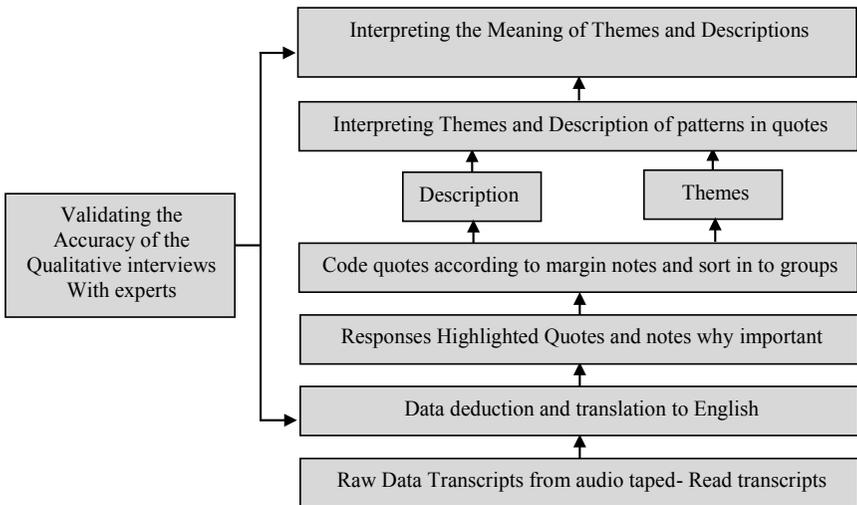


Figure 3: Stages in validation of accuracy of information data
 Source: Adopted from John W. Creswell, *Research design Qualitative and Mixed Methods Approach*

RESULTS AND FINDINGS

In order to provide a rich picture of the qualitative findings, the overall results through the coding process is presented in Table 1, as tabulation of the most frequent categories of responses mention in the response. In addition, the most frequent of space number of message sentences where the most important categories are mentioned in the response are shown as appearing categories in Table 2.

Table 1: Tabulation of the overall frequency of the categories mentioned in the responses¹

No.	Code	Categories	Frequency of Categories being Mentioned				Total Documented Co- Mention
			IR-1	IR-2	IR-3	IR-4	
1	PP	Paradigm	9	10	8	7	34
2	IM	Identity / Meaning	9	5	7	5	26
3	P&P	Policy and Practice	5	4	2	3	14
4	IC	Interaction with Context	4	2	4	3	13
5	RA	Rationalism	5	2	0	1	8

1. The appearing categories are not suited to statistical analysis, but they only can reveal general pattern in the data”(Powell & Renner, 2003)

Table 2: Tabulation of the overall frequency of sentences where the most important categories are mentioned in the response

No.	Code	Categories	Frequency of Sentences that Mention the Categories				Number of Message Sentences in the Text
			IR-1	IR-2	IR-3	IR-4	
1	PP	Pattern, Paradigm	16	17	11	12	56
2	IM	Identity / Meaning	10	5	8	5	28
3	IC	Interaction with Context	5	4	4	4	17
4	P&P	Policy and Practice	4	4	3	4	15
5	RA	Rationalism	5	4	0	1	10

The experts’ transcripts provided extensive information and evidence to support the significance of historical precedent and revealed three themes namely aesthetic design attributes; aesthetic design values, and aesthetic application of architectural precedents as shown in Table 3.

Table 3: Overall structures of results and findings associated with each theme

Key Themes As The Main Findings	Categories	Data Set	Data Source
1. Aesthetic Design Attribute	Feature and quality	Interview with experts	Transcriptions of audio tapes
2. Aesthetic design values	Design values		
3. The aesthetic application of architectural precedent in contemporary architecture	Architectural precedent		

These themes, which are contribute essentially to the practical inquiry of the study is developed in the process of transcription as follows.

Aesthetic Design Attribute

One of the predominant areas, which are pointed out in the interviews was connected to the design feature and quality of the historical precedents. In this setting, the experts were familiar with the area and had connection with the subject discussed during the interview with the historical architecture precedents and particularly with the city of Isfahan. The frequent amount of space and co-mention of the text documents indicates many of the statements declared by experts described the attributions of art and architecture of historical precedent as a central core for this study. Experts delivered the following accounts across the interviewees talk as follows.

Architecture precedent cannot be in a simple meaning, we should refer to spatial and physical set of properties. ... You can consider those as a better indication for aesthetic qualities... as a matter of fact, one of the features of architectural precedent is about the articulation of space..... which are depicting the combination idea of spatial and physical quality of forms and space.

Spatial characteristic and visual aspect of form and space in building and urban scale have been found to be an important characteristic of historical precedent to the interviewees. Qualitative analysis revealed that, the attribution of historical architecture relies on many patterns such as

geometry, rhythms, scale, proportion, etc. It is clear from the interviewees' evidence that experts were looking at similar formal attribution of the architectural precedent features to make their judgments. These similarities found as a common thought about a variety of aspects in a different approach. For example, duality is found as a criterion of aesthetic design features. One of interviewee indicates, "the duality plays its role again". Given the nature of qualitative interview, how these attributions have functioned through the sense; it is found that, tangible quality can be perceived as a rational relationship between aesthetic components of Safavid Architecture. Surface treatment, shape, and in general the physical artifacts throughout sensory factors are found as the most distinguishing design feature and quality. The representative remarks are as follows.

If you ever pay attention to the Khaju Bridge, the rhythms of movement creating a rational tension and unity within the sequential elements that fall into the aesthetic quality. ...These types of architectural perceive tangible and arise from the rationalism relation to the design... its ask for aesthetic awareness of materials, building surfaces, shape, colour and our sensory factors such as hearing, feeling, seeing, touching and smelling.

The experts had generic comments about the feature and quality of architecture precedent. However, the interviewees raised an issue and explains that, exploration and richness of local and traditional materials tended to focus on the monumentalize character rather than folklore architecture. Additionally, architectural precedent deemed not given the feeling of folklore architecture. However, the concept of the courtyard as a predominant feature in architectural precedent is adopted as a national concept in a variety of scales. This appeared to be a clear contrast between experts as described.

The aesthetics of architecture precedent are a monumentally architecture and it does not give you a feeling of folk architecture. ...Traditional brick masonry, stucco ornamentation, glazed tile demonstrating the most features of architecture precedent. In the Masjid-e- Imam (Shah Abbas or Blue Masque) expresses the richness of exploration and presenting one of its particular characteristics of its traditional style in a variety of scales.

This contrast can take as an indication of the particular characteristic in traditional monumentalized architecture, which emerged through the perception of an interviewee. Nevertheless, many of the co-mentioned documents were concerning the aesthetic character of architecture precedent. The indication of a turning point in Iranian architecture by manifestation of architecture precedent particularly Safavid Architecture made this period to be an uplifting among other styles.

Aesthetics Design Values

Aesthetic design value is a further theme that emerged from evidence, which represents its properties through categories. The experts viewed the vision of aesthetic design value as significantly related to meaning, principles, morals and ethical issue. This view expressed that the adoption of custom, tradition and social interaction in relation to architecture provided a definition and an expression for the constitution of symbolic aesthetic design values. The following quote from interviewee display their opinion.

I refer to this adoption such as acceptance of religion, custom, traditions; social interaction ideology, rituals, dress, music, art and architecture define and construct values, symbolic and aesthetic design expressions.

This finding supports the idea of aesthetic as being a mother of ethics and deeply relates to the people's beliefs, ideology, morality, philosophy, principle, values, manifest, and guideline. Furthermore, the property of design values and quality in architecture precedent are found to be predominant feature, which defined the meaning and aesthetic values of architecture. An explanation, which is provided by interviewees on this subject, sets out,

There are principles exist in every aspect of architecture precedent not only in the physical aspect of the buildings but in a plan, section and elevations....Nowadays, the values of aesthetic design developed into meaningful architectural language and meaning such as cultural, perception, and traditional design values.

The importance of architectural precedents is about the establishment of meaning and conceptions described as meant to be for contemporary life of the people. These findings point out the importance of the link between the architectural precedents and contemporary architecture. There is a diversity of the point of view represented through the interview data. These perspectives refer to the civilization, history and the pattern of Iranian architecture as the sign of cultural aspects. Responses that reflect this personal connection are as follows.

Let me start with Iranian civilization throughout history of Iranian architecture, which has a lot of expression of aesthetic architectural values in each era. To my knowledge, architectural precedent developed some kind of intellectual pattern of its architectural aesthetic design values, rather than emphasizing merely on surface and material qualities. However, the concept of aesthetic in architecture precedent applied to the integration of physical characteristics of its buildings.

Experts believed, the aesthetic of architectural precedent has a universal meaning, and to some degree, it is unclear to some people. The values of architecture precedent are identified as the culture and tradition as the society's belief. Further, purity and honesty related to the nature of materials enhance the value of its architecture. This viewpoint was particularly a unique noticeable comment as its cover many ideas regarding culture, ethics, beliefs and science. Interviewees described their general views as follows.

Nowadays, the word aesthetic is a universal language with lots of meaning. However, the meaning of the word is vague about some people.... In the Safavid period; architecture was harmonious with society's custom and integrated with cultural aspects. Traditional and natural materials are given character and value to Safavid Architecture.... They had a moral obligation to perform architecture efficiently. Moreover, this is what we call multifaceted prism because Safavid architects communicate with culture, ethics, beliefs and science. Safavid period demonstrated a kind of moral and doctrinal toward Idealism.

One of the significant findings revealed through interview data in relation to the aesthetic design values refer to experiencing architecture through the value of hearing architecture. The cultural value of architecture has a relationship to our sensory factors such as hearing, smell, sight, touch and taste. Interviewees described it as follows; we experience our traditional architecture by our sensory factors, smell, sight, touch, taste and hearing (Khaju Bridge, Masjid game Abbasi (underneath the dome) Ali Qapu, palaces, (Music rooms) and Bazar-e-Mesgarha (Market Place).

Application of Architectural Precedent

The application of Architectural precedent is identified to be laid based on rationalism. Interviewees pointed out that architectural precedent is a fact and mainly emphasize on the many intellectual devices. These comments have the indication of the recognition of many items in the Safavid Architecture as well, which contribute to the aesthetic design values. The following quotes illustrate interviewees' opinions.

The profiles architectural precedents laid based on rationalism. I have noticed that in our past architecture, and this is a fact". Indication of architectural history mainly emphasizes meaning, space conception and articulation with the last period... Tangible aspects of historical proceeding should recognize.... Understanding of precedent' is going back; analogy may help, going back to the treasure of rules in design concepts.

The interviewees frequently highlighted some criteria to suggest and remake their point of views. They made some remarks and suggestions to ensure that, further and accurate attention should paid in the contemporary Iranian architecture. Interviewees indicated that, since, the architecture is a social instrument related to the people's tradition and cultural background, the necessity of aesthetic design as a representative of a social asset becomes important to be demonstrated in building industry. The two interviewees' vivid accounts of this expression are as follows.

The spirit of contemporary Iranian architecture relied on the tradition, and cultural background based on the architectural background of this nation. Creating aesthetic design value in contemporary architecture

is an important issue in a design of any buildings...we should demonstrate aesthetic design values in architectural industry.

The interviewee's perspective leads into the recommendations, which clearly focused on the concepts of historical buildings as a starting point for the development of a theoretical framework. The feature of the aesthetic design value highlighted as the main source available through historical building. The following quotes illustrate participants' opinion concerning this matter.

The concepts of historical building should develop into a form of the theoretical framework in contemporary architecture. We should establish some kind of manifestation... Theoretical approach to this issue defiantly would be helpful to reveal the significance of Safavid Architecture. Architectural precedent, which we can discover in this period, would create many concepts in contemporary Persian architecture.

Regulations and rules are indicated as the most effective way that would change the image of the physical characteristics of the cityscape. In addition, interviewees presented a few phrases to describe their perspectives on the aesthetic valuable in the city that should be preserved through the similar regulations to protect the valuable features of the people and quality of the city. The following quotes demonstrate the visions of the interviewee.

Authorities should identify and come up with some kind of regulation or policy to preserve and protect the valuable features of people and city identity.... Preservation of architectural aesthetic design value should develop in a frame of government policy. Any contemporary building with high architectural aesthetic design values, features or elements should identify and preserve in good condition.

Other interviewees gave the generic comments about the issue. A strategy development of was found as a supportive approach for making reasonable architecture. Representative responses indicated that, "strategy would support to make some kind of approach that contributes to the contemporary architecture, creating at less a reasonable architecture.... What we do and how we do in practice of architecture is related to the social structure of society".

DISCUSSION AND CONCLUSION

The discussion of themes fall into the following themes, aesthetic design attribute, aesthetic design values, and application of aesthetic design of architectural precedent in contemporary architecture. Aesthetic design attribute: In light of cultural aesthetic variations, architectural precedent presents the features as a social instrumental, which connect to the people's ideology. There is no fix indication of an attribute or meaning of aesthetic quality found by experts. However, expert's personal views provide different aspects of spatial and visual quality of architectural precedent, especially in the context of Safavid Architectural. Although the similarity of statements about the attribution of the historical architectural precedent indicates a common thought about experts' judgments, experts' attention to the aesthetic design values and attribution in contemporary are different. The symbolic meaningful relationship between architecture and nature, surface, and shape through sensory experience is a result of aesthetic quality expression of natural light in the context of Islamic eastern aesthetic patterns.

Aesthetic Design Values: The issues of meaning, principles, morals and ethic perceive as the vision for the aesthetic design value. These viewpoints are expressing the structure of symbolic aesthetic design values. These values are the result of adaptation in custom, tradition and social interaction of the society. This interpretation strength by literature that shows a link between the study of architectural precedent and architecture over a long time – span, provides a basic approach to think about the issues in modern architecture.

Application of Aesthetic design precedent in Contemporary architecture: There is a potential development for improvement of the contemporary architecture through Safavid of historical precedent because seemingly experts have confidence that historical precedent of Safavid Architecture is relying on the pattern of many features and aesthetic order in the geometry, scale, proportion of building components etc. The diversity of historical pattern is a signature of cultural aspects in the pattern of Iranian architecture. This opinion highlights the geometric pattern as standing on the platform of style and feature of built form. The imitations of physical characteristic are no longer and have ever been successful in contemporary

architectural phenomena because apparently they do not follow the full society's test whereas the concepts of historical precedents are delivered as the central core of the invention as a paradigm in contemporary architectural phenomena.

The discussion of the above findings on the following conclusion provide an opportunity to seek answers to the research questions as how historical precedent can be assisted the formation of aesthetic design in contemporary architecture. The results suggested that, architecture of historical precedent has a tendency to inject the cultural and traditional values to the contemporary development process. Architectural precedent is producing a monumental prototype architecture, which explores the richness of local and traditional materials. The historical precedent has embedded with a diversity of ideas, values and attributes, which aesthetically boost to improve contemporary architecture. This research theorizes that, the reality and essence of the social phenomenon in architecture are in the shade of characteristic of architectural precedent. This is a phenomenon, which is revealed through the history of great ancient architecture, such as Safavid Architecture.

RECOMMENDATION

Any design of architectural place must aesthetically be valuable to a society's culture. The spirits of cultural context ought to be developed in the architectural elements. Every work of art and architecture should suggest a representation of the full constitution to generate the communicative form, which interconnect to the people with cultural means. The perspectives of experts through suggestions and remark add a new dimension to ensure that, further and accurate attention has to be paid to the concepts of contemporary architecture. In addition, aim can be consider for further elaboration in a detail to investigate the validity of the design concept.

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