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Original Research Article

Explaining Components of Architectural Aesthetics Based on Humans' Experience

(Case Study: Prominent Cultural Buildings in Tehran)

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Abstract

Problem statement: Aesthetics, an experience that manifests itself in various forms under different conditions, is primarily experimental. What appears pleasant in the built environment has always been contentious and ambiguous. It can vary in geographical, social, and cultural contexts depending on the type of relationship it has with human perceptions. However, aesthetics has been overlooked in terms of users' experience with an environment due to an overemphasis on its preferential nature, as well as obliviousness to sociocultural commonalities that lay the groundwork for subjective perceptions. As a result, some anomalies in architectural design have come to light. The following questions arise in this regard: What factors influence the development of architectural aesthetic experience from the standpoint of an ordinary user? What factors contribute significantly to the intensity of this experience?

Research objective: The purpose of this paper is to explain aesthetics and its criteria through users' perceptions and lived experiences to revive their aesthetic feelings by translating them into effective components.

Research method: This descriptive study employed the philosophical phenomenography of people's lived experiences in buildings. It is also classified as interpretative-inductive research.

Conclusion: Perceptual, motivational, sensorimotor, cognitive, behavioral, and emotional components all play important roles in the process of aesthetic perception from the user's standpoint, resulting in the architectural aesthetic experience. In fact, the role of each component in this experience is highlighted differently depending on the features of different buildings, which are distinguished by variable component priority and feedback. However, when all components in an experimental process play complementary roles, the experience can be maximized. Moreover, for this experience to be effective, the emotional component must be strong.

Keywords: *Aesthetics, Aesthetic Experience, User Experience, Phenomenography.*

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Introduction

Architectural aesthetics is essentially a theory of perceptible experience that focuses on spatial building elements and a wide range of perceptual experiences. Therefore, expanding the scope of architectural aesthetics has always raised difficult questions about human perceptual experiences. It is essential to consider the fact that the aesthetic analyses of architectural works must be grounded in users' experiences, cannot be determined selectively, and should be compared to empirical data. In other words, aesthetic perceptions can serve as an experimental foundation for aesthetic judgments; thus, aesthetic preferences are the result of a cognitive-emotional process that relies on architectural attractions for aesthetic perception and can be justified by the fundamental role of user experience. If architectural features are referred to as formalistic concepts from the standpoint of objectivistic aesthetics, this method will be unable to indicate how people experience a building. In other words, most methods of architectural perception are direct and cannot be evaluated by analyzing architectural components divided into integrated and disintegrated sections. They cannot be physiologically analyzed in relation to aesthetic descriptions without prior experience. Thus, reanalyzing and identifying the raison d'être of an individual's experience with the perception of aesthetics can help determine the dimensions of evaluations and convergence of architectural judgments. This study examines a spectrum of architectural aesthetics priorities classified as general frameworks of aesthetic qualities to explain this experience and its effective components. In fact, an individual's aesthetic preferences and emotional reflections are influenced by their environment. These preferences should be identified as a part of perceptual-cognitive processes to study indices of feelings and human behavior in an environment.

At the same time, due to the dominance of a product-oriented view and the absence of an experimental approach in response to user needs, Iran's modern architecture primarily lacks features that appear to respond to the aesthetic needs of users. To address a part of the qualitative issues, this architecture requires a clear perception of the concepts that are hidden in latent layers behind any spectator's aesthetic perceptions. Apparently, it is necessary to consider the subjective states of users who are involved in the architectural experience of a space. In fact, the lack of an integrated system and a theoretical framework for identifying aesthetic judgments may disrupt Iran's positive trend in future architectural development. In other words, the absence of such a comprehensive structure will have negative consequences for accurate prediction of development effects on aesthetic quality and appropriate interventions to improve environmental status. Therefore, it is important to consider the qualitative human expectations of environmental phenomena, something that requires the accurate identification of features constituting these qualitative principles. The reason is that aesthetics is defined as a quality of the potential power that can result in the feeling of favorability if it emerges in the environment. Nevertheless, the aesthetic experience, rather than being defined and limited conceptually, can be studied as a quality. Hence, this study aims to identify the perceptual experience and its effective components in buildings of contemporary architecture in a bid to provide a basis for a more accurate analysis of this experience by nature. The concept of aesthetic experience, for this purpose, necessitates the identification of a probable, cohesive, and evolutionary relationship among architectural elements, space, and humans. Taking into account the user experience as well as transferring this feeling through the environment is one way to increase environmental satisfaction and improve individual life. In fact, such feelings will be improved by identifying the relevant components. Hence, the following questions arise: What factors influence the formation of architectural aesthetics experience from the perspective of the general public (non-experts)? What factors have the greatest influence on the intensity of this experience?

Research Background

Various fields of study have addressed the perception of architectural aesthetics in various ways. However, there have been few systematic studies on the direct relationship between the physical structure of a building and the preferences of experienced space. Recently, some neurological studies of aesthetics and behavior–environment have been developed (Vannucci, Gori & Kojima, 2014; Vartanian et al., 2013, 2015) to analyze the emotional effects and the incarnated features of environmental characteristics (Jelić, Tieri, De Matteis, Babiloni & Vecchiato, 2016). Other experimental aesthetics studies have primarily examined visual perceptions by focusing on visual characteristics or neural stimuli delivered through architecture (Bittermann & Ciftcioglu, 2016). Moreover, a few other studies have addressed the emotional-psychological effects of architectural experience (Böhme, 2018), whereas psychological studies have tried to prove the potential for the rehabilitation of mental focus and environmental experiences (Herzog, Ouellette, Rolens & Koenigs, 2010). Finally, phenomenography research has focused on the experimental relationships of emotional states among humans to perceive the concept of architectural experience and non-contemplative responses (Bermudez et al.,2017). Generally, even though these studies have developed the fundamental theories of methodology, they have failed to introduce a systematic approach to evaluating human experience with architectural aesthetics. Furthermore, no studies have yet been conducted to identify the components of aesthetics in Iran's architecture through an experimental approach.

Methodology

This qualitative study presents the philosophical phenomenography of people's lived experiences[1] through descriptive-inductive research. Given the research topic on lived experiences, it is impossible to unify people's experiences in merely quantitative frameworks, and these experiences must be perceived intrinsically to signify and compare them in terms of diversity.

Therefore, the phenomenography approach was adopted. In fact, an inductive, inferential, and content-oriented method, is classified as an interpretative paradigm. This research was divided into two stages, the first of which included theoretical studies. At this stage, components and criteria were identified and evaluated to test people's aesthetic experiences as much as possible. In the second stage, a case study was carried out to assess people's aesthetic preferences based on their actual presence in buildings (e.g., City Theater of Tehran, Niavaran Cultural Center of Tehran, and Mellat Cineplex). This was conducted through semi-structured in-depth interviews while they were present.

To this end, the statistical population visited the three buildings consecutively on one day. Following their visits to each location, the participants were interviewed individually. Following separate interviews at each building, participants completed a preference test form to prioritize their aesthetic preferences. Finally, the data were analyzed using the structure defined by the phenomenography method.

Theoretical Framework

- **Concept of aesthetic experience in architecture**

The architectural aesthetic experience can be analyzed through two main approaches: 1) an interpretative approach with a normative view on the raison d'être of the subject (e.g., theories proposed by Scruton and Winters); 2) an experimental approach including the views of cognitive science (Moosavian, Aminzadeh Gohar Rizi, Shahcheraghi, 2021). This study adopted the second approach. Based on the assumption that architectures design the functions of an environment, it is possible to conclude that people's architectural experiences are primarily based on the probability of "action," of which they become aware via sensorimotor and motivational factors. Therefore, the cerebral activities that underpin the perception of architectural aesthetics

may involve multiple cerebral mechanisms and circuits that are in charge of regulating physical, emotional, and cognitive reactions. Such neurophysiological and behavioral signs can indicate the visual and emotional effects of feelings (Vecchiato et al., 2015a). Recent studies have proven some evidence of cerebral reactions improving perceptual dimensions such as pleasantness. This indicates the activation of the motor system through "visualized mechanisms" (simulation of actions, emotions, and physical feelings) which plays a major role in the perception of aesthetics. In other words, Theories of "empathy" can be traced back to the idea that unobvious physical reactions are involved in the architectural experience. According to such hypotheses, physical reactions to architectural shapes may result in relationships between emotional-aesthetic dimensions and physical involvement with the pace as a result of observation. These hypotheses, which have been confirmed by recent neurological findings, have emphasized the critical roles of sensorimotor areas in the perception of artworks (ibid., 426).

Freedberg and Gallese (2007) proposed a theoretical framework for the analysis of aesthetic experience based on the neurological interpretation of the "empathy" theory as a kind of emotional-physical adaptability to an artwork. Accepting the "visualized simulation" theory of empathy, they interpreted the motor system and activation of visual mechanisms as the aesthetic experience. The main hypothesis in their approach is that the motor system interacts with the aesthetic experience, resulting in visualized simulations being interpreted as empathy for tactile feelings, motions, and states. A spectator is automatically able to create a feeling of empathy with the represented content of an artwork. Hence, this theoretical framework, which is based on empathy and visualized simulation in the aesthetic experience, will result in tangible feelings, motions, and implicit actions. In other words, the motor system is activated by the represented content of an artwork in addition to an automated inductive relationship between an artwork and a spectator. The activation of visualized mechanisms, according to this theory, can play an important role in the aesthetic experience. In fact, these mechanisms can lead to the perception of aesthetics in architecture, whereas interaction with an environment can involve motivational factors. Therefore, the architectural experience causes the precognitive activation of "visualized mirror mechanisms," including the stimulation of actions, emotions, and physical senses. It means that empathy or empathetic/physical reactions to an artwork can be thought of as "spontaneously empathetic reactions" that lead to a preliminary response (Freedberg & Gallese, 2007, 197–203). Thus, in aesthetic reactions, empathy is correlated with equally mental/physiological changes and the non-objectively perceived intensity of emotions.

These kinds of hypotheses were validated through neurological findings. According to the visualized simulation theory, the activity of the sensorimotor cortex plays a role in the automated and pre-contemplative perception of activities. Reflecting neurological responses to visual stimuli, the visual areas of the brain are involved in processing aesthetics. Finally, the activation of the orbitofrontal cortex is accompanied by the processing of rewarding stimuli, whereas the improvement of activities in the prefrontal cortex is correlated with aesthetic judgments (Jelić et al., 2016, 9). if positive feelings about aesthetics reach a certain threshold, the reward circuit in the nervous system is activated (Menninghaus et al., 2019, 53). In terms of aesthetic judgments, a large body of literature has developed the hypothesis that architectural perception can include the cerebral circuits that regulate reward and emotional processes. In fact, aesthetic experiences are considered the newly emerged states of mutual effects and interactions between nervous systems, i.e., 1) sensorimotor system, 2) feeling-reward system, and 3) meaning-knowledge, known as effective mechanisms in which such experiences affect each other through these systems (Chatterjee

&Vartanian, 2014, 2). According to Chatterjee and Vartanian (2014), these cerebral networks interact with each other in the perception of an object and can have important roles in the perception of architectural aesthetics. Based on this framework, the sensorimotor system can automatically process the objects and environmental features that interact with a spectator through visual mechanisms. The evaluation-emotion system processes the information of proximity-avoidance, desire, and love, whereas the meaning-knowledge system has remained very unknown because it is distributed widely in the brain and depends greatly on cultural conditions and an individual's expertise. The aesthetic experience is produced by the spectator–object interaction, according to evidence from the sensorimotor system in the perception of an object. Moreover, the emotion-feeling systems indicate that the aesthetic experience of a phenomenon is the visualization related directly to adaptation, and the perception of aesthetics pertains to better adaptability to the environment (Jelić et al., 2016, 9). Neurological studies, which focus on the cognitive processes of experience, investigate the neural mechanisms that link architecture and aesthetic experience, particularly "spontaneous experiences." According to their results, the joy of aesthetics obtained from the architectural experience includes cognitive-emotional processing that would occur spontaneously and automatically (Ma, Hu & Wang, 2015, 279). Hence, the main function of human cognition development is the perceptual function acquired from interaction with the environment. It is developed through the accumulation of knowledge, emotional effect, and affection. In this regard, what is perceived as joyful is based on the identifiable models obtained from the "primary emotional mechanisms" (Xenakis, Arnellos & Darzentas, 2012, 216).

Two studies on architectural judgments yielded evidence on the roles of feelings and rewards in perceiving architectural aesthetics. In particular, Vartanian et al. (2013) analyzed the effects of rectangular and curved lines on aesthetic judgments and proximity-avoidance decisions. They also addressed the role of ceiling height in this regard (Vartanian et al., 2015). In their first study, they proved that perceiving and interacting with an artificial environment could include motivational and emotional factors. For instance, perceiving the environments characterized by the sidelines of a curved façade can activate the reward circuits in cerebral areas (Vartanian et al., 2013). Therefore, observing an architectural space activates the neural networks that regulate reward and judgment, indicating the importance of emotional, cognitive, and contextual factors in aesthetic perception (Vecchiato et al., 2015b, 2). At the same time, this view supports the "interactions of sensory and conceptual assumptions" in the aesthetic experience. In their second study, they analyzed the level of pleasantness and the observation of spaces with different architectural features (e.g., ceiling height and openness/non-openness of space). They proved that the interaction between sensory and conceptual hypotheses had a fundamental role in the visual-motor processing of architecture (ibid., 13). In other words, the perceived open/closed space can affect aesthetic judgments. In fact, the open/closed space can be considered a degree of the perceived motion in the space. Quoting Vartanianet al., Stamps (2005) argued that the degree of motion and movement in the space would be described as "penetrability", which is divided into visual penetrability and motor penetrability. The preference for an architectural space is determined by how well it facilitates visual/motor penetrability (Vartanian et al., 2015, 4-5). Based on cognitive science, it can be stated that the content and senses corresponding to the architectural experience include a combination of cognitive, emotional, and sensory elements; therefore, the use of visualized experiences can be regarded as an axial feature of joy in architecture.

- **Components affecting formation of architectural aesthetic experience**

As previously stated and from a cognitive science

perspective, the presence of ambiguous physical reactions in the architectural experience indicates the presence of emotional dimensions as well as a body–space relationship, implying the importance of sensorimotor mechanisms in the perception of space. Feelings, implications, and implicit motions are all mentioned in the theoretical framework of the visualized simulation and the concept of empathy in the aesthetic experience. Through the resultant affordances, interaction with architecture can involve motivational factors. The necessity of adjusting body posture and taking appropriate actions in architectural environments can be considered an instance of the activation of attention and motivation to allow a spectator to have an informed experience as the experiencing institution or body as well as the perception of aesthetics. Motivation or stimulation is closely related to the primary stage of the evaluation process. According to Russel and Mehrabian, stimulation is a subjective activity that describes an individual's emotional stage along with a single dimension varying from drowsiness to severe excitement (Russel & Mehrabian, 1978). Hence, the perception of aesthetics depends on the stimulated implicit and intrinsic activities, including emotional experiences, processing of evaluations, and context-related factors activated by different types of environmental stimuli. In fact, emotional reactions can be evaluated with emotional preferences, which are regarded as an individual's assessable reactions and experienced meanings about an environment.

Accordingly, the following are the main constituent components of human experience with aesthetics, which are activated by sensory responses in the space and form the aesthetic experience if emotionally processed positively. 1) The perceptual component refers to the structures of stimuli (i.e., elements of the space) and reflects such dimensions as coordination, color, texture, rhythm, order, and balance in an architectural combination. It is perceived as a rich set of perceptual qualities, 2) The motivational component consists of sensory states or practical desires for behavioral readiness in the space, 3) The sensorimotor component includes the physiological responses of humans to the space and activates the interactional dimension reflecting the affordances that result from the architectural experience. It includes multiple senses such as direction, gravitation, balance, stability, motion, continuation, continuity, and scale, 4) The cognitive component refers to the content (i.e., meaning) and context of an artwork, 5) The emotional component, also known as the emotional experience, reflects positive or negative emotions in terms of their effects on the space user and, 6) The behavioral component includes expressive behavior as well as actively voluntary actions in a space such as proximity or avoidance. The most prominent theories. allowed for the emotional evaluation of a place resulting from the correlation of different indices in this area were considered in the review of literature on aesthetic preferences, which was conducted to achieve interpretable criteria for these components. The most important spatial criteria for each component that shared a common conceptual sense and played a significant role in those theories were selected and related to the relevant components. As a result, reading the components of aesthetic experience and evaluating their relevant criteria (Table 1).

Research Methodology

This study aims to determine how to analyze people's evaluative reactions to their first-hand experiences of buildings in the real world. To this end, a phenomenography paradigm was proposed under the qualitative paradigm. Although phenomenography shares some similarities to phenomenology, they are different[2]. The phenomenography approach originates from an experimental basis rather than a philosophical one; hence, it adopts a specifically predefined method of analyzing experience through an organized approach in proportion to the objective of this study. In fact, phenomenography is a method of analyzing a spectrum of people's different views regarding the description, representation, and explanation of experience by studying diversity and

Table 1. The components affecting the formation of architectural aesthetic experience and relevant criteria. Source: Authors.

Experimental Components of Architectural Aesthetics	Features	Criteria	Citable Criteria in Theories of Environmental Preferences
Perceptual Component	Morphological and structural features, characteristics, and configuration of a building such as proportion, rhythm, scale, color, light, shade, hierarchy, geometric/spatial system, and locational relationships resulting in perceptual experiences.	- Complexity (diversity, richness of patterns, scaling, contrast, entropy, visual richness, information, and combination of elements) - Cohesion (unity, order, sequence, transparency, unification, and organization)	Kaplans's Theory (Kaplan & Kaplan, 1989) Bell (2012), Nassar (1997), Herzog (1992)
Motivational Component	The summation of environmental variables, the effects of which result in the subjective activity of humans and their biased feelings and behavior.	- Novelty (newness and uniqueness) - Contrast (inconsistency) - Ambiguity (complexity) Surprise (excitement and stimulation)	Emotional Model (Russel & Mehrabian, 1978)
Sensory-motor Component	The features that result in a sense of spatial exploration and curiosity through the perception of the five senses and the sensory induction of motion (e.g., direction, gravitation, balance, motion, continuation, and continuity)	- Legibility (wideness and openness, transparency, clarity, visual/motor penetrability, persistence, and continuity) - Secret (exploration and curiosity) - Immersion (sensory richness) - Dynamic interaction	- Berlint's Theory (Berlint , 2010, 2013) - Kaplans's Theory (Kaplan & Kaplan, 1989) Rapoport (1990) Herzog (1992)
Cognitive Component	The perceptual experience emphasizes perceivers' knowledge and affects their aesthetic judgments under the effects of various factors such as meaning, memory, history, culture, social class, personal characteristics, prior analysis, interest, and preference.	- Acquaintance (style and archetype) - Meaning (sign, symbol, et al.) - Awareness (historical importance) - Prior experience (motivation for association and memory stimulation)	- Cognitive Evaluation Theories (Carlson, 2009) Nassar (1994), Herzog (1992)
Emotional Component	Positive emotional processing is performed through the emotional evaluation of a place in the form of aesthetic feelings. Individuals respond emotionally to situations in different ways (not a fixed way).	Positive emotional indices: joy, pleasantness, happiness, favorability, and desirability	- Emotional Model Russel & Mehrabian (1978) Ulrich (1983)
Behavioral Component	The characteristics that lead to the practical desires of humans in an environment through spatial stimulation potentials. The motivation for proximity means the desire to approach a stimulus or avoid a stimulus.	- Proximity-avoidance (willingness to end, expand, repeat exposure to an architectural space) - Presence in a space (the time spent in a space) - Affordance (invitingness) - Efficiency (willingness to do an activity)	- Kaplan's Theory (Inspired by Appleton's Theory of Survival) Appleton (1987) - Vartanian et al.'s studies Vartanian et al. (2013, 2015) - Gibson's Theory (1986) Gibson (2014)

variety in the experience of a specific phenomenon (Mohammadpour, 2018, 411). Nevertheless, it lacks a theoretical framework or a hypothetical comparison approach (ibid., 415). Thus, a phenomenography study seeks to improve the perception of different ways of experiencing a single experience by collecting and combining data obtained from the effects of external and internal factors on the studied phenomenon. Apparently, the dominant approach is to ask questions by discovering various experiences and placing them together. Phenomenography takes a secondhand approach, focusing on what is learned from the research subject rather than what the researcher thinks about it (ibid., 413). In contrast to phenomenology, phenomenography emphasizes public awareness, emphasizing the significance of focusing on this approach in this study.

- **Case study**

A case study is an experimental search attempt that analyzes a phenomenon in a real-world context. Therefore, a few major factors were taken into account to select the type of building in this case study: 1) The building should be designated as public so that a group of people can be present in it. 2) It should be used in a specific way to be of high functional importance to the current generation

and, 3) Access to a diverse range of building type samples should take into account changes in architectural style, situation, and period. As a result, the researcher can evaluate the effect that culture or a specific time might leave on the contemporary experience. Therefore, Tehran's cultural landmarks were selected as a case study in accordance with the above factors. In this step, the researcher started to conduct a field analysis on buildings with cultural applications on two scales: an atomistic scale and a holistic scale. The atomistic scale includes the researcher's presence on-site for the analytical perception of physical elements and spatial features of buildings by conducting a survey, capturing photos, and taking notes. The features of multiple cases of cultural landmarks were read and identified on a holistic scale resulting from the atomistic contemplation and analysis. Hence, two experts selected several prominent buildings having the potential to affect the user experience. Finally, three buildings were selected that differed in terms of morphological features, styles, construction time, and architectural details: 1) City Theater of Tehran, 2) Niavaran Cultural Center of Tehran, and 3) Mellat Cineplex.

- **Statistical population**

This study aimed to analyze the aesthetic experiences of people known as the space users (apart from architecture and experts). Thus, an informed purposive sequential sampling technique was employed to select the participants because it was impossible to evaluate all of them in the research process. In fact, there is no prescribed sample size in a phenomenography study, and research data should be collected until the researcher feels that the rich concepts of various experiences have been acquired to facilitate perception. Hence, the sample size is ensured when the results of the data remain controllable until the saturation level is reached. Having bachelor's degrees or higher education, 21 males and females aged 30–45 years old expressed willingness to participate in this survey. The incremental sampling strategy was employed to introduce participants to the research process.

- **Data collection method**

Following the distribution of preliminary information to the participants, they were instructed to visit all three buildings consecutively on the same day. This method converted the passive analysis of space into active exploration, which would result in a dynamic visualized perception and a multifaceted experience through interaction with a space. Therefore, different participants visited the buildings during several consecutive stages. In other words, two or more participants were present during every visit. After the participants finished visiting a building, they participated in a semi-structured interview individually in that building. The interview questions were primarily designed to provide a context in which participants' evaluations could be compared by assessing the components of interest and their roles in the formation of aesthetic experience. Therefore, the interview questions were revised by two experts to enhance the content validity. The interviews were then repeated to emphasize the preferences and evaluations of individuals as stimulating questions. After the interviews were conducted at the end of the visits, the participants filled out a preference test form (i.e., a preference ranking form). The survey was carried out until no new evidence of data was obtained to reach the sampling saturation level. In fact, the data gathering was repeated when the saturation level was reached. In other words, the thorough analysis of data was conducted through "synchronization analysis", which means that data analysis was performed at the same time as theoretical sampling through continuous comparisons and interview questions. Finally, a few additional interviews were conducted to confirm the theoretical saturation and end the sampling process.

- **Research validity and reliability**

The findings were validated based on three principles: 1) using multiple references (triangulation), 2) creating case study databases, and 3) retaining

a logical chain of evidence. Dependability, the accuracy of collected data or believability (validity), and the accuracy of methodology implementation (reliability) were taken into account (Flick, 2006, 413–420). In phenomenography, reliability depends on the repeatability of results. It is possible to achieve quality and stability in data analysis through appropriate methods; hence, reliability is of the conversational type resulting from an agreement between the researchers in this study. It was achieved through discussion. The content-coding of interviews ensured the stability of expressions, themes, and main concepts through the regular reduction of data. Thus, the codes of each category were classified after their positions were agreed upon (Table 2).

Data Analysis

In the analysis of phenomenography, a "concept" is the major unit of description. In fact, every concept indicates a method in which the phenomenon of interest is experienced. Phenomenography does not analyze people's experiences holistically but attributes a structure and certain elements to structures. It considers every concept to include a diagram that depicts a structure of knowledge. The structure of an experience consists of two interwoven aspects, the first of which is a "referential aspect" that depicts the raison d'être of a phenomenon and the general meaning of the conceptualized theme. The second one is a "structural aspect" that refers to a deeper meaning of a phenomenon and the constituent components of a phenomenon. It also shows the mixture of features distinguished and focused on (Marton & Yan Pong, 2005, 335). Hence, every knowledge diagram includes an external horizon (what), meaning the perceptual boundaries and a way of separating the constituent components of a specific phenomenon and associating them with each other and to all of them. This is an internal horizon (point of attention and quality) including constant and variable aspects that have been separated (Bruce, Pham & Stoodley, 2002, 4). The external horizon depicts a part of the world in which the participants see their surroundings in a specific way but cannot see beyond them. In other words, the external horizon describes the concept from their perspective; however, the internal horizon represents their specific point of attention. Hence, phenomenography emphasizes the association of different meanings in a specific framework known as the structure of experience. This structure shows the nature of experience as a chain of meanings in a hierarchical structure. Despite the analysis of concepts obtained from different people's experiences in this structure, the association of meanings is independent of individuals and emerges in the general context of the "outcome space", which is the general indicator of a phenomenon and interrelated structures.

Ultimately, the outcome space gives a holistic image of mutual relationships between different views of people in a structure (ibid.). In the first step, the inferential research method was employed and through theoretical coding process the phrases were separately extracted and coded them under the titles related to the main themes. In the primary analysis process, differences and similarities of codes were analyzed repeatedly to avoid overlaps. The final codes were then clustered and summarized

Table 2. The research validation technique. Source: Authors.

Technique	Explanation
Construct Reliability	- Collecting theoretical data from many sources provide various scales for the perception and evaluation of the phenomenon (i.e., architectural aesthetic experience). - Making the proposed theoretical framework flexible to acquire rich, multifaceted experiences of the research phenomenon. - Triplicating the interview questions to acquire a comprehensive perception of people's aesthetic experiences.
Internal Reliability	Selecting specific cases to enrich data based on authenticity and accuracy (reliability)
External Reliability	Selecting specific cases for theoretical repeatability (generalizability)

separately in content to extract the general concepts. The descriptive categories (i.e., the main extracted contexts) were determined by analyzing the general structure of preferences through the modification and revision of phrases. Furthermore, descriptive categories represent the axial meanings of concepts, similarities, and differences to explain, analyze, and perceive a phenomenon. After the categories of description are generated, they are frequently revised to reach maximum adaptability and consistency with the codes. In other words, the title of a category and its concepts were determined by screening the main themes extracted from the interviews. According to analytical induction, the extracted descriptive categories are characterized by the "experimental categories" based on people's experiences. In fact, the mentioned utility factors were coded as general themes and specific phrases. In the next step, the factors that were conceptually and contextually close or had holistic and atomistic relationships were classified as one thematic category. After that, five descriptive categories were extracted and named 1) morphology and configuration, 2) perception, 3) motor, 4) cognition, and 5) emotion. These descriptive categories were made abstract based on the common meanings of some concepts. Each category explained a separate part of the phenomenon.

The referential elements were then classified as conceptual categories. When the conceptual categories were generated, the categorization process was based on technical terminologies through the analysis and comparison of codes for convergence on the concepts reviewed in the theoretical research foundations (Table 3). Following the primary coding of descriptive categories, the structural descriptions of data were categorized in the second step, known as secondary coding. In other words, descriptions were converted into specific categories and themes matching the theoretical research model, and the relevant categories were explained through secondary coding in the descriptive conceptual structures of every building. After that, typology was performed. In this step, the conceptual categories were summarized as much as possible, and the experience structure was developed with respect to the minimum conceptual categories. The results were repeatedly double-checked. The interview transcripts and conceptual categories were thoroughly examined to ensure that no common concepts formed two distinct categories, for the experience structure should be as simple as possible to minimize chances of reinterpretation. This moderation and regulation process was carried out until concepts were fixed. Finally, all of the extracted concepts represented a dimension of experience independently (Fig. 1).

The following are the six main extracted themes: The criteria affecting an individual's experience with respect to their descriptive categories indicating the formation of an individual's attention are referred to as perceptual and motivational components. Sensorimotor components and cognitive-behavioral components refer to the type of experience with respect to their descriptive categories indicating subjective effects on an individual's experience. Finally, there is the emotional component that refers to the effectiveness of an experienced phenomenon

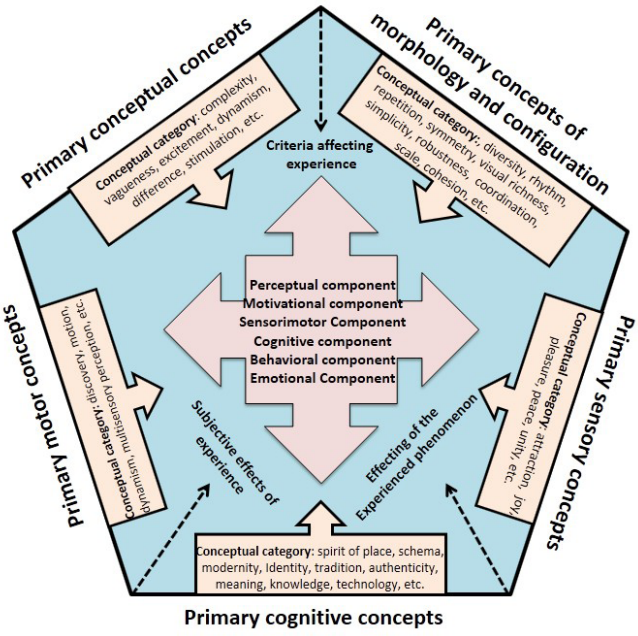

Fig. 1. The process of extracting components based on secondary coding and descriptive-conceptual categories. Source: Authors.

Table 3. An instance of primary coding, general categories, and referential elements extracted from City Theater of Tehran. Source: Authors.

Descriptive Categories	General Themes Extracted from Primary Coding of City **Theater**	Titles of Conceptual Categories
Primary concepts of morphology and configuration (morphologic)	Fine combination of façade and its elements; large scale with tall height; many details; special interior design; combination of various materials; rotational and symmetric; tent-like exterior form; creative design of the exterior area; subtlety of exterior tilework; interior reliefs; interior design of wooden doors and windows; decorative details; subtle details; combination of materials; use of traditional materials such as bricks in combination with cyan and green tiles; colorful tiles; decoration; geometric shapes; grandiose and exaltation; circular building representing ancient architecture; proximity to nature in a park; details and decorations of interior bodies in coordination with the façade; detailed decorations; repetition; symmetric; cylindrical building, rotational fountains and use of causeway in the exterior environment; fenceless exterior design and openness in all directions resulting in the view of building from all angles; curved stairs and platforms around the building platform; creative design of exterior and interior walls; appropriate relations of different sections in the building; subtlety of design in façade and attention to details in interior design; feeling of greatness in interior space; hustle and bustle of the environment; coordination of function and form of building; accurate efficiency of building; combination of traditional design with elements of modern art in the area; superhuman scale; decoration of spaces; dominant sound of water in the exterior environment; multipurpose space design in the exterior environment including platforms and stages of play; combination of wood and metal in the corners of building; many height differences in the environment resulting in the dynamism of location; sidewalk leading to building step by step; diversity in covers of floors.	- Diversity - Rhythm - Repetition - Proportions - Visual richness - Scale and size - Cohesion - Coordination - Details Symbolism (association) Symmetry - Visual adaptability
Primary perceptual concepts	Infusion of excitement and emotion; motivation for constant visits; surprise; wonder; positive complexity; specialness; exterior-interior coordination of the building; effectiveness; visual adaptability; unity; difference; difference; mysteriousness in interior turns and curves; liveliness; feeling of dynamism; interior-exterior homogeneity; organization; clarity; creativity and innovation from past until now; interior mysteriousness.	- Unity - Stimulation - Dynamism - Mystery - Difference - Uniqueness
Primary sensory concepts	Stimulation of curiosity from interior space to exterior space and vice versa due to the absence of a visual outlook; understandable space; gradual movement in space; specific and clear routes for motion; movement through symmetric pillars all around the building; movement through different levels between building and environment; attention to human motion path from the environment to the building; extensive space for moving around the building.	- Feeling of curiosity - Spatial exploration - Legibility - Motion hierarchy - Continuity
Primary cognitive concepts	Authenticity; Iranian architecture; nostalgia and feeling of attachment to the building; reminiscence of the past; antiquity; traditionalism; identity; formation of cumulative memories; use of local elements; authenticity; feeling of attachment; Iranian symbol and design; reminiscence of old buildings; attention to traditional symbols all over the building; decorations inspired by Islamic models; Iranian identity; social environment; use of ancient and traditional models; consistency with culture; familiarity of space to visitors; physical bondage of building with history; the possibility of social interactions in different spaces of this complex; manifestation of traditional and local values.	- Familiarity - Identification - Awareness - Old style - Association - Paradigm (Archetype) - Association of specific meanings - Spirit of space (location) - Symbol - Local elements - Attachment
Primary feeling concepts	Iranian aesthetics; attractiveness; interestingness; **uniqueness;** specialness and distinguishability; feeling of robustness and grandiose; feeling of security; feeling of liveliness; feeling of distinguishability and difference; creativeness; grandiose; innovation; intactness and uniqueness; diversity; pride; feeling of power; excitement; attraction; favorable effectiveness.	- Attraction - Loveliness - Enjoyment - Pleasantness - Positive feeling - Aesthetics - Favorability - Feeling of amiability

with respect to its descriptive categories evaluating that phenomenon. After the six main components were determined, the general criteria describing the features of each component in their conceptual structures were classified as four more general themes for every component through axial coding. In other words, the concepts of every component extracted from axial coding were classified with respect to the closeness of themes in smaller categories with closer meanings. In general, four main criteria were determined for every component to cover the relevant concepts (Table 4).

Table 4. The typology of components based on descriptive-conceptual structures extracted from secondary coding. Source: Authors.

Secondary Coding of Descriptive Categories	Secondary Coding of Conceptual Categories	Typology of Extracted Components
Criteria affecting attention	Development of an individual's attention	Perceptual/Motivational
Awareness of the effect of a phenomenon on the type of experience	Subjective effects affecting experience	Sensorimotor/Cognitive/Behavioral
Effectiveness of an experienced phenomenon	Phenomenon-based evaluation	Emotional

In this step, the relevant categories and concepts of an individual's experience of pleasantness were reviewed and explained in a bid to reach more general criteria for every component and determine the relevant propositions in the analytical process to compare and fix the aesthetic preferences of users in all three spaces. In other words, axial coding was implemented to determine a set of conceptual categories related to the structural concepts extracted from the axial coding in every building to reach more general criteria related to the components. Hence, every concept extracted from the structural concepts of each component in secondary coding was converted into more general criteria based on its frequency and semantic closeness in every building. They were then made more accurate through axial coding. The structural and referential aspects of the criteria were made accurate to explain the nature of components based on their conceptual categories and extracted themes (Tables 5 & 6). In the third step, the status of each component was measured on a five-point Likert scale to compare people's preferences based on the frequency of relevant criteria. The results of comparing the components of City Theater are as follows: 1- emotional (4.76), 2- perceptual (4.58), 3- motivational (4.42), 4- cognitive (4.28), 5- behavioral (4.22), and 6- sensorimotor (4.21). Moreover, the results of comparing the components of Niavaran Cultural Center are as follows: 1- emotional (3.91), 2- sensorimotor (3.67), 3- cognitive (3.5), 4- perceptual (3.39), 5- behavioral (3.33), and 6- motivational (3.14). Finally, the results of comparing the components of Mellat Cineplex are as follows: 1- emotional (3.67), 2- sensorimotor (3.6), 3- behavioral (3.53), 4- perceptual (3.39), 5- motivational (3.28), and 6- cognitive (3.06). The total means of components were reported as 4.37, 3.85, and 3.[37] for City Theater, Niavaran Cultural Center, and Mellat Cineplex, respectively. Based on the preference evaluation forms, preferences were ranked on a three-point Likert scale to evaluate people's aesthetic priorities. According to the surveys, 76.92% of evaluated priorities selected City Theater as the first building, whereas 69.23% selected Niavaran Cultural Center as the second building. Finally, 61.54% selected Mellat Cineplex as the third building. Hence, the correlations between all components and aesthetic preferences were taken into account, something which indicates the effects of components on people's aesthetic preferences. In fact, all components and every single component were considered more beautiful in City Theater than in the other two buildings.

According to inferential analyses and common findings of people's preferences, it is possible to determine the external horizon (perceptual boundary) and internal horizon (point of attention with constant and variable aspects) of experiences. In each building, people's aesthetic experiences are evaluated in four main conceptual categories: 1) contextual qualities of the building, 2) relationships organizing the human–environment contact in the same context, 3) additional concepts and relationships pertaining to an individual's subjectivity, and 4) indication of the effectiveness of experience in the same context. Therefore, this conceptual classification can be based on two scales: 1) spatial scale and 2) processing scale. Internal and external horizons are assigned to each of these two scales; thus, these conceptual categories are related and integrated into a larger structure called the "outcome space" to depict a more comprehensive and multidimensional image of different concepts regarding the aesthetic experience (Table 7).

Table 5. An instance of secondary coding, the extracted structural concepts, and their relationships with every component in City Theater of Tehran. Source: Authors.

Analysis of Structural Concepts of Every Component in City Theater of Tehran					
Perceptual component	**Motivational component**	**Sensorimotor component**	**Cognitive component**	**Behavioral component**	**Emotional component**
Diversity (color, form, and material)	Surprise	Movability in space	Iranian identity	Appropriate use	Attraction
Coordination	Stimulation	Feeling of dynamism	Traditionalism	Willingness to stay in the space	Pleasantness
Rhythm and repetition	Novelty	Sound of water	Unity	Frequent visits	Interestingness
Scale	Excitement	Rotational motion	Antiquity	Invitingness of building	Loveliness
Symmetry	Mystery	Motion hierarchy from the environment to the building	Uniqueness (specialness)	-	Aesthetics
Visual richness (colors)	Difference	Concentrated visual perception in motion	Prior knowledge (familiarity)	-	Positive feelings
Grandiose	-	Potential of location for the use of motor senses	Reminiscence	-	Joy
Proportions	-	Peripheral (environmental) view	Prior experience	-	Interest
Cohesion	-	Diversity in the stimulation of tactile senses	Reminiscence	-	Pleasantness
Subtlety	-	Concentrated view	A feeling of attachment to a place	-	Liveliness
Special exterior form	-	Legibility	Meaning	-	Happiness
Attention to details	-	-	Urban symbol	-	-
-	-	-	Spirit of a traditional place	-	-

Table 6. The analysis of structural and referential dimensions of general criteria related to the extracted components. Source: Authors.

Conceptual Category	Criteria with Referential Dimensions (What)	Criteria with Structural Dimensions (How)
Main themes	What is perceived? How are the perceived ele?ments related	The meaning of what is perceived
Components	People's experiences of the concepts	Interpretation of an individual experience
Perceptual	Diversity/cohesion/visual richness/scale	-
Motivational	-	Surprise/vagueness/Complexity/contrast
Sensorimotor	Multisensory perception/sensory immersion/legibility/curiosity and exploration	-
Cognitive	-	Familiarity/meaning (content)/awareness/prior experience
Behavioral	Affordance/efficiency/avoidance-proximity/durability	-
Emotional	-	Attraction/joy/loveliness/feelings

In the fourth step, selective coding was implemented to link data. In other words, the propositions were classified as central or core categories. The analytical results of this step were presented as the "outcome space" indicating the real experiences of users in a space. The same phrases and data were

Table 7. The organizing structure of the outcome space. Authors.

Descriptive Categories	Conceptual Categories	Structural Elements
Contextual qualities of an architectural work - Features organizing the human–environment contact	Spatial scale	- External horizon: physical features affecting the feeling of utility - Internal horizon: effectiveness of environmental stimuli (constant and variable elements)
- Additional concepts and relationships of an individual's subjectivity - Indication of the effectiveness of the experience	Processing scale	- External horizon: meaningful aspects of indices affecting the perception of pleasantness - Internal horizon: emotional evaluation resulting from an experience (constant and variable elements)

taken into account in the final analysis to form the outcome space, which presents a combination of the minimum number of different descriptive categories to explain the highest diversity of a phenomenon of interest. The outcome space or the output space introduces the mutual relationships between different methods of aesthetic experience as a structure and internal consistency. Hence, four conceptual categories were determined in selective coding. They can be defined particularly as different descriptive categories for every work of architecture. These descriptive categories include a complete structure of each concept or structural description; therefore, this space indicates both the phenomenon (i.e., an architectural work) and different methods in which the phenomenon was experienced (Fig. 2).

Discussion

Each component had the highest value in the City Theater of Tehran, which was evaluated as the first building. This finding indicates the effects of both each and all components on people's preferences resulting in the highest value of aesthetic experience through a real-world experience of the space.

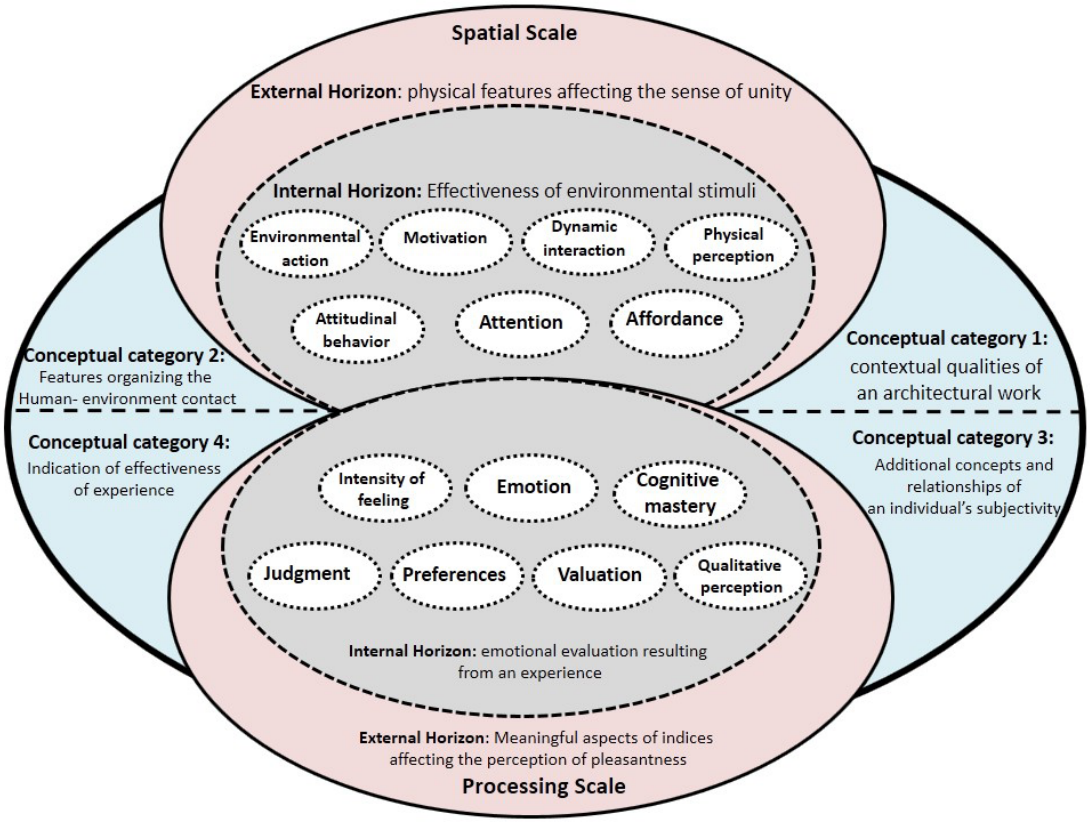

Fig. 2. The outcome space resulting from the structural elements of aesthetic experience. Source: Authors.

Therefore, the combined effect of all components, as well as the individual effect of each component, were taken into account. Moreover, people's aesthetic preferences were ranked as 1) City Theater, 2) Niavaran Cultural Center, and 3) Mellat Cineplex, for which the emotional component was reported at 4.76, 3.91, and 3.67, respectively. In comparison with the other experimental descriptors, the high rank of emotions indicated that the resultant internal status (i.e., emotional effect) had a key role in an individual's aesthetic experience. The relationship between the perceptual characteristics of spaces and their emotional effects on aesthetic experiences was the focus of the present study. Hence, the emotional component is a component having the greatest effect on the intensity of creating an aesthetic experience in the three selected buildings. Following the effect of the emotional component, there were other effective components. The users responded emotionally to the perceptual components, i.e., the morphological features. For instance, the perceptual components (e.g., rhythm, symmetry, coordination, and cohesion) were much more prevalent in City Theater than in the other two buildings, and the users responded differently to the perceptual factors of this architectural work. The effect and intensity of this component were not preferred by the visitors to the other two buildings. Hence, perceptual features were considered strong stimuli for sensory factors, emotional experience, and emotions in comparison with the other components. In fact, the users experienced different emotional stimuli based on the physical features of an architectural building, and the perceptual component was the main stimulus of emotional experience.

After the perceptual component, the cognitive component is an important factor in stimulating the emotional component. According to the findings, this component affected preferences in Niavaran Cultural Center and City Theater through the presence of cognitive elements (i.e., the signs of Iranian architecture, traditional symbols, and identity orientation). It had the least effect on Mellat Cineplex, known as a modern building. Furthermore, the three buildings had clear differences in terms of motivational components. In fact, motivational components were perceived differently in each building through environmental stimuli. In other words, motivational factors stimulated emotions in spaces, and they were perceived differently by everyone in every building. Therefore, every space elicited a wide range of aesthetic feelings from the users that were perceived differently as motivational factors affecting the emotional experiences and evaluations. After the perceptual component, the motivational component was the most important factor affecting preferences in City Theater; however, it ranked among the last factors in the other two buildings. Nevertheless, the users responded to motivational factors differently. According to the results, motivational factors were overlooked by the users of the space. Apparently, these factors were not adequately tangible. In fact, they affected emotional stimulation latently to influence the experience. This component can most likely be described as a "latent component" that can influence other components and evaluations in a given context. However, perceptual, sensorimotor, and cognitive components can be considered the "evident components" because their effects on the resultant evaluation are clear from the perspective of users. The effectiveness of the behavioral component can be described as the "interstitial component" because their effects appear to take on conscious/unconscious forms in different experimental conditions and motivations as a result of different spaces. In other words, users react consciously/unconsciously to their spatial behavior at the same time as the stimulation of spatial experience and visualized perception. An instance is an individual's movement toward an exciting stimulus to approach it further consciously/unconsciously. Like the exterior elements of City Theater or the interior mirror work of Niavaran Cultural Center, this indicates an individual's active reaction that is affected by the spatial stimulation, thus moving emotional components (Fig. 3).

Therefore, the emotional components indicate a

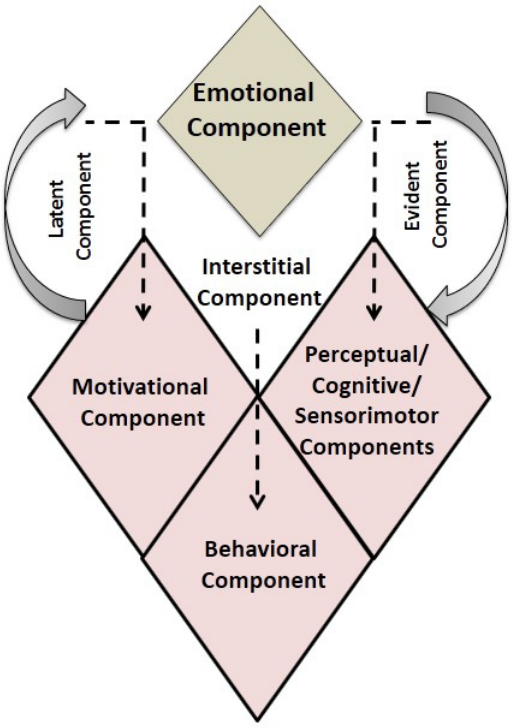

Fig. 3. The effectiveness of the emotional component is affected by the other components. Source: Authors.

balance between the internal and external points of attention. The external point of attention refers to cognitive perceptions, whereas the internal point of attention denotes sensory perceptions. Both are inextricably linked to the physical schema in a parallel manner. Hence, emotional evaluation can be divided into two main dimensions based on emotional components: 1) emotional states, and 2) emotional exchange. The emotional state includes a user's emotional and sensory experience; thus, its effectiveness was determined by examining the roles of perceptual, cognitive, and motivational components. The emotional exchange emphasizes the interaction between the user and the resulting spatial experience, incorporates emotional models into an interactive model, and assumes applied desires in an emotional state based on practical desires. Thus, the desire for another avoidance/proximity to a stimulus is considered a major dimension of emotion. The emotional exchange is based on the users' interaction and their spatial experience; moreover, sensorimotor and behavioral emotions act as the factor affecting the emotional interaction and the resultant emotional evaluation. It can then be concluded that the two main dimensions of the emotional component, i.e., emotional state and emotional exchange, and the factors affecting each of these dimensions explain user's aesthetic preferences, which play different roles in explaining and matching people's preferences in every building in accordance with configuration features and perceptual aspects (Fig. 4). According to the findings, the sensorimotor component had the greatest effect on the user experience equally in Niavaran Cultural Center (through the design innovation in the organization of spatial accesses) and Mellat Cineplex (due to the presence of ramps and symmetric slopes). In other words, the sensorimotor component had the greatest effect equally in these two buildings after the emotional component. Although this component had a greater effect on City Theater than the other two buildings, it had different priorities in evaluations. Therefore, the results indicate the effective role of the sensorimotor component in the emotional exchange. Moreover, the behavioral component had the greatest effect on evaluations in Mellat Cineplex. The most important feature of this building, according to users, was its use proportion. This component had equal effects on the behavioral aspects of users in the two other buildings; however, the behavioral component had the greatest value in City Theater than in the other two buildings. By contrast, this component had a different priority than the other components in people's evaluations. In general, the components were based on two major scales, the first of which is the spatial scale that includes the physical features affecting the sense of utility-related actually to the linked (communicational) structures of the human–environment contact. The second scale is the processing scale, including the meaningful aspects of indices affecting the perception of pleasantness forming valuation structures. These two scales were developed to analyze people's experimental responses. The spatial scale includes the environmental stimuli for the evaluation of aesthetic experience through perceptual analyses and resultant emotional states, whereas the processing scale addresses a user's

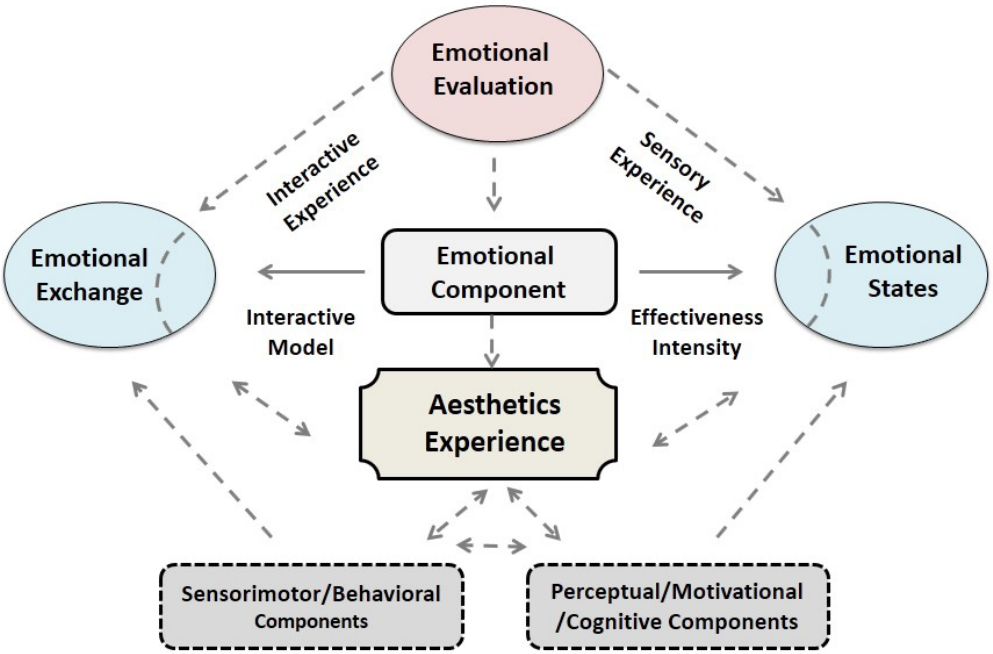

Fig. 4. The role of the emotional component in the emotional evaluation affecting the architectural aesthetic experience. Source: Authors.

aesthetic preferences of spaces through the emotional exchange for emotional evaluation. These two scales can be thought of as the two extremes of a component spectrum. At one extreme of the spectrum, there is the spatial scale that includes perceptual, motivational, sensorimotor, cognitive, behavioral, and emotional components. The other extreme of the spectrum is the processing scale. In the middle of the spectrum, there is the interaction of user–space actions acting as the main communicational loop between the chain of components in the process of perceiving the aesthetic experience. If this spatial interaction is absent, the function of each component will be disrupted during the aesthetic experience. For instance, certain criteria such as diversity, cohesion, visual richness, and surprise indicate effective differences on the spatial scale, whereas other criteria such as sensory immersion, invitingness, avoidance/proximity, attraction, feelings, love, and joyfulness indicated effective differences on the processing scale. Moreover, certain criteria such as multisensory perception, exploration and curiosity, legibility and identification, and awareness have unconscious effects on an individual's body posture and motor perceptions on the processing scale. They also have unclear effects on experience. These effects are indescribable because they occur unconsciously as a result of physical (body) monitoring in the space (Fig. 5).

Conclusion

To answer the research questions, it can be stated that each component (i.e., 1) perceptual, 2) motivational, 3) sensorimotor, 4) cognitive, 5) behavioral, and 6) emotional) had effective roles in the aesthetic perception process from a user's perspective of architectural aesthetic experience. In fact, the role of each of these components on architectural aesthetic experience is highlighted differently depending on the features of each building, with each component and its feedback being variable. However, when an individual's aesthetic experience of an architectural work is at its highest level, the maximum effects of components and the separate effect of each component are highlighted. When all components are placed in an experimental process to complete each other, they can maximize this experience. Under four main themes, the components have different effects on the perception of aesthetic experience: 1) contextual qualities of the building; 2) relationships

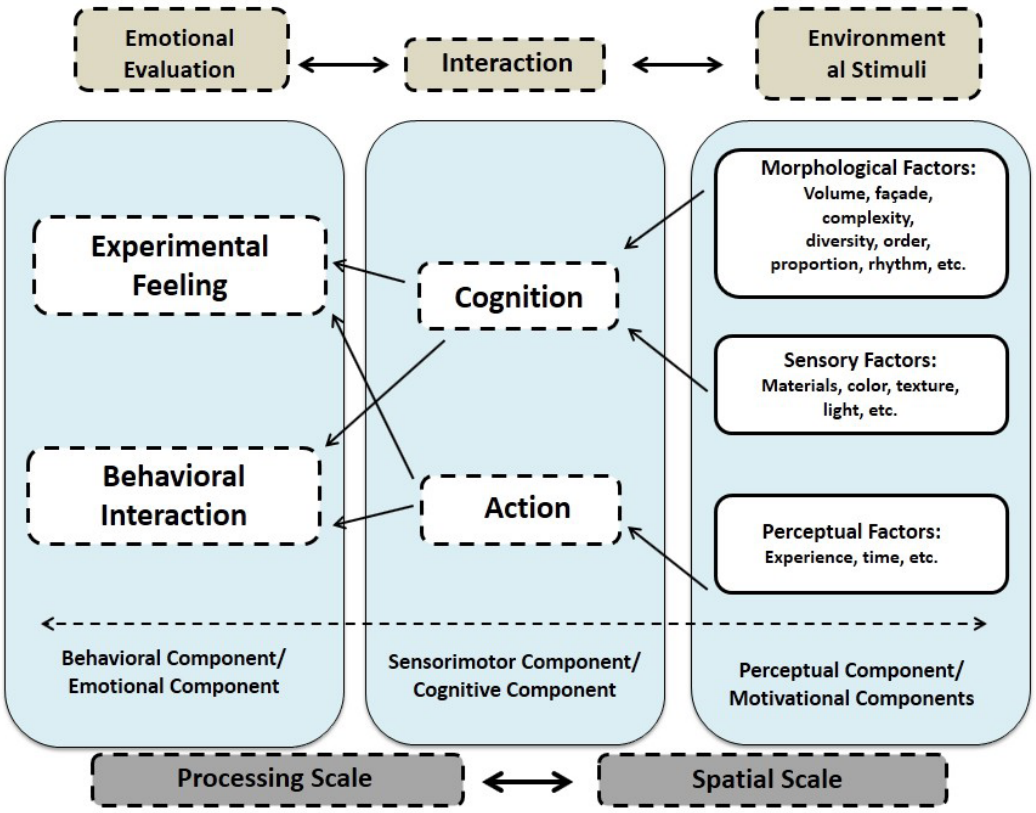

Fig. 5. The spatial scale and the processing scale in evaluating people's experimental responses to aesthetics. Source: Authors.

organizing the human–environment contact as the external contexts including the human–environment link structures, which develop interactive models of humans and places through the functions of architectural work; 3) additional concepts and relationships pertaining to an individual's subjectivity; and 4) an indication of the effectiveness of experience as the internal contexts that can be considered the valuation structures. In fact, these structures develop human evaluation approaches to the architecture based on emotional models and make their aesthetic preferences. On the spatial scale, the functions of elements and architectural spaces organize an individual's experience of the environment through the potential existing in the space to take action. For this purpose, the motivational and sensorimotor components of humans are activated to develop the architecture–human contact space. This contact space leads to the locational experience, physical position, physical feelings, and motor changes in relation to the locational structure in a visualized experimental-locational scenario. More importantly, this can affect the main features of perceptual components of humans. Therefore, the architectural experience is developed directly based on the interaction between human visualization and the functions of physical features on the spatial scale. By contrast, the environmental information is received through senses on the processing scale and is then associated with the additional concepts and relationships of an individual's subjectivity resulting from the process of perceiving aesthetics. In fact, individuals' emotional models are activated at this point of time and are then formed through their evaluative approach in the form of aesthetic preferences (Fig. 6).

In response to the second question, it can be stated that emotional reactions (i.e., the effects of emotional components) are more prominent than the other components. The greatest effect on the aesthetic experience came from the emotional component, for the architectural aesthetic experience is inevitably limited to the first person. Therefore, an individual gains the aesthetic experience of the place during a specific period. If only a large portion of their

subjective activity remains single over time and is mixed with the perceptual and cognitive features of the architecture that are focused upon through stimulation potentials, human perceptions will encounter "emotional evaluation" in terms of a single experience with the place. Hence, the architectural aesthetic experience means the emotional evaluation of an experience with the perception of space based on a direct approach through perceptual, motivational, sensorimotor, cognitive, and behavioral features emerging as a combination of different sensory imaginations (e.g., joy and pleasantness). Thus, the following are the features that can be considered key factors in this experience: acceptance and experience of a place as an open quality through attention; perception through a sensorimotor experience in combination with memory and imagination; stimulation of an individual's perceptions through the sense of new probabilities; bilaterality, which refers to the dynamic exchange, continuity, and interaction with the space for the conversational and participatory methods of individuals and the space. Since the main function of human cognition development is the perceptual function resulting from interaction with the environment developing based on the accumulation of knowledge as well as the emotional effect, what is perceived as joyful is based on the identifiable models of emotional mechanisms. This is not a trivial issue, especially when it comes to architecture that results in ever-lasting fundamental changes in human knowledge.

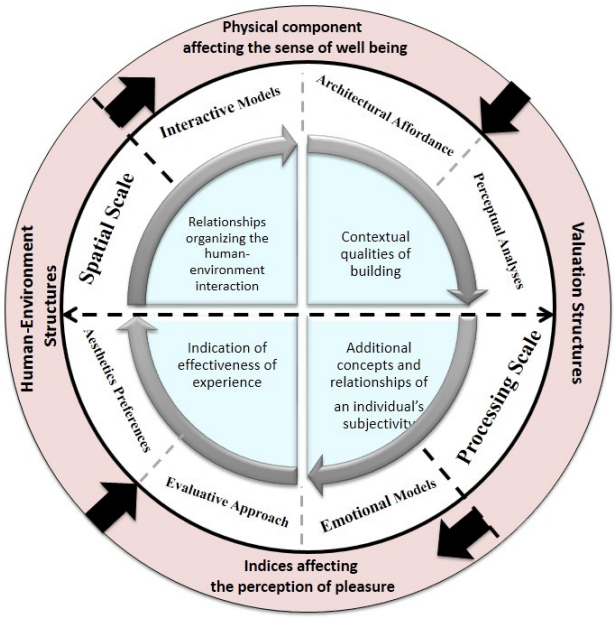

Fig. 6. The conceptual model of constituent structures of the architectural aesthetic experience. Source: Authors.

Endnotes

1. A lived experience is a direct perception that an individual acquires in a specific context or situation; therefore, it is correlated with a kind of direct awareness.
2. Phenomenology investigates the common nature of a phenomenon by examining people's lived experiences.; however, phenomenography views people's various experiences of a single phenomenon from different angles and describes various ways in which a phenomenon emerges for different people in order to achieve a more in-depth insight into their experiences. In fact, people will not experience different aspects of a specific phenomenon in the same way. There is a spectrum of methods by which different people perceive a phenomenon. Phenomenology seeks similarities in people's experiences, whereas phenomenography analyzes differences in their experiences. Phenomenography describes different ways in which a phenomenon emerges in various people. It considers how a phenomenon is experienced, perceived, and conceptualized. This method helps describe qualitative differences but does not explain these differences; therefore, it is generally considered the same as phenomenology because it is a relatively new approach. However, it is not the same as phenomenology.

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