

Original Research Article

Discourse of Authenticity and Technology in the Theory of High-Performance Architecture: An Analytical Approach to the Concept of Innovation in Monumental Buildings

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Abstract

Problem statement: How to map the future appearance of architecture and the future architecture is one of the enduring questions in research on architectural history and theory. Formulating this problem requires an analytical reading of High-Performance Architectural Theory with a focus on the concept of contemporaneity. Funerary monuments in Iran dating from 1921 to 1978 provide relevant cases through which this question can be investigated.

Research objective: This study aims to map the future image of Iranian architecture based on the concept of contemporaneity in contemporary monuments, thereby developing the semantic capacities that contribute to shaping emerging horizons in the design of monuments.

Research method: The study adopted a mixed methods approach based on an exploratory sequential design, comprising a qualitative phase followed by a two-stage quantitative phase. The qualitative phase employed documentary research and thematic analysis of the discourse of high-performance architecture, resulting in the identification and organization of latent themes across 17 monuments. In the quantitative phase, the authors first developed an eight-item questionnaire whose content validity was confirmed through expert judgment and internal consistency was established with a Cronbach's alpha of 0.80. Eight selected monuments were then evaluated by experts in architectural history and theory, and the resulting data were analyzed using the nonparametric Friedman test in SPSS 22.

Conclusion: The findings indicate that the concept of innovation within the discourse of high-performance architecture can be explained through the meaningful relationship between authenticity and technology. Authenticity encompasses shape and form, design-organizing principles, and relationship with the surrounding environment, while innovative technology comprises materials and construction technology. The quantitative findings further showed that the Avicenna Mausoleum in Hamedan exhibited the highest level of representation of contemporaneity in the discourse of high-performance architecture.

Keywords: *Contemporary Architecture; Contemporaneity; High-Performance Architectural Theory; Authenticity; Technology; Architectural Innovation; Future of Architecture and Architecture of the Future; Monuments.*

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Introduction

Architecture can be regarded as a reliable source for understanding, interpreting, and communicating the sociocultural values of societies, as it provides the setting for human habitation and activities through architectural characteristics embedded in the design of the built environment (Majidi et al., 2023). Architecture has a spatial nature, and it is fundamentally the institutional capacity of form, functioning as an instrument, which enables a better representation of the nature of architectural space. Therefore, form and space provide the grounds for our cognition and perception of the diverse objective and subjective themes embedded in an architectural work. The identification of geometric coordinates and spatial characteristics in an architectural building depends on how order governs the physical elements of the building (Grütter, 2004); so that the mass-space system - as the basis of architecture - not only defines the elements that form architecture but also determines communication structures as well as physical-perceptual and physical-functional structures (Falahat & Shahidi, 2015). Accordingly, an architectural work is perceived through deepening and refining the physical-perceptual characteristics of mass and space, which requires explaining the three indicators of architectural ideation, including function, meaning, and structure. The perception of the architectural quality of monuments is no exception to this rule and entails a meaning beyond form, shape, and function (Nicolai, 2013).

The analysis of physical-perceptual characteristics to read the architectural monuments of the first and second Pahlavi periods mainly involves the emerging discourse of the interconnection between the previous traditions of Iranian architecture and the need to explain the concept of contemporaneity in architectural ideas. The necessity of the geometric-spatial analysis of monuments stems from the irreplaceable role played by these works in the continuity of history and territorial identity. By preserving the environmental authenticity and reflecting the essence of cultural traditions at a national scale, and through the institutionalization of physical, spatial, and identity values in the architectural

work as a medium, these buildings guarantee the preservation of cultural heritage and historical continuity and renewal of territorial identity. Thus, the design of monuments with the aim of preserving the modern artistic heritage and safeguarding the durability and authenticity of traditional arts in the transition from events and calamities requires attention to multiple considerations and requirements in the body and meaning of the work. The monuments of the first and second Pahlavi periods are largely the product of the ideas of architects who experienced academic architectural education, either within Iran or abroad, in the contemporary era. The lack of attention to the artist's mindset, the mode of the work presentation, and its content has caused the concept of contemporaneity in monuments to be ambiguous. In addition to simultaneity, contemporaneity requires awareness and understanding in relation to the world, time, society, and self (Taghavi & Kafshchian Moghadam, 2019).

Dynamism inferred from the concept of innovation may have more limited and specific manifestations within smaller human societies and any cultural situation in the world. Contemporary Iranian architects, like artists and architects in other countries, are products of their own time; therefore, the language of the works recreated in their present temporality reflects a deep connection between the two concepts of the past and the future. The motivation required to create an architectural work on the basis of contemporaneity presupposes the triple richness of knowledge, insight, and capability of the architect. This means that the internal dynamics embedded in an architectural work reflect the ideas materialized in the design and construction of architectural works.

Accordingly, the question of this research is to decode the concepts, ideas, and metaphors embedded in monuments constructed between 1921 and 1978, as the missing link of contemporaneity; and the analysis of the latent themes in funerary monuments as one of the instances of the available monuments based on the discourse of high-performance architecture constitutes the strategy for addressing this question. In other words, the discourse of high-performance

architecture as the grammar of the future architecture of Iran (Mahdavinejad, 2018), not only facilitates the rereading of architectural ideas in the monuments of the first and second Pahlavi periods but also reveals the possibility of explaining the categories of contemporaneity in contemporary Iranian architecture. Given that the levels of representation of contemporaneity in the monuments of this period span a broad range of indicators, it requires the adoption of both qualitative and quantitative approaches. The qualitative approach aims to develop the explanatory capacity of the phenomenon under study, and the quantitative approach, as an effective strategy, assigns the weight of each of the analytical axes of the discourse of high-performance architecture and prioritizes buildings based on these axes. More precisely, the mixed-methods approach shifts the research from the deep yet limited domain of qualitative data - such as documentary studies and thematic analysis - toward generalizability and statistical assessment. Therefore, through critical reflection and scrutiny in extracting the institutionalized meanings and signs embedded in the architecture of monuments of the first and second Pahlavi periods, it is possible to expand the conceptualization and formulation of geometric-spatial dimensions of architectural design principles at the intersection of emerging horizons of newly conceived elements in monuments (Diba, 2012).

Research Questions

1. What are the components of the concept of contemporaneity based on the discourse of high-performance architecture in monuments constructed between 1921 and 1978?
2. Do monuments constructed between 1921 and 1978 have different priorities in explaining the concept of contemporaneity based on the discourse of high-performance architecture?

Theoretical Foundations

• The concept of discourse

Discourse is a system of language that explains a specific terminology, encodes particular forms of

knowledge, and is often used to refer to knowledge systems and their associated functions at a specific time (Punch & Oancea, 2014). Discourse analysis is a qualitative research approach that studies and examines language with the aim of representing the construction of a social reality, especially within a social context, and is not merely indicative of what an individual thinks (Yin, 2015). Discourse analysis is concerned with how language is used, and by emphasizing the nature of language, it also investigates its social function, and thereby, the interaction between language and society is explained.

The concept of discourse and its analyses are grounded in cultural and epistemological foundations, and from a critical standpoint, any phenomenon may be formed in accordance with its specific social considerations and necessities, and the critic is the one who articulates these necessities in a context-oriented position. In general, when addressing the relationship between architecture and context, it is essential to refer to a set of data that determines the structure and general format of the architectural work and its relationship with the context (Ganji Kheybari & Diba, 2014).

• Discourse of high-performance architecture

The theoretical foundations of the present research are grounded in the theory of high-performance architecture (Mahdavinejad, 2022), which explains the formal-physical characteristics of the monuments of the first and second Pahlavi periods in architectural design as a subject of conversation between the work and the context (Mahdavinejad, 2017). The theory of highperformance architecture is the result of a systematic analysis of the existing situation (Mahdavinejad & Hosseini, 2019; Mahdavinejad, 2022; Mahdavinejad et al., 2025) in comparison with the desired conditions; and while referring to contemporary architectural theories, it demonstrates that the criticism of contemporary architectural works is often structured around five principal axes, including shape and form, principles that structure design, relationship with the surrounding environment, materials, and construction technology (Mahdavinejad, 2018). The present study also revisits

the discourse of high-performance architecture in the monuments of the first and second Pahlavi periods (Table 1) to analyze the examples of each building and explain the concept of contemporaneity at the intersection of the theoretical framework of high-performance architecture.

• The concept of contemporaneity

Posing questions such as who is contemporaneous with whom? Or what is contemporaneous with what? It is a critical movement to elevate the concept of contemporaneity beyond mere simultaneity to a level that results in the formation of a special relationship with time. Within such an approach, contemporaneity presupposes the perception of a concept of time that does not coincide with natural and calendar time; rather, it is a spectral and intensive phenomenon. In other words, contemporaneity is something that is represented along a broad spectrum with varying degrees. These degrees include relative intensity and weakness and are not fundamentally absolute and instantaneous. The questions of who and what our contemporaries are have been raised by Giorgio Agamben when explaining the concept of contemporaneity (Agamben, 2010). In his epistemological geometry, contemporaneity is a critical presence in the present, awareness of crises, and dynamic dialogue with times.

Although thinking within the horizon of contemporaneity requires recognizing the lifeworld of

one's own era, the contemporary thinker continually maintains his active and critical relationship with presentism through critical thinking. In doing so, while maintaining his distance from the present, he is trying to avoid an immersion in the abyss of attachment to presentism and reductive levels of thinking confined to the prevailing norms of the present.

Although understanding the past and prior lifeworlds, as well as surviving in the present and common-sense rationality, fall outside the domain of contemporaneity, the contemporary thinker's relationship with the past and tradition cannot be denied. Understanding tradition and the past is a prerequisite for achieving contemporaneity insofar as tradition and the past persist within the present and presentism. In general, contemporary thinking is trying to be an observer of the dark sides of its own time, and while avoiding mere attachment to the present, it strives for a kind of authentic agency to visualize the emerging horizons of the phenomenon under investigation.

Contemporaneity is not a definitive point or moment, and the closer a contemporary thinker approaches it, the more it recedes. The contemporary thinker is acutely aware of the necessity of designing and expressing emerging values, and while dwelling within the history of the presentism, he journeys toward the unknown possibilities of the future. In this way, he rethinks the constructive linkage between the past,

Table 1. Analytical axes of the discourse of high-performance architecture in relation to the strategies presentable in the architectural design process of contemporary Iranian architectural works. Source: Mahdavejad, 2018.

No.	Analytical axes of the discourse of high-performance architecture	Strategies presentable in the architectural design process
1	Shape and form	Analysis of the philosophy of formation and principles of design of non-Iranian forms, rather than their formal imitation Avoiding an appearance-oriented approach to traditional Iranian architecture and a formal interpretation of past architecture, and paying special attention to the philosophy of the formation of existing forms in traditional Iranian architecture
2	Principles that structure design	Avoiding formal and stylistic engagement with traditional Iranian architecture, and attending to the concepts of Iranian Islamic architecture in the architectural design process
3	Relationship with the surrounding environment	Avoiding differences and undue emphasis on contrast with the surrounding environment, and connection with the design context, and emphasizing significant values that contribute to harmony between the design and the context of the formation of the architectural work
4	Materials	Attending to the appropriate and principled use of materials employed in traditional Iranian architecture Attending to the direct and indirect effects of using new and innovative composite materials, and examining the effects of their application on the audience
5	Construction technology	Improving the construction technologies in buildings of contemporary Iranian architecture to improve the construction quality and increase the functional lifespan of buildings

present, and future while observing the rereading and continuity of meaning. Contemporaneity criticizes ruptures, and while rereading history, it recreates new possibilities of engaging with the world of phenomena to find meaning.

• **Stylistics of contemporary Iranian architecture and urbanism**

The necessity of addressing the stylistics of contemporary Iranian architecture and urbanism arises from the fact that the monuments studied in this research were designed and constructed in the contemporary era. Explaining the analytical axes of the discourse of high-performance architecture requires analyzing the themes embedded in the stylistics of architecture of this era. In this regard, the studies by Haghir and Kamalnia (2021) have delineated three historical periods in contemporary Iranian architecture and urbanism as

modernity. The first wave of modernity in Iranian architecture and urbanism during the Nasser era was characterized by two styles, including European nineteenth-century eclecticism and the late Qajar style known as Iranian eclecticism. Subsequently, in a later classification, the new architectural styles of the first Pahlavi period were classified as the second wave of modernity in architecture and urbanism, situated within the Art Nouveau movement and divided into two anti-rationalist (primary) and rationalist (secondary) orientations (Fig. 1). The third wave of modernity in Iranian architecture and urbanism began in the second Pahlavi period, which included four levels (Table 2). Given that the temporal scope of the buildings studied in the present research spans from 1921 to 1978, the stylistic concepts associated with the second and third waves, the first and second Pahlavi periods, were

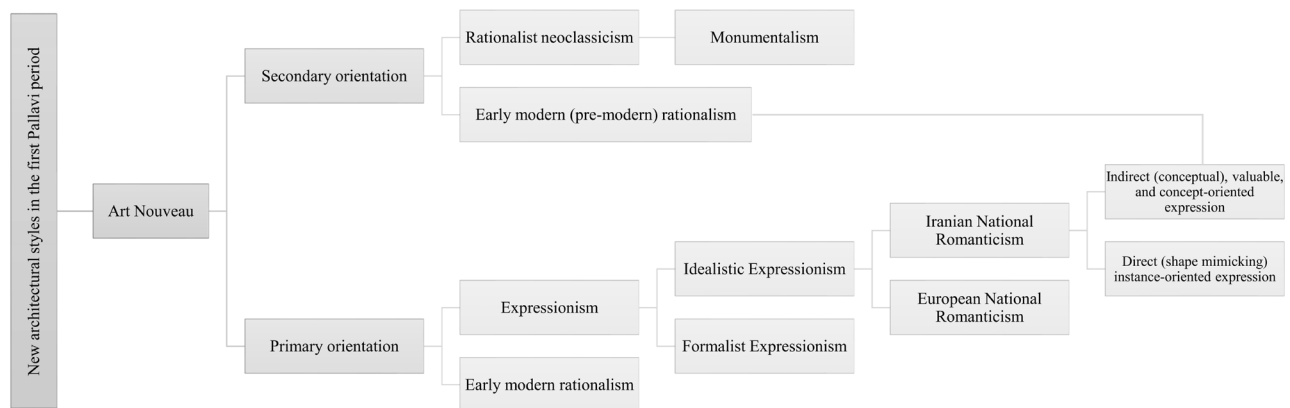


Fig. 1. Architectural stylistics of the first Pahlavi period. Source: Haghir & Kamalnia, 2021.

Table 2. Approaches contained in the third echo of modernity in Iranian architecture and urbanism. Source: Haghir & Kamalnia, 2021.

	Approaches	Examples
The third wave of modernity in Iranian architecture and urbanism	Modernist and entirely European approach	Architecture by Vartan Avanesian, Paul Abkar, and Mohsen Foroughi
	Nostalgic, elegiac, and memory-evoking approach (past-oriented approach)	Some works by Seyhoun, such as Dowlatabadi House, Seyhoun's residence and studio, the Amir Chakhmaq Square Bazaar in Yazd, the Mausoleum of Khayyam, and the Mausoleum of Kamal-ol-Molk
	Rational (Iranian rationalist) approach: Iranian modernist architecture	The Mausoleums of Avicenna and Nader Shah Afshar
	A kitsch approach to architecture	Kitsch past-orientalism, pursued under the guise of reviving Iranian-Islamic culture on the one hand, and incoherent imitations of Western postmodern architecture on the other hand, ultimately resulted in the absence of architecture and the construction of buildings lacking value. This approach predominantly emerged in the period following the Islamic Revolution and was characterized by a superficial appropriation of Iran's past architecture.

analyzed, and meanings were extracted to achieve the latent themes embedded in the monuments of this era.

Review of Literature

Numerous studies have addressed various dimensions of monumental architecture. Research by Mahdavinejad and Bahrami (2014) analyzed monumental works across a spectrum of seven indicators, including ideas that structure design, shape, and form in the building, identity, materials, construction technology, relationship with the surrounding context and environment, and monumentality. The course of research on contemporary Iranian monumental architecture in recent decades has often been accompanied by an emphasis on the fundamental components of monumentality such as geometry transparency, environmental adaptability, spirituality, tradition, and culture, a sense of unity, a sense of visual continuity, and construction details (Behzadfar & Keramati, 2017; Hosseini Nejad et al., 2023). Research by Hasanisaleh et al. (2021) aimed to discuss how materials and construction technology affect aesthetics, and relying on the objective identity of form, they attempted to compare the prominent monuments of the Pahlavi era. The criteria studied in their research included physical criteria affecting form, such as legibility, complexity, order, color, style, contextual compatibility, materials, differentiation, ground connection, proportions and scale, value, formal coherence, self-referencing, other-referencing, and shape. Adopting a ranking approach to prominent contemporary Iranian monuments in terms of fundamental characteristics, this study considered materials as the most important influential characteristic and shape as the most important component affected by the selection of attractive forms for monuments.

The description and analysis of the monumental architecture in the research conducted are not limited to the analysis of physical elements. Turkman et al. (2021) grounded their investigations in the semantic and metaphorical richness institutionalized within physical elements and considered the perceptual and associative prominence of monumental architecture to be made possible through components in the building's

body and its relationship with the social and cultural context. The research by Mollasalehi (2015) considered the monumental architecture as embodying meanings that invite future generations to reread and rethink the architectural work, and as a three-dimensional book, narrates the identity and historical-cultural heritage of cities to them. Additionally, given the content-semantic relationship of monumental architecture with the historical-social context of its era, some studies have sought to trace the origins of monumentalization and identify the components influencing the formation of such buildings. Considering the role that monumental architecture plays as part of the cultural-historical heritage of cities, the historical-social developments in Iran during the first and second Pahlavi periods provided the grounds for the formation of values that are considered the basis for the design and construction of contemporary Iranian monuments. Research by Yavari Kolour et al., (2020), aimed at explaining the political and social trends influencing the formation of contemporary Iranian funerary monuments between 1921 and 1978, identified developments such as Westernization, secularization, attempts to create national unity, attempts to change social charisma, the use of literary and national celebrities to realize nationalism, and ultimately the global self-assertion in relation to the West as among the most important factors shaping monumental architecture during this era.

Some of the analyses conducted in the field of monumental architecture focus on the role of monuments at the scale of urban design. The research conducted on urban design considered monuments, due to their physical-visual prominence, as urban landmarks and symbols of human ideals, goals, and activities. Contemporary Iranian funerary monuments, as one of the instances of the available monuments, relying on their symbolic and signifying function in cities, play a significant role in the physical configuration of the cities. Research by Attwa et al. (2022) indicated that monuments have often been placed as urban landmarks in a focal point, an important node or square, a park, or the city center, or any location imbued with the

memory of a significant historical-social event. Research by Torkaman et al. (2021) also emphasized the importance of urban physical factors, such as the degree of elevation and the effect of the monument on the permeability and legibility of the city, in understanding the role of monumental architecture within the physical domain of urban design. Moreover, in urban design discourse, monuments are regarded as critical factors shaping users' sensory-spatial experiences and fostering evocativeness within the urban space (Behzadfar & Keramati, 2017). Research by Shahed and Shahrudi (2018) considered the immortality of monuments in the collective memory to require their association with popular memories and their capacity to keep past events alive in the minds of citizens, particularly at the urban scale.

A critical review of the literature indicates that in seeking a principled reading of the architecture of contemporary Iranian monuments, scholars have always analyzed this category from two general perspectives: architecture and urban design. Studies that investigate monument design from an architectural perspective have discussed contemporary Iranian monuments using three approaches: physical and geometric-spatial analysis, perceptual-semantic analysis, and historical-cultural context analysis. Some of these studies focus on analyzing the physical configuration of monuments, such as location, form, and surfaces, as well as landscape components of monuments, such as water features, vegetation, and landscape furniture (Attwa et al., 2022). The second group of studies interprets the symbolic and meaningful richness of monumental architecture and examines how the messages latent in the context of monuments are communicated and transmitted. This approach encompasses semiotics, the reciprocal relationship between architectural design and human psychology, and the impact of architectural narratives on the user experience (Tarczyński, 2021). The third approach in research from this perspective considers the importance of monuments by recognizing the historical-social contexts in which monumental architecture has developed, including the evolution of architectural styles or influential historical-social events. Furthermore, the

intertwined relationship between monuments and the urbanization of spaces has directed scholars toward analyzing monumental architecture from an urban design perspective. Research indicates that monuments can be interpreted and analyzed through three approaches: the role of urban landmarks, the physical configuration of cities, and the construction of citizens' spatial experience and the evocativeness of space. According to what has been extracted from the literature review, the approaches employed by scholars to analyze contemporary monumental architecture have been presented in Table 3.

Research Methods

Considering the nature of the subject matter and the data collection method, the present study aimed to explain the concept of contemporaneity in monuments designed and constructed between 1921 and 1978, grounded in the discourse of high-performance architecture. Achieving this goal necessitated the adoption of a mixed methods approach using an advanced multistage framework based on an exploratory sequential design in three phases, comprising one qualitative phase and two quantitative phases (Fig. 2). The qualitative and quantitative data collected by the researchers were analyzed in such a way that the errors were minimized and the effective capabilities of qualitative and quantitative methods were used (Majidi et al., 2025), and thereby the research findings had more perceptual richness by carefully processing details (Creswell, 2015; Creswell & Clark, 2017).

In the complex exploratory sequential design, the research is mainly based on a qualitative approach. Therefore, the priority is given to collecting, analyzing, and interpreting data to describe and explain a phenomenon, identify elements of the emerging theory, and generalize qualitative findings to diverse samples. Such a method not only reconstructs the explanatory capacity of the research problem but also reveals latent layers of architectural characteristics embedded in the monuments of the first and second Pahlavi periods (Majidi et al., 2024; Majidi et al., 2025). The qualitative part of this research was conducted

through the documentary study and thematic analysis of qualitative data. The implementation of thematic analysis proceeded through an in-depth and iterative examination of textual data derived from available sources to attain an overall understanding of content related to monumental architecture. In the second

and third phases, meaningful segments of text were identified and extracted, similar codes were grouped, and initial themes were developed through systematic and rigorous examination of the dataset. In the fourth stage, the themes were reviewed through a reflexive and iterative process to do a detailed analysis and

Table 3. Analytical approaches to analyze contemporary monumental architecture. Source: Authors.

Context	Analytical approach	Research findings	Research approach	References
Architecture	Physical and geometric-spatial	Investigating and analyzing the physical factors of monuments, such as the ideas that structure the design, shape, and form in the building, geometry, materials, construction technology, adaptation to the environment, monumentality, transparency, and sense of unity	Qualitative Quantitative	Attwa et al. (2022), Mahdaveinejad & Bahrami (2014), Hassani Saleh et al. (2021), Behzadfar & Keramati (2017), Hosseini Nejad et al. (2023)
	Perceptual-semantic	Investigating the semantic-metaphorical richness of the monuments, encompassing the physical identity and cultural heritage of cities	Qualitative Quantitative	Torkaman et al. (2021) Mollasalehi (2015) Tarczyński (2021)
	Historical and cultural context	Investigating the historical-social developments influencing the process of formation of monumental architecture, including Iranian nationalism and efforts toward global self-assertion in relation to the West	Qualitative	Yavari Kolour et al. (2020)
	Urban landmark	Investigating the function of monuments as urban landmarks and symbols	Qualitative	Torkaman et al. (2021) Sert et al. (1943)
Urban design	Physical configuration of the city	Investigating the impact of monumental architecture on the physical attributes of the city, such as legibility and permeability, through its placement in cities and spatial enclosure	Qualitative	Attwa et al. (2022) Torkaman et al. (2021)
	Creating users' sensory-spatial experience and the evocativeness of the urban space	Investigating the impact of monumental architecture on the construction of sensory and spatial experiences of citizens, investigating the impact of monuments on the evocativeness of urban space.	Qualitative	Attwa et al. (2022) Tarczyński (2021) Behzadfar & Keramati (2017) Shahed, Shahrودي (2018)

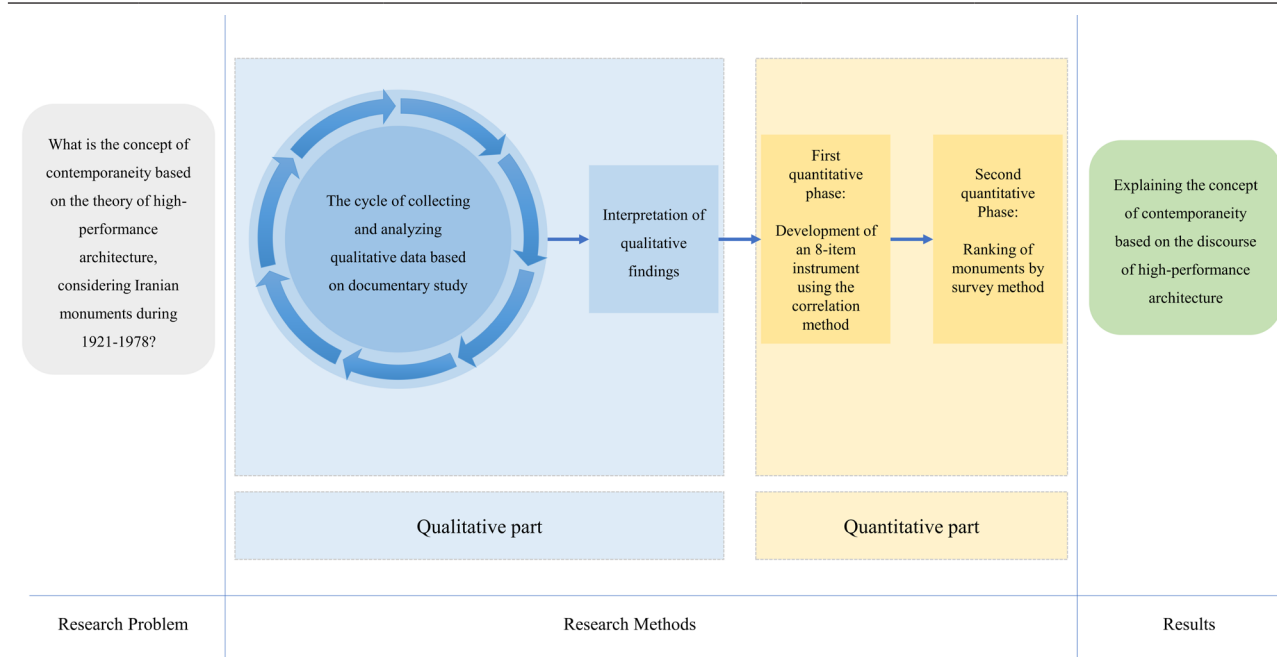


Fig. 2. Complex exploratory sequential mixed-methods research design. Source: Authors.

ensure greater coherence to assign themes to the initial codes. Coding is considered particularly significant because it establishes a central linkage between data collection and the development of explanatory capacity for addressing the research questions. Finally, through the detailed description of each theme in relation to each of the monuments, the themes were named (Clarke & Braun, 2013). In this way, the semantic patterns of data related to the architecture of the monuments were identified and interpreted, enabling a deeper understanding of the concept of contemporaneity. Accordingly, relative comprehensiveness, the exclusion of irrelevant instances, and flexibility were among the advantages of the thematic analysis in relation to the question of this research.

It should be noted that qualitative findings often generate rich insights, novel concepts, and nuanced and meaningful assumptions that may not be present in the literature. However, developing a questionnaire whose items are directly extracted from the findings of the qualitative phase ensures that the quantitative instrument is culturally and contextually relevant and meaningfully measures the phenomenon under study - independent of the researcher's subjective predictions. Therefore, the quantitative approach in the first phase aimed to construct an instrument suitable for measuring the identified attributes, and in the second phase, the validated instrument was used to examine their relative weights and priorities. The validated instrument enabled the identification of patterns and relationships in a larger sample, thereby extending the initial qualitative findings, which are typically characterized by semantic depth. In other words, a quantitative approach provides a relatively comprehensive understanding of a discovered qualitative theme.

In the process of quantification, prioritizing components extracted from qualitative findings adds another layer of analytical depth and pragmatism to the research. Prioritizing monuments does not mean listing themes; it allows for measuring the relative weight and priority of each concept within a broader population. Moreover, determining the weight of factors and quantitatively

prioritizing case samples is crucial insofar as it facilitates more precise pattern recognition and comparative analysis of concepts, ideas, metaphors, and semantic patterns institutionalized in monuments. In other words, the broader generalization of these ideas and metaphors, which are represented across a substantial spectrum of the five principles of the theory of high-performance architecture (Table 5), necessitates the combined application of qualitative and quantitative methods. The quantitative part was implemented in two phases. In the first phase, using a correlation method and through thinking over and a detailed rereading and interpretation of qualitative findings (Table 5), an eight-item questionnaire was developed by the authors. The content validity of the questionnaire was confirmed through expert judgment, and its reliability was verified using Cronbach's alpha coefficient of 0.8, indicating a high level of internal consistency of items and the total score. Accordingly, the technical characteristics of the developed instrument were sufficient to assess the research question. The second phase of the quantitative part was also implemented using a survey method, and the data analysis was conducted using the non-parametric Friedman test via SPSS version 22. In this analytical procedure, eight monuments were selected from the total sample of seventeen contemporary Iranian monuments based on expert judgment. In the next phase, the ranking of the monuments was carried out using a questionnaire completed by a population of experts in the history and theory of architecture. In this way, while explaining the concept of contemporaneity and clarifying the high performance of each monument, a broader perspective on the research problem was achieved.

Research Field

The research field comprised 17 monuments that were designed and constructed between 1921 and 1978 in different cities across Iran. The qualitative data for this study were collected from two sources: field observations of the monuments by the researchers and a review of textual, visual, and graphic documents related to each monument, which were then analyzed in detail and rigorously. Among the monuments examined, only

two, the Mausoleum of Ferdowsi and the Mausoleum of Hafez, dating respectively to 1934 and 1937, belong to the first Pahlavi period. However, studies by Bani-Masoud (2009) indicate that the design and construction of the Ferdowsi Mausoleum, due to the builders' lack of familiarity with soil testing techniques, lack of accurate calculations, and ignorance of the groundwater conditions in the Tus region, led to the structural settlement from the very first years; and after 30 years, Houshang Seyhoun proposed a new structure while preserving the original design. In Seyhoun's proposed design, the main facade of the mausoleum was retained, whereas substantial modifications were introduced in the interior spaces. The remaining 15 monuments were designed and constructed during the second Pahlavi period. The architects of these monuments designed them under the direct and indirect influence of Beaux-Arts educational traditions. In terms

of geographical distribution, out of 17 monuments, 6 are located in Razavi Khorasan Province, one in South Khorasan, 3 in each of Fars and Hamadan Provinces, 2 in East Azerbaijan, and 1 in each of Isfahan and Semnan Provinces (Fig. 3).

• Criteria for evaluating qualitative research

There are various methods for assessing the trustworthiness of data derived from the qualitative part. In the present study, drawing on the criteria proposed by Lincoln and Guba (1985) and aiming to improve the credibility of the findings, which is equivalent to validity and reliability in quantitative research, four criteria of credibility, transferability, dependability, and confirmability were adopted for evaluation (Majidi et al., 2025). The titles, definitions, and corresponding measures associated with these criteria have been presented in Table 4.

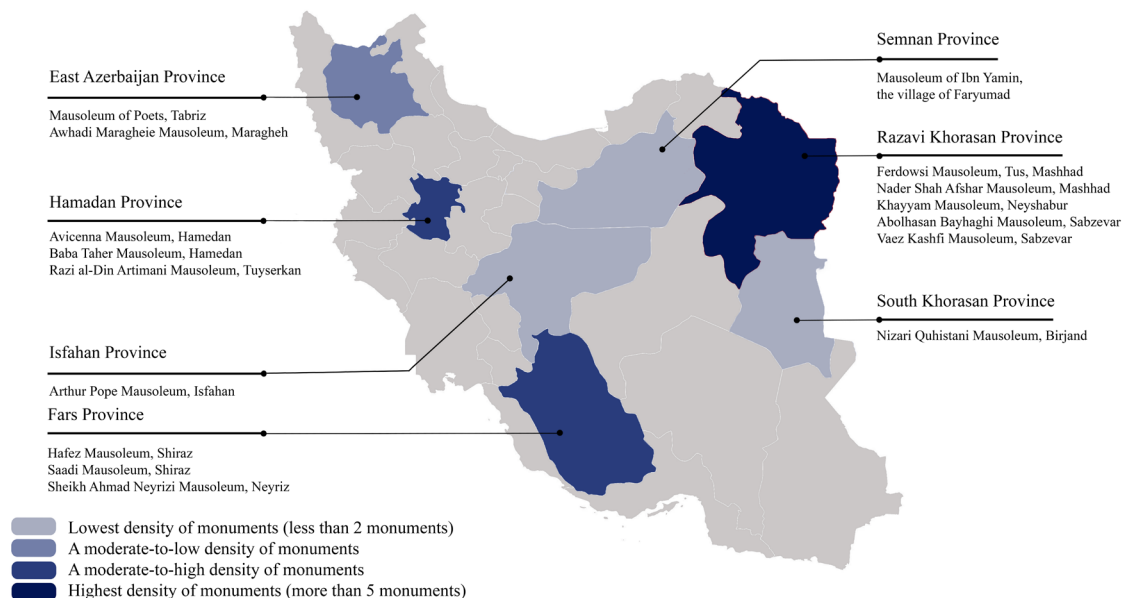


Fig. 3. Geographical distribution of monuments constructed between 1921 and 1978 in Iranian cities. Source: Authors.

Table 4. Criteria for evaluating qualitative research and the measures undertaken in the present study. Source: Authors.

Criteria	Measures undertaken in the present study based on the characteristics
Credibility	Confirmation of the plausibility of the researchers' interpretations and the validation of research data by five faculty members in architecture, specializing in contemporary architecture (peer checking)
Transferability	Application of data triangulation, drawing on documents and prior studies, as well as investigator/researcher triangulation through the involvement of a research assistant in the processes of data collection, analysis, and interpretation (member checking)
Dependability	Provision of sufficient evidence and documentation related to each monument under study, including comprehensive and precise descriptions of the investigated procedures, as well as the research context and conditions
Confirmability	Detailed explanation and clarification of the procedures for data collection and analysis

Table 5. Analyzed examples. Source: Authors.

Name & Location	Architect & Date	Monument	Shape & form	Authenticity		Innovative technology		References
				Principles that structure design	Relationship with the surrounding environment	Materials	Construction technology	
Ferdowsi Mausoleum, Tus, Mashhad	Karim Taherzadeh, 1934- original building Houshang Seyhoun, 1964- reconstructed building		Iranian National Romanticism (Conceptual paradigm)	Synthesis of past forms and concepts; a refined inspiration from the design of the tomb of Cyrus in Pasargadae and the ziggurat of Chogha Zanbil in the body of the building, a refined inspiration from elements of ancient Iranian architecture such as the columns of Persepolis in the details of the building (shape mimicking), a solid and closed form in the base and body of the building. Interior ornamentation: stone relief carvings.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, positioned on a platform in the style of stepped temples, collective configuration.	Iranian modern and postmodern materials, polished marble on the exterior, exposed concrete on the interior.	Concrete structural frame, application of modern engineering techniques to achieve a beautiful and robust facade.	(Bahr al-Olumi, 1976; 23-60), (Rajabi, 1976), (Shafei et al. (1985), (Mofid, 1986), (Aghaei Hafeshchani, 2016), Bani-Masoud, 2009), (Haghir & Kamelnia, 2021), Yavari Kolour et al. (2020)
Hafez Mausoleum, Shiraz	André Godard, 1937		Iranian National Romanticism (Conceptual paradigm)	Synthesis of past forms and concepts; eight stone columns integrated with muqarnas capitals, the placement of a copper dome in the form of a kolāh-fārangī atop the eight columns, symbolizing the dervish cap as a sign of Hafez's Sufi identity, the use of symbolic numbers in the design, and a porous and permeable form. Ornamentation: glazed Mo'araq tilework with rasmī-bandi patterns, arabesque motifs beneath the copper dome, Muqarnas cornice encircling the lower perimeter of the dome.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, elevated on a series of steps, single-building configuration.	Traditional Iranian materials combined with modern materials, brick, stone, and copper (gradual oxidation of copper and the emergence of a beautiful color effect)	Traditional structural frame, use of traditional techniques such as domes, arches, and Muqarnas.	(Bani-Masoud, 2009), (Ghobadian, 2013), (Nasr, 2004)
Saadi Mausoleum, Shiraz	Mohsen Foroughi, 1951		Modernist approach	Synthesis of past forms and concepts; inspiration from the Chehelsotun Palace in the porch and the application of a balcony form, inspiration from the Reza Shah Mausoleum in the body of the building, incorporation of Iranian-Islamic architectural elements, porous and permeable form. Ornamentation: Turquoise tilework on the entrance hall and interior surfaces, and the application of marble.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden elevated on a series of steps, and a collective configuration.	Iranian modern and postmodern materials, travertine stone on the exterior.	Traditional structural frame	(Bani-Masoud, 2009), (Bahr al-Olumi, 1976; 161-205), (Ghobadian, 2013)

Rest of Table 5.

Name & Location	Architect & Date	Monument	Authenticity		Innovative technology		References	
			Shape & form	Principles that structure design	Relationship with the surrounding environment	Materials		Construction technology
Avicenna Mausoleum, Hamedan	Houshang Seyhoun, 1951		Iranian rationalist approach Iranian modernist architecture	Synthesis of past forms and concepts; inspiration from the Gonbad-e Qabus (a structure contemporaneous with Avicenna) in the body of the building, 10 columns symbolizing Avicenna's millennium, a twelve-fluted tower symbolizing the multiplicity of sciences mastered by him, the explicit and implicit dominance of square geometry in the plan, elevation, and section, the solid and closed form at the base of the building and the use of granite stone in the façade, referencing ancient Greek architecture and symbolizing the rigor and solidity of Avicenna's philosophical domain (Peripatetic wisdom derived from ancient Greek philosophy), spatial transparency with a porous and permeable form in the tower. Ornamentation: Stone inscriptions executed in thuluth script.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, placed on an elevated platform, collective configuration	Iranian modern and postmodern materials, exposed reinforced concrete, granite stone, and hard stone.	Concrete structural frame, application of modern structural techniques using reinforced concrete.	(Maadani, 2017), (Ministry of Housing and Urban Development, 2008), (Bani-Masoud, 2009), (Haghir & Kamelnia, 2021)
Nader Shah Afshar Mausoleum, Mashhad	Houshang Seyhoun, 1963		Iranian rationalist approach Iranian modernist architecture	Synthesis of past forms and concepts; sculptural design and modern Brutalism enriched with symbolic references to Nader Shah's persona, including massive granite columns symbolizing Nader's grandeur, red coloration and protruding interior wall elements evoking warfare and defense, the body of the building recalling the black tents (Nader's place of residence), a rising sculptural tower embodying Nader Shah and his Qizilbash forces, the axe-shaped railings and metal door details symbolizing Nader's battles. Ornamentation: Interior cladding in ochre-colored marble.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, part of the building is placed at ground level, and another part elevated on a two-meter platform, in a collective configuration.	Iranian modern and postmodern materials, Kuh-Sangi granite on the exterior, reinforced concrete.	Traditional structural frame, incorporating modern techniques and reinforced concrete in parts of the building.	(Seyhoun, 1973), (Bani-Masoud, 2009), (Ghobadian, 2013), (Haghir & Kamelnia, 2021)

Rest of Table 5.

		Authenticity			Innovative technology			
Name & Location	Architect & Date	Monument	Shape & form	Principles that structure design	Relationship with the surrounding environment	Materials	Construction technology	References
Khayyam Mausoleum, Neyshabur	Houshang Seyhoun, 1963		Nostalgic approach (Past-oriented)	Synthesis of past forms and concepts; the ten divisions of the tower symbolizing Khayyam's profession as a mathematician, blade-like structural elements forming a five-pointed star, symbolizing his role as an astronomer; diamond-shaped tilework panels inscribed with Khayyam's quatrains in shekasteh nastaliq script, symbolizing his identity as a poet, for the first time in the history of Iranian architecture, the combination of shekasteh nastaliq script and painting in the decoration of the building the triangular and tent-like water basins around the tower, symbolizing Khayyam's name (Khayyam means tentmaker), porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, positioned on a very slight elevation, with a single-building configuration.	Iranian modern and postmodern materials, body: reinforced concrete, water features clad: travertine, stairs: granite, and tombstone: Mashhad black stone.	Steel structural frame with a stone-carved cladding.	(Bahr al-Olumi, 1976; 279-328), (Bani-Masoud, 2009), (Haghir & Kamelnia, 2021)
Kamal al-Molk Mausoleum, Neyshabur	Houshang Seyhoun, 1963		Nostalgic approach (Past-oriented)	Synthesis of past forms and concepts; intersecting arches as the principal element of the facade's body, symbolizing the arches of Iranian-Islamic mosque architecture, Mo'araq tilework ornamentation recalling the architecture of Kamal-ol-Molk's birthplace, Kashan, porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, building placed directly on the ground with no elevation differential, single-building configuration.	Iranian modern and postmodern materials, body: reinforced concrete, and tombstone: Mashhad black stone	Traditional structural frame.	(Shahed and Shahrudi, 1397), (Seyhoun, 1375), (Bani-Masoud, 1388), (Haqir and Kamil Nia, 1400)
Baba Taher Mausoleum, Hamedan	Mohsen Foroughi, 1965		Modernist approach	Synthesis of past forms and concepts; adherence to Seljuk mausoleums (Razi style), inspired by the Platonic volumes of modern sculptural architecture in the body of the building, application of Iranian-Islamic architectural elements such as ornamentation and tilework, porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, elevated and placed in the center of an urban square in Hamedan, a single-building configuration.	Iranian modern and postmodern materials, body: granite stone and white stone	Concrete structural frame, application of modern techniques, and reinforced concrete to enhance the building's stability.	(Bahr al-Olumi, 1976; 435), (Bani-Masoud, 2009), (Ghobadian, 2013)

Rest of Table 5.

Name & Location	Architect & Date	Monument	Shape & form	Authenticity		Innovative technology		References
				Principles that structure design	Relationship with the surrounding environment	Materials	Construction technology	
Arthur Pope and Phyllis Ackerman Mausoleum, Isfahan	Mohsen Foroughi, 1971		Nostalgic approach (Past-oriented)	Formalistic approach derived from past architecture; application of Iranian-Islamic architectural elements such as pointed arches, brickwork, and tilework with arabesque and khataei motifs and symbols of Isfahan style, solid and closed form, and brick ornamentation.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, positioned on a very slight elevation, with a single-building configuration.	Traditional Iranian materials combined with modern materials, brick body, and concrete domes.	Concrete structural frame, application of modern techniques, and reinforced concrete.	(Ghobadian, 2013), (Bahr al-Olumi, 1976; 419)
Avthadi Maragheie Mausoleum, Maragheh	Hossein Jodat, 1973		Modernist approach	Synthesis of past forms and concepts; integration of Iranian-Islamic architectural elements and modern architecture, application of symbolic shapes and numbers, porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, the building is positioned on an elevated platform, in a collective configuration.	Iranian modern and postmodern materials, reinforced concrete, stone, and brick.	Concrete structural frame.	(Bahr al-Olumi, 1976), (Yavari Kolour et al., 2020)
Abolhasan Baynaghni Mausoleum, Sabzevar, Sheshtamad	Hossein Jodat, 1974		Modernist approach	Synthesis of past forms and concepts: use of Iranian-Islamic architectural elements such as vaults and arches, porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, the building is positioned on an elevated platform, in a collective configuration.	Traditional Iranian materials, brick, rubble stone, and lime.	Traditional structural frame, use of prefabricated components	(Bahr al-Olumi, 1976; 602)
Nizari Qulistani Mausoleum, Birjand	Hossein Jodat, 1974		Nostalgic approach (Past-oriented)	Formalistic approach derived from past architecture; application of Iranian-Islamic architectural elements such as vaults, tilework ornamentation, and calligraphy.	Harmonious with the surrounding environment, observing homogeneity, positioned atop a series of steps, with a single-building configuration.	Traditional Iranian materials, brick and stone.	Traditional structural frame.	(Bahr al-Olumi, 1976; 651)

Rest of Table 5.

			Authenticity		Innovative technology			
Name & Location	Architect & Date	Monument	Shape & form	Principles that structure design	Relationship with the surrounding environment	Materials	Construction technology	References
Sheikh Ahmad Neyrizi Mausoleum, Neyriz, Fars	Houshang Seyhoun, 1975		Nostalgic approach (Past-oriented)	Synthesis of past forms and concepts; application of Iranian-Islamic architectural elements, porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, positioned at ground level, single-building configuration.	Traditional Iranian materials combined with modern materials, brick, and stone.	Traditional structural frame.	(Bahr al-Olumi, 1976)
Mausoleum of Ibn Yamin, the village of Faryumad	Architect unknown, 1975		Nostalgic approach (Past-oriented)	Synthesis of past forms and concepts; revival of traditional Iranian architecture through the design of a twelve-fluted tower, the hexagonal form of the building evoking a blooming flower, the body of the building recalling Sarbedaran's hat, a porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, positioned on an elevated platform, with a single-building configuration.	Traditional Iranian materials, the use of indigenous materials such as brick and rubble stone.	Steel structural frame, a combination of concrete foundation and twelve steel columns.	(Bahr al-Olumi, 1976; 588)
Mausoleum of Poets, Tabriz	Gholamreza Forouzanmehr, 1976		Iranian rationalist approach Iranian modernist architecture	Synthesis of past forms and concepts; angular vaults of the building's body symbolizing the arches of Iranian-Islamic architecture, inspiration from Iranian-Islamic ceiling structures in the geometry and form of the internal body of the building, porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, the building is positioned on an elevated level, with a single-building configuration.	Iranian modern and postmodern materials, reinforced concrete.	Steel structural frame, reinforced concrete used as the building envelope.	(Bani-Masoud, 2009), (Bahr al-Olumi, 1976; 686)
Razi al-Din Artimani Mausoleum, Tuysarkan, Hamadan	Gholamreza Forouzanmehr, 1976			Formalistic approach derived from past architecture; application of Iranian-Islamic architectural elements such as brick vaults and tilework ornamentation, porches on four sides, porous and permeable form.	Harmonious with the surrounding environment, observing homogeneity, the building is positioned atop a hill, in a single-building configuration.			
Vaez Kashfi Mausoleum, Sabzevar	Ahmad Farahbakhsh, 1977		Kitsch approach to architecture	Formalistic approach derived from past architecture; an incoherent imitation of Iranian-Islamic architectural elements such as brick vaults, tilework ornamentation, and porches, employed to satisfy immediate and transient popular tastes.	Harmonious with the surrounding environment, observing homogeneity, employing the Persian garden pattern, elevated on a series of steps, collective configuration.	Traditional Iranian materials, brick, rubble stone, lime, and tilework.	Steel structural frame.	(Bahr al-Olumi, 1976; 595)

Results

The monuments listed in [Table 5](#) were designed and constructed over nearly half a century, between 1921 and 1978, during the first and second Pahlavi reigns. Using the documentary study method, the concepts embedded in the samples of monuments were identified and classified under each of the components of the high-performance architecture. Based on the concepts listed in [Table 5](#), the components of shape and form, principles that structure design, and the relationship with the surrounding environment have a semantic correspondence with the category of authenticity; and the components of materials and construction technology have a semantic correspondence with the category of innovative technology. Using a design-oriented approach, research by Pourbagher ([2024](#)) has also pointed out the challenge between authenticity and innovation as one of the most influential stylistic developments in the rheology of art and architecture. Although her studies have conceptualized the category of authenticity around the five components of highperformance architecture across buildings with a variety of functions- ranging from recreational and sports buildings to religious and residential buildings - the present study, adopting a complex exploratory sequential mixed-methods approach and analyzing exclusively examples of monuments from the first and second Pahlavi periods, has studied authenticity and innovative technology under the theory of highperformance architecture to provide broader horizons for problematizing future research by doing more precise analyses and creating more clarity and distinction.

Discussion and analysis of qualitative findings

The intersection of the five axes of the highperformance architecture with each of the buildings resulted in the explanation and representation of themes embedded in the concept of contemporaneity of Iranian monuments constructed between 1921 and 1978; so that the explanation of parameters such as the period of design and construction, the stylistic identity of each building - based on the classification proposed Haghir and Kamelniya ([2021](#)) - the description of geometric configurations, spatial characteristics, and physical characteristics associated with each monument as a heritage of contemporary

Iranian architecture ([Damir et al., 2024](#)) places the current research at the level of conceptual ordering. In this way, the grounds are provided for the formulation of emerging horizons within the newly conceived elements of the architecture of monuments.

The monuments of the first and second Pahlavi periods were commissioned by the National Heritage Society. The criteria for selecting the monuments were the historical period and the availability of reliable documents and sources for examining the design and construction contexts of the monument ([Table 5](#)). The research by Yavari Kolour et al. ([2020](#)) used a sociological approach to explain the impact of social and political trends of the first and second Pahlavi periods on the formation of contemporary Iranian mausoleum monuments, and classified the factors affecting the selection process, the form, and structure of the monuments along a spectrum ranging from Westernization and secularism to efforts toward national unity. The continuity of the architecture of monuments in the second Pahlavi period was due to the cultural context of the society, in which variations in form and details were largely influenced by architects' individual approaches and global artistic developments.

The National Heritage Society of Iran, as an influential civil institution, aimed at accelerating the modernization of contemporary Iran by transforming the collective mindset of Iranian society during the Pahlavi era. The strategies aligned with this objective involved, on the one hand, changing Iran's cultural foundations and formal-semantic affinity with the West, and on the other hand, negating traditional and religious worldviews. The physical basis of this objective and the strategies corresponding to it provided the grounds for the emergence of contemporary Iranian mausoleum architecture. Thus, the design of the monuments of the first and second Pahlavi periods can be considered consistent semantically with the perspective of the continuity of the concept of contemporaneity ([Taghavi & Kafshchian Moghadam, 2019](#)). Additionally, despite their fixity within specific temporal and spatial frames, the artistic dimensions of the monuments of the first and second Pahlavi periods are not limited to them and may continue to manifest in future artistic contexts.

Amid the socio-political developments of the Pahlavi era,

the architecture of most monuments was formed with the aim of reviving national values and reinforcing the Iranian-Islamic identity. According to Seyhoun (1962), drawing inspiration from Iran's past architecture should not be reduced to the construction of broken arches and tilework; rather, the mission of the contemporary Iranian architect is to understand the spirit of traditional architecture rather than utilizing its techniques.

The ideas that structure the design and content of these works have provided a platform for the appropriate synthesis and interaction of tradition and modernity, symbolism, and presentation of abstract concepts in design, commitment to purity and transparency of form, and engagement with geometry and ornamentation. Moreover, one of the most critical concerns consistently addressed by architects of contemporary monuments is the development of a mechanism for the architectural design process based on planning and programming, the relationship and perceptual interaction of the designer with the environment, respect for the context of the design, and particular attention to the Persian garden pattern (Mahdavinejad, 2018). Additionally, contemporary monuments are mainly made of the affinity and coexistence of traditional materials with modern materials, such as the combination of brick, reinforced concrete, stone, and tile ornamentation, and the use of traditional, steel, or concrete structural systems.

Shape and form are the most important and tangible elements perceived by space users, which have always been designed and implemented in the monuments of the first and second Pahlavi periods under two dominant trends. The shape and form of contemporary Iranian monuments constructed in the first Pahlavi period are categorized under the secondary orientation of Art Nouveau, which emerged as the pioneer of Iranian national romanticism and was expressed through both conceptual (indirect, value-laden, and concept-oriented) and shape-mimicking (direct and instance-oriented) approaches. The monuments of the second Pahlavi period are categorized under the nostalgic, melancholic, and memory-evoking (past-oriented) approaches. They are also classified as the Iranian rationalist attitude or Iranian modernist architecture (Haghir & Kamelnia, 2021).

The principles that structure the design are a strategy for representing architectural ideas within monuments. The concepts contained in the three orientations of Iranian national romanticism, nostalgic attitude, and Iranian rationalist attitude (Haghir & Kamelnia, 2021) confirm the quest for national identity in the first and second Pahlavi periods. Relying on the above three orientations, architects of this era made serious efforts in creating concepts for designing monuments to integrate formalism and conceptualism, so that they adopted principles from past architectural forms, such as the tomb of Cyrus for the Ferdowsi Mausoleum and the Gonbad-e Qabus for the Avicenna Mausoleum, when organizing the form and space, while recalling past architecture when incorporating profound architectural concepts such as introversion, ambiguity, reflection, and transparency and using ideas such as mathematical formulations and abstract geometry in the Khayyam Mausoleum and providing the grounds for the interaction of tradition and modernity in the architecture of contemporary monuments.

Symbolism and presentation of abstract concepts in monuments such as the Hafez, Avicenna, and Nader Shah Mausoleums are the generators of design ideas and the creators of the spirits that govern the product of architectural design, which confirms the concept of contemporaneity while inviting the audience to discover the latent layers in the work, reinterpreting a kind of mutual reaction with the architectural work, and effectively interacting with it (De Maison Rouge, 2010). For example, Avicenna's millennium has been symbolized by constructing 10 cylindrical columns located in the front portico and the twelve sciences mastered by him through 12 vertical planes in the tower (Bani-Masoud, 2009), explaining the concept of contemporaneity by establishing a dynamic and continuous dialogue between the past, present, and future while observing the reinterpretation and continuity of meaning.

Purism has been formed in the Avicenna Mausoleum by raising 12 vertical planes in the tower section and creating spatial porosity and transparency instead of using a solid volume; and the rhythmic nature of the vertical planes with reinforced concrete materials in the tower section represents the movement of futurism.

Therefore, the synthesis of purism and futurism in the tower section draws the observer's attention from the surroundings to the inside to reveal the tombstone as a symbol, and thus represents a type of cubist ideas in the design of this monument (Haghir & Kamelnia, 2021). In other words, such metaphorical ideas in the building of the Avicenna Mausoleum explain a unique example of the concept of contemporaneity under the dialectic of authenticity-technology. The research by Ghobadian (2013) also indicates that Seyhoun's architectural conceptualization in the design of the Avicenna Mausoleum was based on avoiding any formal-figurative imitation of traditional Iranian architecture and not repeating the past. Therefore, drawing inspiration from Gonbad-e Qabus can be due to the contemporaneity of Avicenna's lifetime with the time of its construction (4th century AH). Regardless of the similarities between the Gonbad-e Qabus and Avicenna Mausoleum in form, which emphasize the individuality and separation of the building from its surroundings, the location of the former on a natural hill and the location of the latter on an artificial platform are other aspects of the similarity between the two buildings. Citing Seyhoun (1996), Bani-Masoud (2009) argues that the colonnade of the front portico and the solidity of the artificial platform in the main facade refer to ancient Greek architecture. Furthermore, the twelve-fluted tower in the upper part of the building, beyond the historical reference to the Gonbad-e Qabus of the 4th century AH, symbolizes the multiplicity of Avicenna's sciences and philosophy at the forefront of them. The combination of the artificial platform with granite in the lower part and the reinforced concrete tower in the upper part indicates the establishment of the Avicennian Peripatetic wisdom upon the foundations of ancient Greek philosophy.

Semanticism and the priority of meaning over words are characteristics of Hafez's poetry and thought, and have been manifested in the architectural design of his monument. Simply put, it is Hafez's words and poetry that occupy the center of the architect's attention in the architectural design process as a source for metaphorization and mythmaking. One of the most

important features of Hafez's poetry is brevity, and André Godard has expressed broad meanings in the architecture of this building by using limited elements; restrained words yet eloquent, imaginative, and poetic expression. The apex of meaning-making in the Hafez Mausoleum is achieved through the design of a dome resembling a dervish's cap, clad in copper rather than precious metals, which rusts over time to be metaphorically a reminder of Hafez's Sufi identity and a description of the life of dervishes and Qalandars, marked by detachment from the world. The entire architecture of the mausoleum is distilled into 28 columns, a dome, and its covered portico. A total of 28 columns are used in the design of Hafez's Mausoleum, comprising 20 columns in the portico and 8 columns supporting the dome. The number 28 corresponds to the number of syllables in the ramal poetic meter, which is considered the common meter of Hafez's poems. In Hafez's Divan, 115 ghazals out of a total of 495 are composed in this meter.

Another characteristic of contemporary Iranian monument-making is the pure and transparent physical expression, free from any redundancy or exaggeration in presenting the conceptual content of the design. The ornamentation in contemporary monuments, while simple, is a manifestation of the values of Iranian-Islamic architecture, and the elevated art of calligraphy has mainly been combined with tilework. The use of the thuluth script in the interior inscriptions of the Avicenna Mausoleum is an unparalleled innovation in representing the solidity and rigor of Peripatetic wisdom, and the shekasteh-nasta'liq script on the vertical geometry of the frames in the Khayyam Mausoleum effectively relegates the philosophical temperament of this eminent Seljuk-era poet-philosopher. Although the use of nasta'liq script in the Saadi Mausoleum aptly exposes the didactic literature of the undisputed master of word land to be decoded by an audience familiar with Iranian culture and civilization, the application of the thuluth script in the inscriptions surrounding the Hafez Mausoleum cannot be regarded as a suitable medium for expressing the romantic sonnets of the renowned ghazal poet of the 8th century AH.

By their attentiveness to indigenous materials alongside the application of innovative composite materials,

architects of monumental buildings have been the pioneers of Iranian modernism in the contemporary architecture of the Pahlavi era. Seyhoun considered Iranian architecture to be independent of foreign materials. In his view, an architect can create a valuable artistic work even with raw clay. Imported materials and costly stones or metals cannot compensate for a flawed basis in architectural design (Seyhoun, 1962). The most important element used in the design of monuments is brick, and the persistent and deliberate use of brick in contemporary Iranian architecture embodies not only durability and resilience but also profound aesthetic and identity-based values. The brick cladding on the building makes it look authentic and enduring (Mahdavinejad, 2017). Furthermore, the application of concrete materials in several monuments, such as the Nader Shah Mausoleum and the Avicenna Mausoleum, combined with free forms, presents a brilliant image of Iranian modernity.

The relationship with the surrounding environment and the connection with the context are considered the missing link in the analysis of contemporary Iranian architectural works. By emphasizing the lack of identity in the context of the design, designers seek to exempt themselves from paying attention to the relationship with the surrounding environment (Mahdavinejad, 2018). However, in the architecture of monuments, respect for the design context has been a fundamental generative force in advancing the design process, and establishing harmony between the values of the design and the context of its formation has shaped the policy of the architects of monuments. Contemporary monuments, in complete coherence with the surrounding environment, define themselves as part of and belonging to the context. While being coherent with the environment, by being positioned at a level elevated above the ground and by observing the appropriate proportions to spatial scale, monuments have preserved their symbolic and monumental prominence. Moreover, the placement of monuments in the context of the Iranian garden affirms the continuity of identity, coherence, valuing nature, and its mechanisms in landscape design.

The innovative and contemporary techniques resulting from the introduction of Western society's perspective on technology to Iran during the Pahlavi era initiated

new trends and orientations in contemporary Iranian architecture. The use of reinforced concrete and exposed concrete in the Avicenna Mausoleum and the application of prefabricated components are examples of this influence. The use of smoothed granite stone on the walls of the Avicenna Mausoleum functions, on the one hand, as a response to technological considerations through the use of indigenous materials native to the city of Hamedan, and on the other hand, as a metaphorical and implicit narrative of the solidity and rigor of thought in Peripatetic wisdom. The research by Mahdavinejad (2018) on the trajectory of contemporary Iranian architecture indicates that the greater the inclination of an architectural work toward advanced new technologies, the more the outcome tends to distance itself from Iranian-Islamic identity. Therefore, considering the importance of monuments as historical-cultural signifiers of society, architects of many contemporary monuments have avoided excessive and exaggerated reliance on new and costly advanced technologies.

To assess the status of qualitative categories, analyze comparative significance, and also document and prioritize the findings, the quantification process was implemented in two phases. First, the questionnaire was developed using the correlation method, then the prioritization of monuments was carried out using the survey method, and the quantitative data analysis was conducted using the nonparametric Friedman test. The selection of 8 monuments from the total of 17 case studies was done using the snowball sampling method. According to the expert judgment, 8 of the 17 monuments were selected for the questionnaire development. In this questionnaire, images of each of the eight contemporary Iranian monuments alongside eight items, addressing the dimensions of authenticity and innovative technology, were presented to 15 experts in contemporary Iranian architecture, selected considering their teaching and research experience in the history of contemporary Iranian architecture and affiliated with the Nazar Research Center and Shahid Rajaee Teacher Training, Tarbiat Modares, Tehran, and Shahid Beheshti Universities, Iran University of Science and Technology, and Ferdowsi University of Mashhad.

Discussion and Analysis of Quantitative Findings

The results of the Friedman test indicated that the test statistic was equal to 30.448 with a degree of freedom of 7 and a p-value of 0.000. Since $p < 0.01$, the null hypothesis of equal mean ranks was rejected. The results from the Friedman test statistic demonstrated that there was a significant difference in the architecture of the contemporary monuments. Hence, the mean ranks revealed that Avicenna Mausoleum in Hamedan, with a mean rank of 7.75, occupies the highest position in explicating the concept of contemporaneity based on the two pillars of authenticity-innovative technology. The two pillars were considered under the discourse of high-performance architecture for contemporary monuments. Additionally, the Mausoleums of Khayyam in Neyshabur, Hafez in Shiraz, Kamal-ol-Molk in Neyshabur, Nader Shah Afshar in Mashhad, Hakim Abolghasem Ferdowsi in Tus, Saadi in Shiraz,

and Baba Taher in Hamedan were ranked second to eighth, respectively (Table 6).

Conclusion

The results of the research indicate that the concept of contemporaneity in Iranian monuments constructed between 1921 and 1978 can be explained under the two main categories of authenticity and innovative technology in the context of the discourse of high-performance architecture (Fig. 4). Therefore, the concept of contemporaneity cannot be reduced to synchronicity with global events or superficial imitation of modern paradigms. According to the findings of the quantitative part of this research, when the authenticity and innovative technology have the highest level in the analysis of each monument, the dynamism of the concept of contemporaneity can be inferred. For example, the architecture of the Avicenna Mausoleum, which ranked highest in the present research, transcends

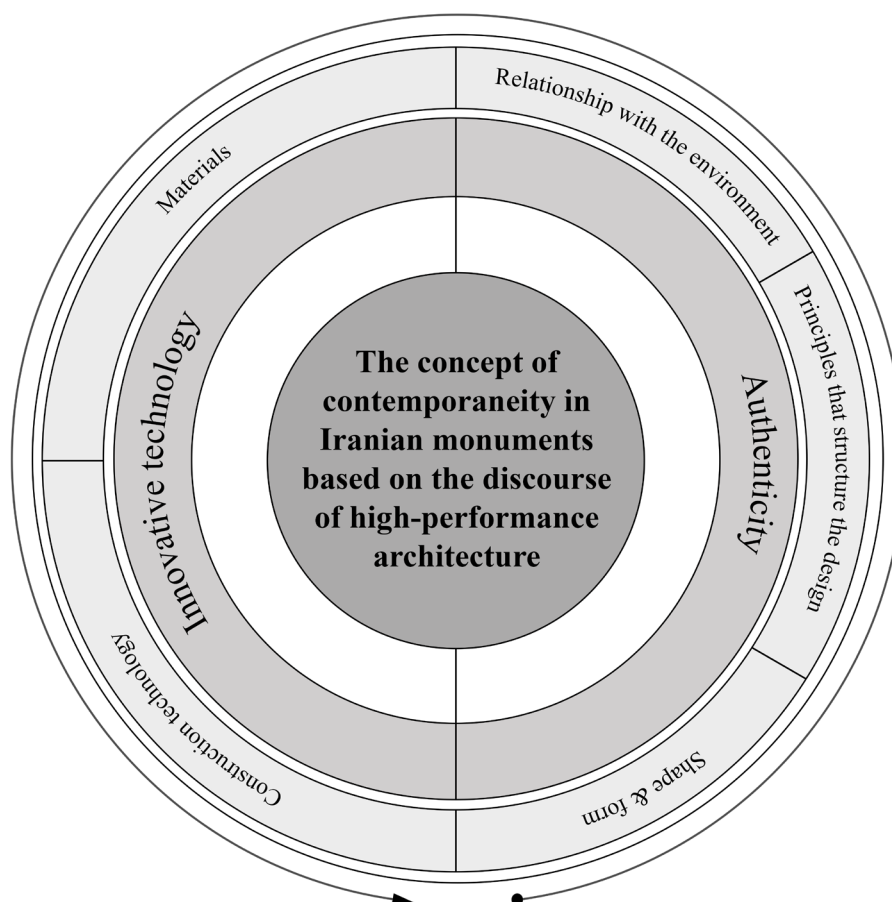


Fig. 4. Mapping the image resulting from the conceptual ordering of focused categories, related to the concept of contemporaneity of monuments based on the discourse of high-performance architecture. Source: Authors.

Table 6. Nonparametric Friedman test. Source: Authors.

	Descriptive Statistics			Ranking of monuments	
	Number of questions	Percentiles			Mean rank
		25th	50th (Median)	75th	
Avicenna Mausoleum	8	67.75	71.00	74.25	7.75
Nader Shah Afshar Mausoleum	8	54.25	61.00	66.75	3.88
Khayyam Mausoleum	8	62.25	67.00	70.00	6.31
Saadi Mausoleum	8	55.50	59.50	64.50	3.06
Baba Taher Mausoleum	8	53.25	56.50	61.25	2.38
Kamal-ol-Molk Mausoleum	8	58.00	64.50	66.00	4.00
Hakim Abolghasem Ferdowsi Mausoleum	8	54.50	62.00	64.75	3.50
Hafez Mausoleum	8	60.75	64.50	67.00	5.13

formal imitation of the past, and through a successful movement, it re-creates the spirit of the place by relying on the contemporaryization of authentic architectural ideas within the horizon of emerging technologies of its time. In other words, although the Avicenna Mausoleum was designed and constructed in 1951, nearly 74 years ago, it functions as more than a mere tomb, it is an enriched manifestation of the concept of contemporaneity in contemporary monuments, and it also signifies more adaptive reuse of contemporary architectural heritage, including the continuity of cultural prestige, the promotion of public perception, and social sustainability at the center of ongoing socio-cultural activities in the city of Hamedan; and through a critical movement in a trans-temporal direction with innovative artistic elements linking the past, present, and future, it persistently reconstructs the concept of contemporaneity in a monument. In light of the understanding of contemporaneity, neither the trap of subjugation to mere authenticity, leading to the repetition of previous patterns and the reduction of architecture to the construction of archaic, nostalgic, or melancholic works, nor uncritical imitation and the construction of kitsch works in response to changing technologies in Western postmodern architecture result in a decline into the abyss of fascination, infatuation, and seduction.

The results of this research explain the capabilities institutionalized in the theory of high-performance architecture as a dynamic, continuous, critical-analytical, and exploratory-interpretable grammar for reading the concept of contemporaneity of contemporary monuments critically within the future horizon of Iranian architecture.

In other words, if one or several monuments remain in the future, they would function as a timeless way of building or a timeless way of thinking, whose geometric-spatial characteristics, semantic-metaphorical richness, qualities of legibility and permeability, and the application of advanced technologies in the construction of these remaining buildings would articulate the spirit of their time. Thus, the category of authenticity, grounded in form-making derived from conceptualism and contextualism inspired by Iran's architectural past, reconstructs the present within the dynamism of future possibilities. Additionally, the category of innovative technology is also represented in proportion to the facilities and capacities available in the period when the building is designed and constructed.

It is recommended that future research investigate architectural values based on the discourse of high-performance architecture in the monuments constructed from 1978 to the present, and discuss and criticize what has been explained in this research regarding the two categories of authenticity and innovative technology under the concept of contemporaneity at the intersection of the discourse of high-performance architecture.

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