Assessment of the Role of Archetypes in Creation of Sense of Place in Iranian Mosques Using AHP

*¹Nazanin Bahrami Samani, ²*Seyed Yahya Islami, ³Seyed Gholamreza Islami*

¹ Ph.D. Candidate, Department of Architecture, Karaj Branch, Islamic Azad University, Karaj, Iran.
*²*Assistant Professor, School of Architecture, College of Fine Arts, University of Tehran, Tehran, Iran.*
³Professor, School of Architecture, College of Fine Arts, University of Tehran, Tehran, Iran.

ABSTRACT: Taking into account the decrease in public presence in religious places, it appears that one of the main reasons for the lost connection between audiences and sacred sites is the lack of sense of place. Creating a sense of place is the job of architects who utilize several factors to this end. The objective of the present study is to show that in designing, an architect considers a set of the personal unconscious mind and collective unconscious mind to achieve the optimum design based on the needs and a sense of place. Hypotheses were formed based on this. The most complete among them was that the most solid and adequate understanding of place is composed in a space that encompasses a combination of the two groups of semantic and physical archetypes. A variety of phenomenological, environment psychology, and analytical approaches helped the study to realize its objective. A combination of field and library studies provided qualitative and quantitative data to the researcher that were analyzed using the Delphi technique. The data obtained by a questionnaire were analyzed using analytical hierarchy process [1] (AHP). The findings showed that inducing a sense of place in the Iranian mosque depended on semantic archetypes, and creating, strengthening, and ensuring the survival of these archetypes turned on more robust use of physical archetypes.

Keywords: *Sense of place, Archetype, Religious place, Mosques.*

INTRODUCTION

Many religious and sacred places in Iran, such as mosques, are no longer places of worship. Many of such sites are only used on special occasions such as funeral ceremonies and remembrance days. However, the primary function of such places is to create a safe and meaningful place for worshiping God and seeking tranquility, which is almost forgotten. Overemphasis on operation speed in building such sites have deemphasized many perceptional aspects of architecture spaces such as sense of place as felt by the users. This has led to a meaning lack of in the architecture of modern religious sites.

Meaning is positioned in mind, and a significant portion of Man's mental space is involved with religious beliefs passed to us from past generations. After the primary ages and expansion of urban life, man replaced myth with science. Through this, symbols have been gradually pushed away from

the unconscious mind to the inner layers of unconsciousness, and phenomena such as religion, art, story, and myth have been the language of hidden symbols in Man's consciousness (Jung, 2010).

Emptying the human mind from the symbols rooted in religion cuts the relationship between conscious and unconscious of the reason, which has destructive effects on society. The relationship between conscious and unconscious minds is formed by archetypes that act as semantic potentials and remain in the unconscious mind unless they emerge as aware images (Jung, 2011). A phenomenological examination of these meaning-inducing symbols is an efficient way to induce a sense of place in the architecture space of religious sites. Using the principles of semiotics and symbolism and environmental psychology is one of the best approaches towards this issue. The objective of the present study is to achieve architectural approaches to create a sense of place and connection to the

*Corresponding Author Email: y.islami@ut.ac.ir

environment in the users of religious sites in Iran.

The physical elements in traditional and contemporary mosque structures fulfill different levels of sense of place, and the only difference is their prioritization. It is notable that despite the undeniable importance of symbolic and physical elements, using these elements at a latent level may not fulfill the higher levels of sense of place that guarantee the survival of a place. On the other hand, removing these identity-creating elements would not create a sense of attachment (Shahroudi Kalour et al., 2010). Which one of the archetypes is more efficient in creating a sense of place in Iranian religious areas? To answer the questions and others like it, a comprehensive study on different archetypes and sense of place was conducted through library review and phenomenological, psychological, and semiotics approaches. Afterward, a questionnaire was designed through the field study method, and the study was carried out using a hierarchical analytical process (AHP).

MATERIALS AND METHODS

Sense of Place

According to Rolf, a sense of place is a specific concept that cannot be given a clear-cut definition. It should be measured and examined through examining inter-place relationships and the phenomenological basis of geography (Relph, 1976). He also argued that the primary meaning of place is broader than simple functions that are fulfilled by a place. It is higher than the society the place occupies and beyond the artificial and earthy experiences of the place. While all these are the required aspects of a place, nature is realized via experiencing, combining the unconscious mind and place. That is, a place is a center rich in existence and human presence. This general impression of place is based on Man's inner relationship, subjective imaginations, and environmental specifications (Seamon, 1982).

On the one hand, this concept has a root in personal experiences (such as memory, tradition, history, culture, and society). on the other hand, it is affected by the objective and external ground of the environment (such as scene, smell, and audio) that generates different associations of a place (Falahat, 2005). Studies about measuring a sense of place have shown that the key measures might be different between individuals. In some cases, a sense of place emerges despite physical problems in the environment only because of social interaction between individuals and groups (Norouzian Maleki & Omidi, 2020).

Archetype

A model with a primary general solution combines designing principles that provide the basis for forming a larger group of designing solutions (Einifar, 2007). Archetype conveys meaning like origin, primary source, cause, and principle. Archetypes are the preliminary and stable models of Man's collective experience over thousands of years to answer Man's mental and intrinsic needs. Therefore, to understand and perceive archetypes and their sources, we need to know man's

psyche and categories. Psychologists have conducted several studies, and the most pronounced of them is the theories introduced by Carl Gustav Jung.

Holy Place

A holy place is where the connection between our world and the other world, the upper world, the world below, the world of gods, and the dead is made possible (Satari, 2002, 179-180). A holy place is formed through the apparition of the sacred in space. The perception of a holy place is based on specific spiritual moods that a person perceives by experiencing such a place and the external factors acting as a guide, facilitator, or stimulation of the abstraction perception of the holy. After the appearance and continuance of its presence in a place, the holy gives holiness to the place (Shaghaghi 2005, 53-54). Religious sites are objectively differentiated from their surroundings. The architecture of sacred places prepares the ground for the user to be in God's presence through organizing, sacrament, and formalizing the space.

There are three fundamental factors to name in religious spaces and places. First, a spiritual place is a tool for communication with the holy and to talk about it. Second, a religious place is the place of expression of God's power. Third, the space is a tangible and visible representation in the physical world. Only when a place reflects a specific spiritual perspective, both physically and superficially, it can be worthy of possessing a holy characteristic (Burckhardt, 2010, 7).

Formation of a Sense of Place through Archetypes

As shown in figure 1, Man's psyche is part of his nature and acts as an intermediating agent between the body and soul (Jung, 1975, 166). The self-psyche is placed on the two layers of conscious self and unconscious depending on one's awareness or lack of understanding. The unconscious part of the psyche is divided into personal and collective sections (Jung, 2011, 26-27). The content of the collective unconscious is an accumulation of man's experiences that is transferred to the next generations. This type of heritage has a comprehensive whole and can act as a model, and given that it has reached us from ancient times, it is called an archetype. In addition, meaning is the twin of awareness (conscious) and unawareness (unconscious); therefore, creating a meaningful work needs to recognize both layers of the creator's psyche. As noted, unconsciousness is a reservoir, not of instincts, visions, and energy, but instead of symbolic functions. This means that collective unconsciousness is the creator of symbols. Collective symbols are the creators of archetypes and create meaning in work subjectively and objectively. Compared to collective symbols, individual symbols play a role in artistic creations, which emerge as a mixture of consciousness and unconsciousness. Meaning is generated through combining these symbols, which have been given birth by the unconscious and conscious of the creator, and by creating meaning in space, a sense of place is made. (Figure 1)
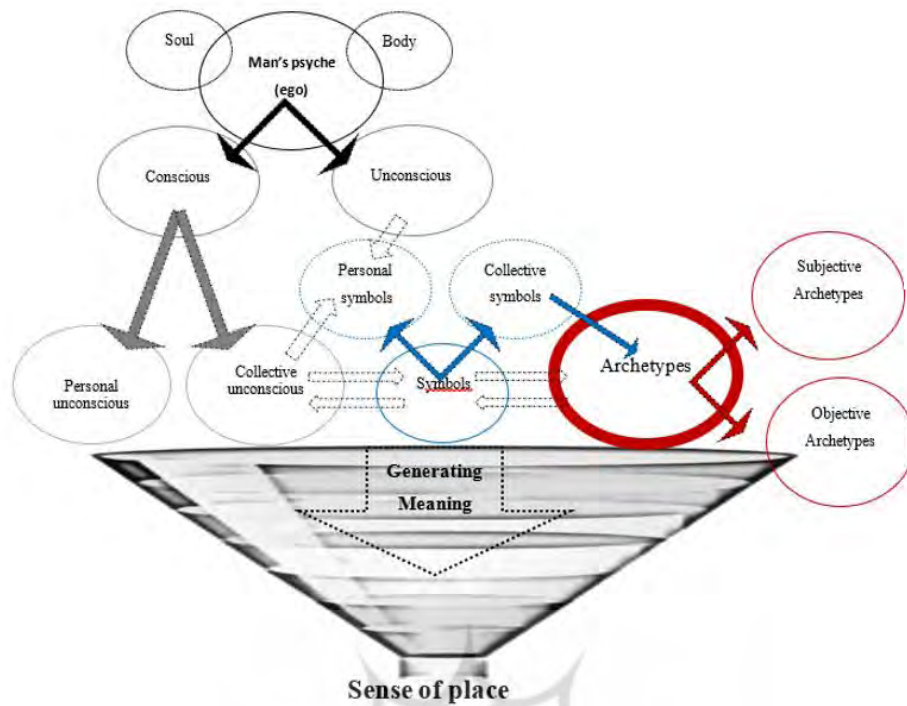
Fig. 1: Creating a sense of place through archetypes

Methodology

Method and approach are two fundamental concepts of a research work that are mistakenly used interchangeably (Islami, 2014, 42). Phenomenological, semiotic, and psychology of space approaches helped us in this study. The primary method used in the study, given that the study trend was from practice to theory, was qualitative, and analysis were through a combination of qualitative and quantitative methods. The start point was gaining a more profound knowledge of the

issues, problems, and specifications, and then we continued the analysis using statistical information. In phase one, the library review method was used to learn about the main approaches (psychological-analytical foundations, semiotic foundations, and phenomenological foundations in architecture). Our study on the research keywords (collective unconscious, archetypes, place, sense of place, religious sites) was entirely quantitative and interpretational analysis. In phase two, hypotheses and questions were answered using Expert Choice, field study (questionnaire), and AHP to examine all elements quantitively
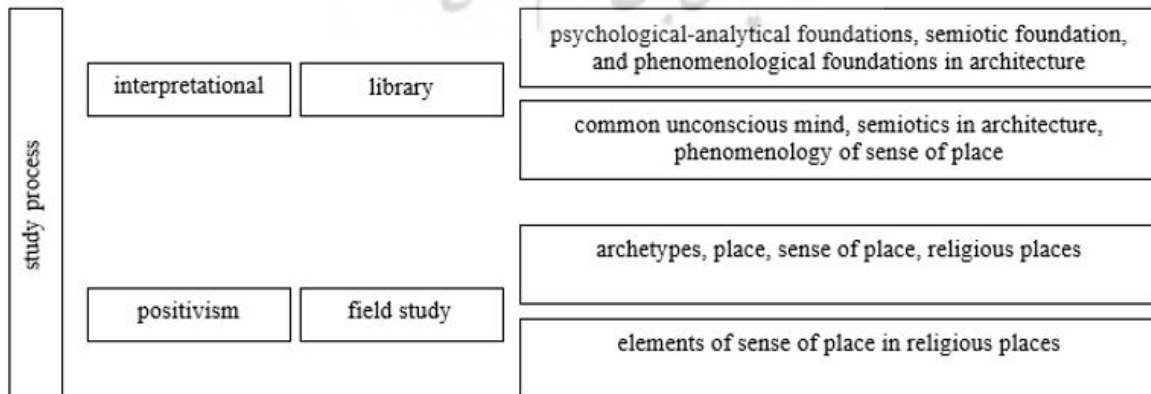

Fig. 2: Study process

Table 1: Strategy, tactics, and solution

Strategy	Tactic
Emphasis on the main topic	Library review
Emphasis on natural place	Observation
Emphasis on interpretation and meaning	Questionnaire (Delphi)
Paying attention to respondents' perception of their condition	AHP
Using multiple tactics	Expert Choice

using numbers, weights, analysis, and positivism. (Figure2)

Strategy, Tactics, and Solutions

The term "strategy" means skillful management and planning for everything. This definition contrasts with technical tactics that refer to a competent measure (Groat & Wang, 2007). Within the scope of this paper, strategy is the general structure and program of the study. On the other hand, research tactics are the specific applied techniques such as data gathering, asking questions, documents, and analyses. In addition, solution refers to the adopted paths and ways based on the strategy and tactics to achieve the study's objective – i.e., creating a sense of place in religious places using archetypes. (Table1).

AHP

The hierarchical analytical process is one of the multi-criteria assessment methods (Zebardast, 2001). The AHP starts with identifying and prioritizing decision-making elements, including objectives, criteria, indicators, and possible options used in prioritizing. The element identification process and their connections lead to the formation of a hierarchical structure called building hierarchy. The hierarchical nature of the structure is because decision-making elements (alternatives and decision-making criteria) can be summarized at different levels. Therefore, the first step in AHP is to create a hierarchical structure of the subject, through which the objectives, criteria, alternatives, and the relationship between them are demonstrated. The next four steps in AHP include calculating the weight of criteria and sub-criteria (if any), calculating the weight (significant coefficient) of alternatives, calculating the final weight of alternatives, and examining the logical compatibility of judgments (Zebardast, 2001).

Subjective criteria include eight sub-criteria, namely knowledge of the history, historical specifications and events that happened in religious places over time, internal beliefs that are not precedented and have formed in each individual, emotional arousal (e.g., amazement, joy, and safety felt in the presence of creator), religious beliefs (induced by family and society), cultural specifications (e.g., behaviors and rituals such as lighting candles), and remembering individuals, mythical, and holy events (e.g., Ashura event, memories about the ceremony and religious sites, mental images and imaginations about sacred places, and rituals).

Objective criteria included 14 sub-criteria, namely Minaret, public spaces (Ravagh and Sabestan), central yard, Gonbad, water and water pool, specific materials and color, porch,

lighting, jail windows with colorful glasses, religious decorations, and ornamentals (e.g., calligraphy), respect to social hierarchy, special entrances in sacred places, traditional forms (square or rectangles on the plan), Qibla and altar, tall structures in specific parts of religious buildings, and symbolic forms (Shamseh, Chalipa.). Figure 3 illustrates the factors in developing the sense of pace in mosques based on objective and subjective categorization and the sub-criteria.

Findings of the Study in a Conceptual Model

as seen in figure4, the main skeleton of the following conceptual model is the red line crossing the center, representing the axis of movement along which the process of creating a religious place from a sense of place and human relations is pictured at the center of the model. The primary categorization approach is psychological and phenomenological that interact to create a religious place with a sense of place and interactive human relations. On the left (phenomenology), we have wisdom in contrast to the right (psychology), which represents science. On the lower left, the collective spirit results from imagination, reason, and primitive perception, respectively, which are on a par with the levels of phenomenal relations from theory to the surface and from surface to the phenomenon (which is the outermost layer of exceptional relations) Is drawn. On the right, we have the archetype at the bottom, obtained from the individual unconscious mind, conscious mind, and Collective unconscious mind, which are the same level as the layers constituting the human psyche. Along the red line and at the upper section, the model of the human-environment relationship to create a sense of place is represented. The common level is located at the center and along the red line, given its high importance. Similarly, along the central axis and at the bottom of the inner circle, we have phenomena relations level (relation; interaction; transaction) (Islami, 2014, 6). Here, achieving a two-way relation is sought after, which is represented by the blue line. At the intersection of lines, the first layer of the psyche is equal to the theory of phenomena whose function is subjective and semantic. The second layer is at the same level as the surface, which has objective and physical functions. The third layer is at the same level with the primary phenomenon of which the function is a combination of objective-subjective and semantic-physical factors. Eventually, the movement lines from top to the bottom toward the center and vice versa represent the two-way relations between religious place, sense of place, human relations, archetypes,
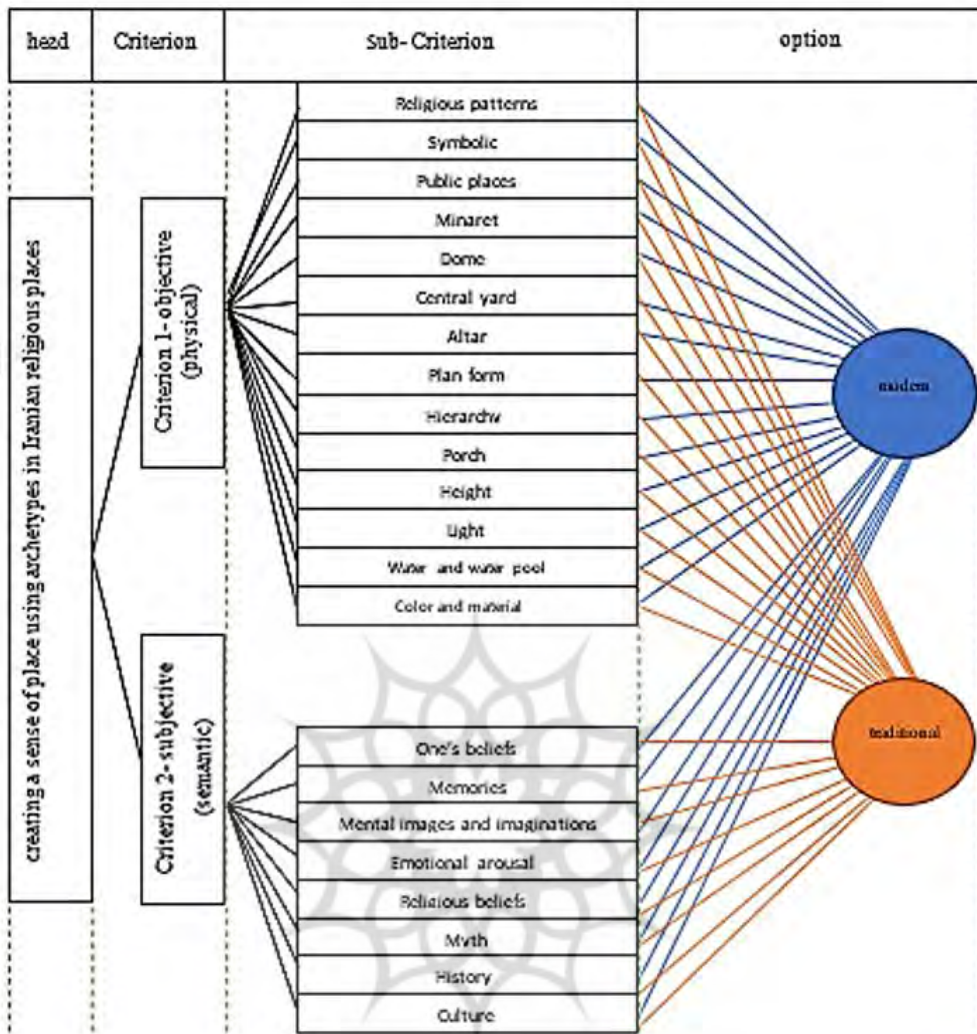
head	Criterion	Sub-Criterion	option

Fig.3: Criteria and sub-criteria of archetypes affecting the sense of place in mosques

and common soul. (Figure4)

RESULTS AND DISCUSSIONS

Given the large number of archetype sub-criteria in creating a sense of place in religious places, the weighted comparison of each sub-criteria seemed complicated. Still, using Expert Choice, the weight and effect of each sub-criteria were determined based on experts' opinions. As shown in figure 5, the impact of physical and semantic archetypes on the sense of place is the same from the experts' viewpoint.

In addition to the weighted comparison of the two sub-criteria, a general comparison encompassing all sub-criteria in semantic and physical archetypes is represented in the following section. The effect of measured criteria is pictured in the hierarchical diagrams. Through this, we can analyze the sensitivity of the impact of each criterion to changes in other criteria. (Table 2) (Table 3) (Figure 6) (Figure 7).

The following diagram illustrates the results of combining two main archetype criteria (semantic-physical). (Figure 8) (Table 4)

As shown in the diagram above, most sub-criteria (elements) at the top that obtained the higher scores are the physical elements. It is also notable that Minaret was the first choice of experts for creating a sense of place in religious places. The experts were unanimous about their answer to the first question in the questionnaire about the effect of physical and semantic archetypes. They evaluated the two criteria of the same value. This paradox is explained in the next paragraph.

The two critical variables in this study are the sense of place of mosques and archetypes. These variables form the foundations to examine physical and semantic specification in a mosque design. To explore this hypothesis, the relationship between the two variables and the physical layout of the mosque was analyzed based on the experts and users of mosques. It was found that the elements encompassing both groups of the archetypes, which form a sense of place, can be the most effective elements. The hypothesis was tested using two
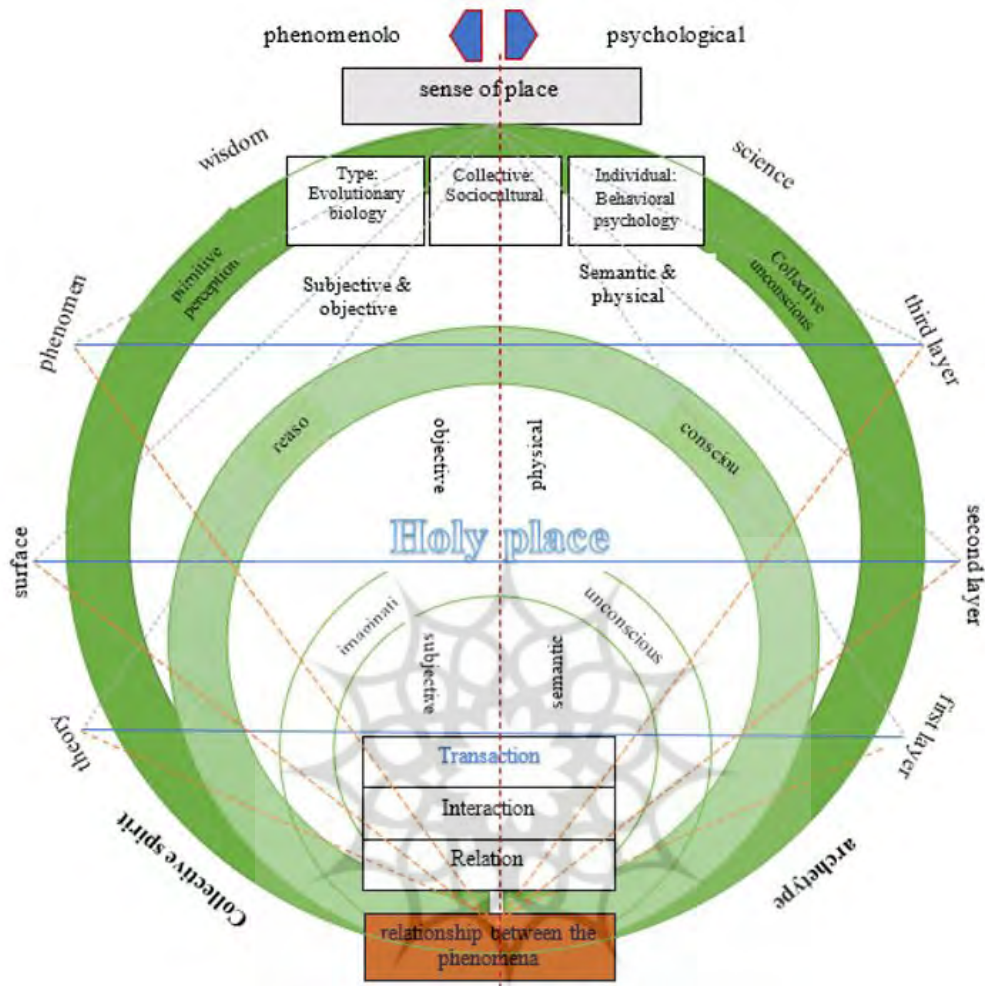
Fig. 4: The conceptual model of function and relationship between the phenomena
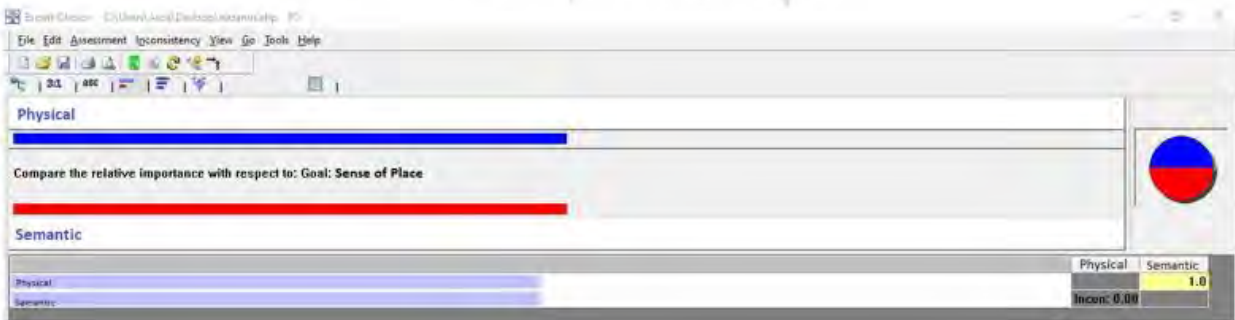
Fig. 5: Weighted comparison of objective and subjective criteria

Fig. 6: Weighted comparison of subjective criteria (semantic)

Table 2: Priority of subjective sub-criteria

No.	Subjective archetype (semantic)	Weight
1	Knowing the history, historical features, and events that happened in the religious place.	0.253
2	Inner beliefs formed in the past in individuals about religious issues.	0.197
3	Emotional arousal includes amazement, joy, and feeling safe in the creator's presence in an individual.	0.165
4	Religious beliefs induced by family and society	0.089
5	Cultural specifications such as religious beliefs and rituals such as lighting candles.	0.083
6	Reminiscence of individuals, mythical and religious events such as Ashura event	0.081
7	Memories about sacred places and rituals	0.069
8	Mental images and imaginations about religious spaces and rituals	0.067

Fig. 7: Weighted comparison of objective sub-criteria (physical)

Table 3: Priority of physical sub-criteria

No.	Sub-criteria of physical archetype (objective)	Weight
1	Minaret	0.112
2	Public spaces such as Ravagh, Shabestan, etc.	0.109
3	Central yard	0.109
4	Gonbad	0.105
5	Water and pool	0.105
6	Material and specific colors	0.089

Continiue of Table 3: Priority of physical sub-criteria

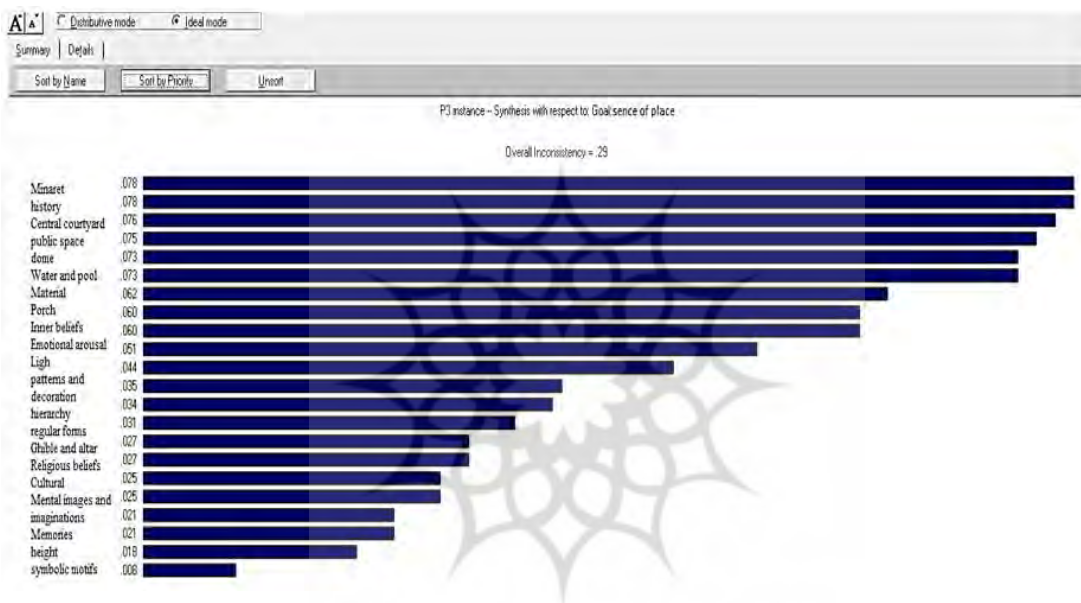| No.	Sub-criteria of physical archetype (objective)	Weight
7	Porch	0.086
8	Lighting and Jali windows with colorful glasses	0.084
9	Religious paintings and decoration such as calligraphy	0.050
10	Concerning hierarchy and different entrances to religious places	0.049
11	Orderly forms (square or rectangle) in the plan	0.045
12	Qibla and altar	0.039
13	Adding tall structures to a part of religious structures	0.026
14	Symbolic forms such as Shamse and Chalipa	0.011

Fig. 8: Weighted comparison of the semantic and physical sub-criteria

Table 4: Weight of all archetype sub-criteria

No.	Archetype sub-criteria including physical (objective) and semantic (subjective)	Weight
1	Minaret	0.078
2	Knowing the history, historical features, and events that happened in the religious place.	0.078
3	Central yard	0.076
4	Public space	0.075
5	dome	0.073
6	Water and pool	0.073
7	Material and specific colors	0.062
8	Porch	0.060
9	Inner beliefs formed in the past in individuals about religious issues.	0.060
10	Emotional arousal includes amazement, joy, and feeling safe in the creator's presence in an individual.	0.051

Continiue of Table 4: Weight of all archetype sub-criteria

No.	Archetype sub-criteria including physical (objective) and semantic (subjective)	Weight
11	Lighting and Jali windows with colorful glasses	0.044
12	Religious paintings and decoration such as calligraphy	0.035
13	Concerning hierarchy and different entrances to religious places	0.034
14	Orderly forms (square or rectangle) in the plan	0.031
15	Qibla and altar	0.027
16	Religious beliefs induced by family and society	0.027
17	.Cultural specifications such as religious beliefs and rituals such as lighting candles	0.025
18	Reminiscence of individuals and mythical and religious events such as Ashura event	0.025
19	Memories about sacred places and rituals	0.021
20	Mental images and imaginations about religious spaces and rituals	0.021
21	Adding tall structures to a part of religious structures	0.018
22	Symbolic forms such as Shamse and Chalipa	0.008

Table 5: Weighted comparison of objective and subjective sub-criteria

Main criteria	Sub-criteria	Weight	Total
Semantic (subjective)	Knowing the history, historical features, and events that happened in the religious place.	0.078	0.308
	Inner beliefs formed in the past in individuals about religious issues.	0.060	
	Emotional arousal includes amazement, joy, and feeling safe in the creator's presence in an individual.	0.051	
	Religious beliefs induced by family and society	0.027	
	Cultural specifications such as religious beliefs and rituals such as lighting candles.	0.025	
	Reminiscence of individuals and mythical and religious events such as Ashura event	0.025	
	Memories about religious places and rituals	0.021	
	Mental images and imaginations about religious spaces and rituals	0.021	
Physical (objective)	Minaret	0.078	0.694
	.Public spaces such as Ravage, Shabestan	0.076	
	Central yard	0.075	
	Gonbad	0.073	
	Water and pool	0.073	
	Material and specific colors	0.062	
	Porch	0.060	
	Lighting and Jali windows with colorful glasses	0.044	
	Religious paintings and decorations such as calligraphy	0.035	
	Concerning hierarchy and different entrances to religious places	0.034	
	Orderly forms (square or rectangle) in the plan	0.031	
	Qibla and altar	0.027	
	Adding tall structures to a part of religious structures	0.018	
	Symbolic forms such as Shamse and Chalipa	0.008	

approaches. First, AHP and direct questions from the experts were used for each physical and semantic criteria. It appeared that these two criteria were of equal value in general. Then, the sub-criteria were studied. Based on the weighted comparison between the semantic and physical criteria, physical standards directly affected twice the semantic criteria (Table 5).

CONCLUSION

The archetypes that formed a sense of place were semantic (subjective) and physical (objective). These factors were influential in creating a sense of place in today Iranian

religious areas. Using AHP, the responses collected from the administered questions showed the extent of the effect of subjective and objective archetypes on the sense of place. To this end, a study population was selected following the experts' comments, and based on the completed questionnaire, the required data to test the hypothesis was obtained. As shown, the hypothesis was supported in the first phase; however, after adding the sub-criteria in the second phase, the hypothesis was not supported, and the effect of physical archetypes became stronger. Throughout the study and interpreting the results, we found that semantic archetype criteria had a floating meaning, and their dependence on physical variables created a sense of place. Trying to explain the paradox found in the experts' responses about the effects of the two main criteria (physical and semantic) and the consequences of sub-criteria, we found that inducing a sense of place depended on the presence of semantic archetypes and creating and preserving them relies on the presence of physical archetypes. That is, by removing a high percentage of physical sub-criteria, semantic sub-criteria are also eliminated, and thus no sense of place can be induced in a religious site. In addition to primary effects on creating a sense of place in mosques for users, physical criteria also indirectly affected semantic criteria and created meaning and, eventually, a sense of place. Creating a sense of place in mosques depends on semantic criteria, whether personal or Collective and creating semantic archetypes depends on physical criteria.

ENDNOTE

1- The analytic hierarchy process (AHP), also the analytical hierarchy process, is a structured technique for organizing and analyzing complex decisions based on mathematics and psychology. Thomas L. Saaty developed it in the 1970s; Saaty partnered with Ernest Forman to develop Expert Choice software in 1983, and AHP has been extensively studied and refined since then. It represents an accurate approach to quantifying the weights of decision criteria. Individual experts' experiences are utilized to estimate the relative magnitudes of factors through pair-wise comparisons. Each of the respondents compares the relative importance of each pair of items using a specially designed questionnaire.

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