Research Paper

Semiotic Interpretation of the Classical Elements in the Spatial Quality of Persian Sacred Architecture [1]

Case Study: Shrine of Shah Nematollah Vali

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Abstract
Throughout cultural history, the architecture of shrines in Iran has been of most significant mythological values. Due to the buried person's spiritual status, it has been sufficiently taken into account in the creation of sacred space and the manifestation of mystical beliefs. In the present era, due to lack of recognition in strategic research, historical semantics has largely been neglected in the field of religious architecture. The philosophical stand of this research is interpretivism; the approach is qualitative, and the method is logical reasoning. Three empirical, analytical and metaphysical theories have been applied in the research strategy. In the process of formulating theoretical foundations, semiotic and conceptual reasoning have been carried out. In the empirical analysis phase, field data were gathered and physical and conceptual modeling has been implemented. At the stage of the metaphysical theorem, the basis of the arguments is phenomenological. The results of the discussion show that the spatial hierarchy in the building, the diversity of Classical Elements and the hierarchical exposure of the people from the entrance to the tomb, is significant based on the mythological view. In analysis of the building, embodiment of the Classic Elements have been interpreted based on the sensory perceptions of the spaces, conscious travel from outside to inside the building, as well as understanding of the four mystical journeys which are: hierarchical ascending from soil to water, to air and to fire. Finally, it has been argued that mythical representation of birth and death is understandable in the transition among the sequences of spaces.

Keywords: Semiotic of place, Classical Elements, Sacred architecture, Meaning of architecture, Cemetery of Shah Nematollah Vali.

1. INTRODUCTION

Since all human-made artifices originate from his/ her mind, they convey subjective trend of beliefs and stories that created it. Man-made phenomena embody the ontology and intellectual system of their creators and hence give meaning to living environment which has been created. This issue in the realm of architecture, which is nothing but the embodiment of mental images in tangible phenomena, is assumed as one of the fundamental basis for perceiving space. This issue is more important in Persian architecture, because the presence of the sacred in their minds goes back to ancient times. Persian architecture may not be properly perceived unless both apparent and inherent aspects of buildings are perceived together.

Burial places in Iran are of paramount use, which have been built over the history. With respect to importance of spiritual position of the buried person in that monument, it has been noticed by architects in terms of creation of

divine space and manifestation of mystic beliefs. Architects have tried to realize divine aspects and epistemological values in this monument, in addition to responding to the needed functions. In this way, what they have built represent mythological and transcendental concepts beyond what they show; however, this aspect has been less addressed in the studied monuments. On the other hand, in construction of religious buildings at present time, historical semantics has been forgotten to the great extent, due to lack of adequate information in studies. This process results in a form and space which has often failed to respond to the function as well. Religious architecture represents the perfect ideal of art among Iranians. This is one of the most challenging architectural fields today and it refers mainly to visual and formative aesthetics rather than generating spiritual and divine space.

This study has been conducted in order to analyze mythological aspects of space and Classical Elements, water, air, fire (sun), earth (soil), (Boyd & Sanderson, 2003; Ball, 2004) in burial architecture, by aiming at more accurate perceiving of this subject, as well as necessitating the reproduction of the historical tradition of divine architecture in religious monuments during present time. In this research, it is assumed that in Iranian burial architecture, the relationship between tangible and intangible represents sacred and mythical concepts, and the creation of the sacred depends on understanding the quality of the presence of tangible. Similarly, it is assumed that ontological and mythological denotations of elements may be interpreted as significant signs by the structure of relationship between them. Therefore it can be asked how the mythological interpretation of the built space could be described; what the mythological denotations of Classical Elements are, how structure for presence of Classical Elements in the shrine of Shah Nematollah Vali is and what sacred structure it indicates.

2. RESEARCH DISCURSIVE BACKGROUND

The previous studies conducted in this regard may be reviewed in two fields. Firstly, there are studies and theories at macro level that have been concerned with relationship among art, architecture, semiotics and divine case; and secondly, some studies have referred to mythological semiotics in Persian architecture.

Joseph Campbell assumes myth as a type of collective dream in community and considers four functions for myths i.e. mystic, cosmological, sociological and educational (Campbell & Moyers, 2019). Sigmund Freud sees myth foundation in mental-physical dynamism of human that may guide human's unconscious tendencies (Sattarie, 2014). Yung argues myth as an archetype planted in ethnic collective unconscious of humankind and deep similarity of myths in various cultures is an evidence for the united nature of humans (Sattarie, 2014). Mircea Eliade introduces main function of myths as the themes and patterns of all human's significant activities and for this reason considers their role as unique in consolidation of human civilization (Eliade, 2013). Clause Levi-Strauss assumes myth as a communicative sign among various people in which the constituent elements of myths become meaningful in composition with each other and they possess the same structure (Mohammadi Asl, 2020). Roland Barthes considers myth as a type of system of symbols and although they stem in various cultures, it is a common language between people (Barthes, 2019). Cassirer maintains that myths are so universal and extensive that no one could assume them as belonging to the world of imagination, but it originates from reality of nature and human essence (Cassirer, 2017). From more contemplative viewpoint, Gaston Bachelard considers human imagination as the origin of myths in phenomenological critique of imaginative case and assumes Classical Elements of water, wind, soil and fire as the primary and original materials as the point for moving imagination among poets and literati (Bachelard, 2015). When exposing to an artistic work, literary text or lived space, Bachelard implies concepts e.g. transsubjectivity and intersubjectivity and their elements and conditions to analyze a potential for a shared experience and considers type of communication among human and space as a reflection of work appearance and echo that is derived from its inside into experience (Namvar Motlagh, 2007: 66-67).

Concerning mythological semiotics in architecture in Iran, theory proposed by Cyrus Sabri regarding the role of myths crystalized as signs in redefinition of architectural design process is one of comprehensive and immense studies which have been presented in this field. Sabri introduces myth as a sign to identify the culture of a community and considers them as responsive to human's living and everyday problems and indicates the position of myths as effective on formative planning (Sabri, 2014: 137-142). In a comprehensive investigation that was carried out by Maryam Pirdehghan and Mohammad Taghi Babaei, in addition to historical genealogy of Classical Elements in archaic and Islamic philosophy, they have distinguished among mythical and allegorical concept of Classical Elements. Relying on an understanding of the symbolic meaning of those elements, they consider their representative nature to be metaphorical, based on Platonic, Neoplatonic, Hermesian, and mystical-Islamic views in pre-existing allegorical and symbolic narratives (Pirdehghan & Pirbabaei, 2013). Thus, it is highly important to assay definitions and include theoretical framework of this subject.

3. RESEARCH METHODOLOGY

In this study, based on interpretivism, the research approach is qualitative (Bazargan, 2019: 19). Data analysis is conducted by logical reasoning. In logical reasoning, argumentation between three empirical, analytical and metaphysical theorems properly establishes a precise and regular relationship in order to reach a conclusion from this relationship (Mirjani, 2010: 50). Data collection and gathering the comments of theorists have been conducted by desk analysis for codification of research theory. Relying on an understanding of the symbolic meaning of those elements, they consider their representative nature to

be metaphorical, based on Platonic, Neoplatonic, Hermesian, and mystical-Islamic views in pre-existing allegorical and symbolic narratives. In the experimental theorem analysis stage, field data were collected through field observation and experiencing spaces. In the stage of analytic theorem, tangibles and intangibles have been investigated. At the stage of the metaphysical theorem, reasoning is based on the phenomenology. First of all, lexicography and expression of the meanings and definitions of myth, sign and sacred space, and the role of the four elements in the architectural space is described. Diagram 3 shows research structure. Conceptual model of this study has been shown in diagram 3 and Table 1 shows the three theorems of logical reasoning.

4. THEORETICAL BASIS, MATERIALS AND METHODS

4. 1. Allegorical case of myth

It is not possible to correctly analyze the meanings of signs in any building, unless there is a precise definition of the concepts of those signs and their mythical meaning. Therefore, clarification of the definitions will be the most important step in analysis. Larry Honko defines myth as the story of gods, a religious narration of the beginning of the world, fundamental events and practices of gods. Myth signifies values and norms of community and patterns of behavior (Honko, 1972: 49); myth consolidates behavioral norms at any society. Myths represent beliefs of any community. According to the opinion of Mircea Eliade, myth narrates sacred history as an eternal event that has occurred at the starting moment (Eliade, 2011: 86). Creation of behavioral patterns in society is deemed as the foremost function of myths. He assumes myth as representation of absolute reality (Eliade, 1961: 23). So myth is the divine penetration into the world. Any myth signifies how any reality comes into existence. Various types of myths are classified into a few general subjects about formation of universe, natural myths, functions of natural world e.g. seasons of year, behaviors of animals, plants and heroic stories that deal with adventures of heroes (Sabri, 2014: 119). In all definitions and classifications, connection between human and nature and existential unity of human with cosmos have been supposed as a strategy for the usage of myths in the processes of creating space. What acts as a tool to express this natural link, is the dominance of mystical, allegorical and narrative situation made by human and presented as mystical art to reveal transcendental realities in tones, faces, forms, colors and generally as tangible images (Madadpour, 2007: 306). Myth is manifested at borders and these boundaries are the place for manifestation of divine task (Nasr, 2015: 236). Therefore, mystical phenomena is intrinsically metaphoric and figurative which represents another aspect of reality.
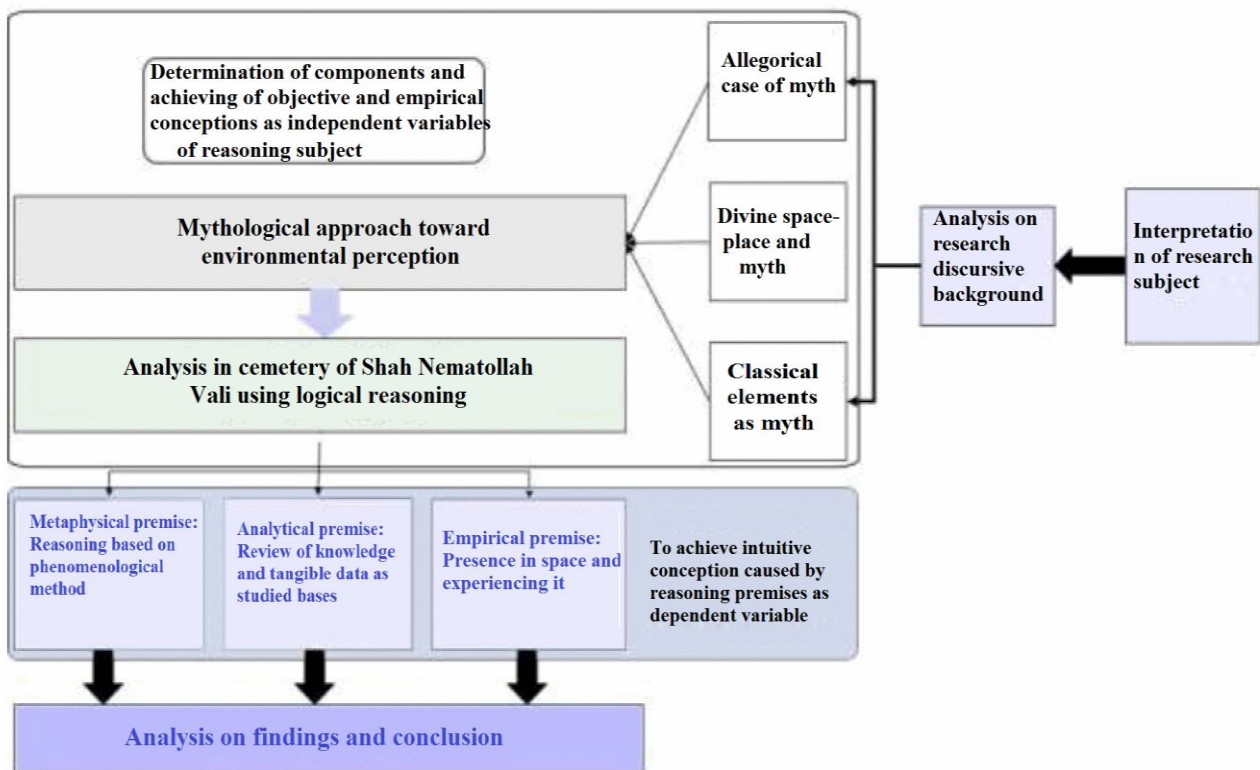

Fig 1. Diagram of the conceptual model of study

Table 1. Three theorems of logical reasoning

	Empirical theorem	Analytical theorem	Metaphysical theorem
Reality	Presence in space and experiencing it by five senses	Review of types of presence of Classical Elements in monument	Quality of presence in each space of the building
Objectivity	Contact between environment and five senses	Exposure and contact with classical elements	Quality of encountering Classical Elements in each space
Subjectivity	Formation of tangible images in mind	Subjective notion from tangible images of classical elements	Creation of memory and imagination forms by exposure to classical elements

Achievement of recognition and objective and subjective conception

4. 2. Holy space-time and mythological semiotics

In the spiritual attitude to the phenomenon of life, if it must be being-in-the-world, it should be established. Discovery of any kind of centrality means a creation of the world and this ceremonial cosmos creation builds holy place (Eliade, 2011: 16). Any holy place denotes advent and manifestation of the divine case that leads to the dividing of an area of cosmological environment and makes it different from other places (Eliade, 2011: 20). Holy place benefits from symbols and signs in creating spiritual atmosphere and conveys intellectual concepts. Symbols manifest absolute essence in conditional case (Corbin, 2013: 42). Symbols reflect concepts beyond them in tangible world and perceiving of those concepts is subject to presence of perceptual conditions in audience. Sacred space-place is perceived by intuitive knowledge because the manifestation of spirituality in it is mysterious and can be understood through the structure of signs. The myths act as intermediate for such manifestation and conveys metaphysical concepts in any culture. Myths are responsible for conveying intellectual concepts and situational divination through their embodiment in elements, parts, materials and way of presence of cosmological phenomena and their representation in space-time. Material convey memory in memorial architecture (Qayyumi Bidhandi, 2011: 9) and it implies outset and end of genesis.

4. 3. Classical Elements as myth

Water, wind, soil and fire are assumed as the main elements of nature and basis for the material world. According to traditional ontological viewpoint, each of these elements is hot or cold and wet or dry. As a result, water is cold and wet; wind is hot and wet; soil is cold and dry; and fire is hot and dry. Based on God's command, these elements have made nature motley by affecting quantity and quality respectively. Water is the maker, producer and a vital element in the world and it has always been sacred among Iranians. Water is a secret for anything that exists potentially and as origin for all facilities in the world. Water is the second being in material world based on Persian myths and it served as the symbol of firmness and manifestation of universe before any genesis (Ghavipanjeh, 2015: 28). Likewise, water is alive, moving and dynamic and as symbol of freshness is a manifestation of health and permanence. Water is the source of purity and cleanness and according to mythical attitude, human dies when enters into the water and revives after coming out (Eliade, 2011: 123).

In Avesta, a term is mentioned as wind (*Baad*) and sometimes as *Izad-e Baad* (Deity of wind) and what implied in this book is that *Izad-e Baad* is expressed as similar to *Izad-e Ab*, fire and soil so that to complete Classical Elements as myth (Hamzehnejad et al., 2015: 44). In Persian myths, wind is deemed as a powerful deity (*Izad*) that governs over blank space between two *Hormazd* (God) and *Ahriman* (evil) worlds and *Ahura Mazda* (God of Zoroastrians) and mythical kings ask it for help. It is the bravest deity (Izad) which wears a helmet on head and a chain on its neck [19] and according to the belief of Iranians it is a spirited element and possesses extraordinary power and influence. Wind in Iran is myth of homeland because in *Story of Arash* it plays an essential role in expansion Persia's borders (Vasegh Abbasi et al., 2015: 158).

Although all of Classical Elements are symbols of purity, the position of fire is different in this regard. Belief in the manifestation of spirituality through fire and light, was the origin of some celebrations like *Chaharshanbe Soori* and anniversary of *Yalda Night* (Birthday of Mithras) which is the birth of sun (Foroozan Kia & Ostaji, 2017: 846). Fire has been deposited inside all creatures and serves as life essence, origin of existence and motion of anything, symbol of resurrection and a device to test purity from impurity (Kalantar et al., 2016: 31).

Soil is the source of genesis. It is an eternal- immortal element of genesis that gives and takes life while it is alive and immortal (Ghavipanjeh, 2009: 159). Among all classical elements, soil is the most immotile and static element and for this reason it enjoys the least possible dynamism in mythical animal paradigm. Soil is the place for growth of plants in the nature. In mythology, soil played the role of "original material" in creation. *Lahmu* (male half) and *Lahamu* (female half) were the first creatures in Mesopotamian myths by linking of *Tiamet* and *Apsu*- namely mud and residues settled at the cross-point of sea and river- so that according to viewpoint of some researchers, sky and earth are circular horizons that create *Anshar* and *Kishar* as sky and earthly worlds. The physical life starts from combination of water- as existence symbol- and soil- as immotile and initial matter of genesis. For this

reason, human's life begins from soil in most of cultures (Ghaemi et al., 2009: 66). Robert Fludd, British cosmologist and physicist in 17th century, has drawn universe hierarchy in four levels from lower to higher, respectively as soil, water, air and fire shown in Fig 1. Also in Islamic mystic doctrine, mythical viewpoint could be traced to Classical Elements concerning interpretation of universe, genesis and existent hierarchy. What one can find in mystic world paradigm in books of Ekhvan Al-Safa and Illuminationism Wisdom (*Hekmat Al-Eshragh*) includes Classical Elements as the theme of material world that conveys intuitive concepts and starting point of journey of mystic to reach metaphysical reality (Nasr, 2018). Comparative analysis of mystic doctrine in way-faring toward truth and hierarchy of Classical Elements are shown in these journeys in Table 1.
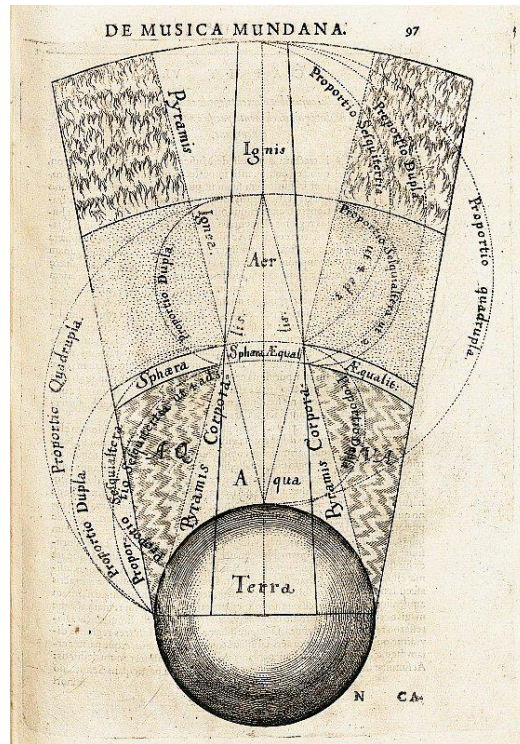

Fig 2. Classification of universe and position of Classical Elements in Fludd's paradigm, 1617

Table 2. Classical Elements in mystic journeys (source: authors, 2020)

Classical Elements as constructional elements of world and universe	Mystic level: Image of existence, fire as symbol of conception toward reality (Kalantar et al., 2016: 41)		Wisdom world	Rational life	Resurrection day life
	Mystic level: Journey on the air		Imagination world	Spiritual life	
		⟨⟩	Third journey: Resurrection to doom's day world (Major resurrection)		Structural hierarchy of existence world and moving there (Henry Corbin, 1978: IV: 110)
	⬆		⬆		
	Mystic level: Journey on the water, water as divine soul (Kermani, 2011: 54)		World of simulacra	Sensual life	Purgatory life
	⬆		Second journey: Resurrection to purgatory world (Minor world)		
			⬆		
	Mystic level: Journey on the earth		Tangible world	Sensual life	World life
			First journey: Resurrection to material world		

4. 4. Mythological approach toward perceiving the environment

Since ancient time, Human has inquired myths as an intermediate to perceive and identify his/her creator and believed that since myths are creatures and symbols of God therefore they are more eternal and comprehensive than what human creates. Traditional communities look for hidden secrets in myths and their relation so they could have the potential to overcome natural forces on their own. Since duration of life for Iranians in climate of Iranian Plain depended on farming and natural forces thus mythical beliefs in this land is mainly concerned with natural forces (Farahi Farimani & Haghighatbin, 2016: 21). Therefore, myths, in Iranians worldview, is a reflection of their perception of natural space in their land and since they saw their own life and death in natural forces so they assumed essence of those elements as divine phenomena and in direction of divine wisdom.

Thus, environment is perceived according to subjective and internal materialistic images of myths in the mind and such a perception is sometimes interpreted by some factors e.g. thought, rationalism and divine nature. This perception creates an image through a natural approach that is led to the given subjective and ideological pleasure and it is followed by various approaches: Tangible attitudes that mainly include sensual aspect and there are variable and also rational approaches (facts) which led to wisdom, knowledge and monotheism (Warner, 2020: 15)

The mythical semiotics of existing elements in the built-space may pass the environmental perception phase and environmental data, which are turned into senses, with mental and subjective images derived from sacred practice and metaphysical concepts. Thus, perceiving these signs is deemed as the first step in conceiving mythical meanings where they are responsible for mythical denotations in spatial structure. Pierce, the salient semiologist in the field of philosophy of art and interpretation of artistic work, believes that concepts of artistic work can be perceived by deduction process (Everaert-Desmedt, 2006). This process is found on proposing assumptions on which the given phenomenon is interpreted (Amélie Razavifar & Ghaffari, 2012: 29). The spatial conception process submerges in spatial qualities in Pierce's semiotics and begins from deduction. Then he expresses his emotions in spatial mirror depending on type of reasoning and he judges on spatial conception within the induction process at last step. According to Pierce's view of space role, rationalization is the qualitative aspect of emotions. Triple structure of signs is shown in Fig 2 found on uncertainty level in Pierce's paradigm. In this figure, certainty is obtained if the object, the representative and the interpreter are the law. If one of these elements is weakened as a rule, uncertainty is reinforced.

	Representamen relation	Object relation	Interpretant relation	
I	Possibility Qualissign	Possibility Icon	Possibility Rhema	**Possibility Uncertainty Abduction**
II	Existance Sinsign	Possibility Icon	Possibility Rhema	
III	Existance Sinsign	Existance Indicative	Possibility Rhema	
IV	Existance Sinsign	Existance Indicative	Existance Decisign	
V	Law Legissign	Possibility Icon	Possibility Rhema	
VI	Law Legissign	Existance Indicative	Possibility Rhema	
VII	Law Legissign	Existance Indicative	Existance Decisign	
VIII	Law Legissign	Law Symbol	Possibility Rhema	
IX	Law Legissign	Law Symbol	Existance Decisign	
X	Law Legissign	Law Symbol	Law Argument	**Law Certainty Deduction**

Fig 3. Triple structure of environmental signs based on uncertainty level in Pierce's paradigm (Berrio-Zapata et al., 2015: 156)
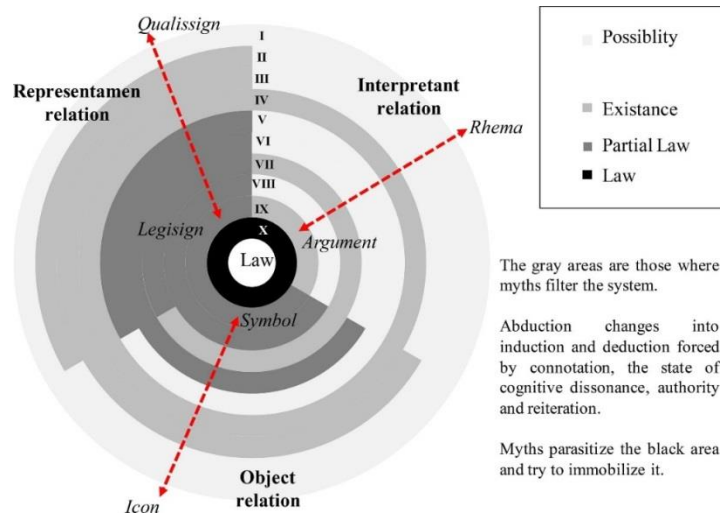
Fig 4. Interaction between layers of representation structures based on Pierce's paradigms. Myths freshen up black color area and try to keep it immobile and fixed (Berrio-Zapata et al., 2015: 156)

In Fig 3, Interaction is shown between layers of representation structures based on Pierce's paradigms (Peirce, 1992: 49). What is seen as influential in gray area in this figure which builds our perception and behaviors, is myth. Induction is under influence of implicit denotations, expression of cognitive incongruence and authority of explication of findings. Myths freshen up black color area in this picture and try to keep them immobile and fixed (Berrio-Zapata et al., 2015: 159).

According to Barthes, any phenomenon may be turned from a silent creature to an open expression of social position. Since any statement possesses thematic narratives, so any object which comes to the language, makes a myth that indicates its origin (Berrio-Zapata et al., 2015: 161). Implicit denotations are dynamic processes because some objects remain in mythical language while some others are substituted with new myths. According to Barthes (Barthes, 2015), myth is the expression of emotion and double structure of a sign that is perceived by various senses and thereby it is meta-lingual language. A language which has been understood by its existential essence. Myth is confirmed by the given repetition and extension.

4. 6. Introducing of case study

The shirine of Shah Nematollah Vali has the area of approximately 6000 m2and it is located at 35kms far from the southeast of Mahan city in Kerman Province. Construction of this monument had started since 840 hegira year (1448 AD) and continued 6 centuries long until the end of 14th hegira century (20th AD century). This building was initially constructed by Shah Nematollah Vali followers as a single monument with a high dome on the top of a four-sided space inside a large garden. The latter buildings were added to it. Since Shah Nematollah Vali has been the main factor for framing and cultivation of Mahan city (Naeima, 2015: 180) and also he was a poet and orator in addition to his mystic position, some buildings were added to his monument cemetery during various periods after his demise. Also the current building includes 6 courtyards. The dome area of this shrine is the oldest part of the monument and it has been constructed by Ahmad Shah Bahmani, one of his followers, in 840 hegira year (1440 AD year) (Naeima, 2015: 180). The reasons for selection of this monument may be implied as follows: historical importance of this monument in Persian mystic culture, various types of presence of spaces in this building, complementary and developmental trend of the monument influenced by mystic approach regarding the cemetery, specification of symbolic elements of monument and various presence of Classical Elements in this complex, arrangement of hierarchical order and various perceptual qualities of spaces for each part of this monument. Similarly, in mythical interpretation of built environment, the mystics assume the cemetery as Paradise in which the soul is similar to a child in cradle. A cradle which is the place of resurrection from material world to the world of awakening in the world of no-time and no-place (Corbin, 1978; Shayegan, 2013: 261).

5. DISCUSSION AND RESULTS

5. 1. Empirical theorem: presence in spaces and experience of Classical Elements

Architecture is an interaction between natural and human-made world that makes a dialectic through images and metaphors of the world, between human scale and the cosmic order and eternal life and the present moment. This existential dialectic through masses and voids, the presence and absence of light, water and plants, as well as the physical body of the building, represents the myth of eternal life (Akbari, 2019: 91). All these tools are perceivable with experience in cemetery of Shrine of Shah Nematollah Vali. Regarding empirical premise, logical reasoning, mythological interpretation of Classical Elements in monument, quality of exposure to water, soil, air and sunlight may be empirically analyzed in the given project. Types and forms of presence of Classical Elements and mythical interpretation of them have been analyzed for each in Table 3.
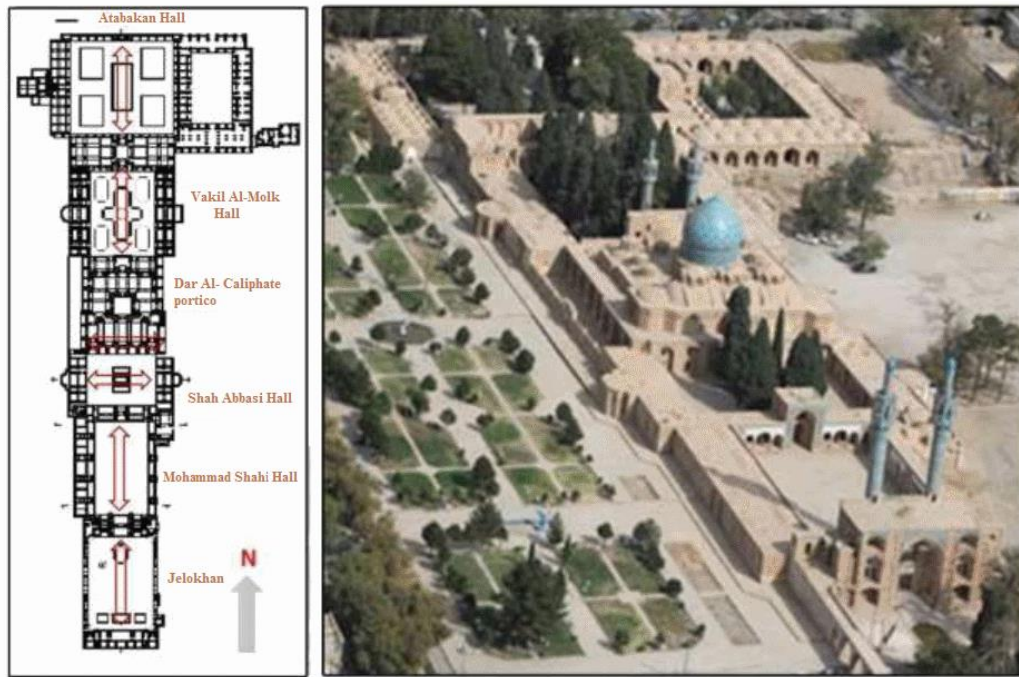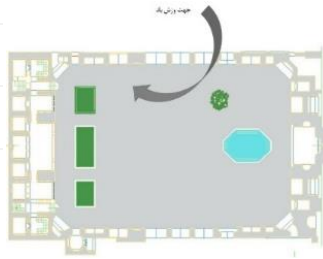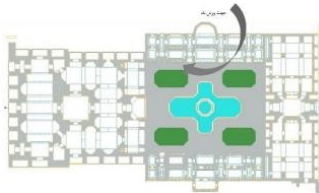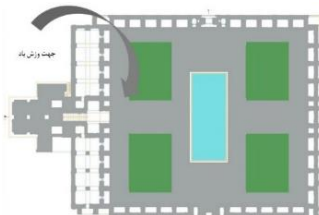
Fig 5. Plan and aerial image of cemetery of Shah Nematollah Vali in Mahan city at Kerman

Table 3. Analysis on forms of presence of Classical Elements in monument courtyards and their mythological concepts

Elements	Space	Presence of *Classical Elements*	Weak	Medium	Strong	Plan	Spatial quality
Biglar Beigi (Jelokhan) Courtyard	Soil	Brick wall with tile work		*			Structure of spaces, produces a balanced quality of meaningful signs. Presence of elements is not preferred to others and a full and moderate world is provided from pure elements so that to make pilgrim ready for spiritual journey at the first step for presence in space. Space implies life and paradise myths.
	Water	Water presence in large pool	*				
	Wind	Wind breezing through trees	*				
	Fire	Shade of trees and less-sunny presence	*				
Shah Abbasi & Mohammad Shahi Courtyards	Soil	Fully clay walls in Shah Abbasi courtyardand significant experience of ground clay surface in Mohammad Shahi courtyard	*				Space structure has created a fully open space with omission of water and tree in Mohammad Shahi Courtyard so that sunlight and wind will fill space at the highest level. Mythical implication of elements has diminished life and recalled myths of dead loneliness. The faint presence of water, plant and sunlight in Shah Abbasi Courtyard in small scale, especially in the opposite orientation of main route, creates a type of pause before entry in shrine courtyard and embodied silence myths. Placing rooms of clergymen
	Water	Absence of water in Nohammad Shahi Courtyard and presence of water in small pool in Shah Abbasi courtyard	*				
	Wind	Wind breezing as much as possible		*			

Elements / Space		Presence of *Classical Elements*	Weak	Medium	Strong	Plan	Spatial quality
		in Mohammad Shahi Courtyard and controlled breezing through trees in Shah Abbasi courtyard					around the courtyard makes this significant.
	Fire	Sunlight as much as possible in Mohammad Shahi Courtyard and controlled sunlight through trees		*			
Vakil Al-Molk Courtyard	Soil	Fully clay walls	*				Spatial structure represents life and paradise myths at maximum level by controlling sunlight and wind breeze and focusing on dynamic presence of water, plant and soil in the courtyard. Objective relationship of elements is converted into representative relationship and covers leaning of life of human beings.
	Water	Strong presence of water		*			
	Wind	Slightly wind breeze through mass trees	*				
	Fire	Slightly sunlight through trees	*				
Atabakan Courtyard	Soil	Clay walls	*				In this courtyard, the allegory of heaven appears with the strongest manifestation. The level of occupation of green space and water is maximized and the presence in paradise is fully represented. Climatic adversities, i.e. sun and wind, reach their minimum and the favors of space reach their maximum.
	Water	Water strong presence		*			
	Wind	Slightly wind breeze through mass trees	*				
	Fire	Slightly sunlight through trees	*				

5. 2. Analytical theorem: perceptions and observations

Given sensual perceptions are deemed as an aspect of conscious modes and cognitive status of perceiving the universe and they influence the impression of concepts from tangible case in the mind of audience of that space (Akbari, 2018: 20). Architects of cemetery shrine of Shah Nematollah Vali have tried to create numerous tangible worlds. Movement in this building takes place from one smell realm to another. Smell of moisture, flowers and plants may strengthen life myth at Jelokhan Courtyard at this building. Soil smell under sunlight radiation from ground and walls, fills the space in the Mohammad Shahi Courtyard and it also refers to death myth as well as genesis myth and natural link among human and soil. mixing of smell of plants, wet scent and shades of trees may represent heavens in this worldly experience of humans at the heart of desert in Shah Abbasi, Vakil Al-Molk and Atabakan Courtyards. From the perspective of tactile perceptions, position and rate of sunlight on the skin and also impact of air moisture and presence and absence of shade and in various courtyards have created several qualities and it denotes different meanings at any space. Sense of touch in Jelokhan Courtyard has been moderated by coarseness of building form and intensity of sense of touch was refreshed with tiles of walls in Mohammad Shahi Courtyard.

Senses of touch in this complex, because of the scale of the building, are mainly focused on the connection between human and soil, water, sunlight and plants and unify the audience with themselves in terms of presence. Architects tried to avoid inhuman scale so people can easily experience the building through their senses, especially the sense of touch. This phenomenon can be experienced in non-symbolic but semantic buildings. The effective factors on sensual perceptions are shown in Table 4 and hearing elements indicated in Fig 6.

Table 4. Perceptual factors and mythological analysis on Classical Elements in each of spaces in the complex

Elements \ Space		Water	Wind	Soil	Sun	Perceptual factors	Mythological analysis
		Classical Elements					
Jelokhan	Sight	*				Water pool, moisture due to evaporation, orchards and plants, water fountain sound and chirps of birds, lofty height of Jelokhan Courtyard, high-rise minarets, khaki color of walls, light various position and shade, smell of trees and flowers, moving around water pool	Perceiving "myth of life" and genesis myth, purity and cleanness myth, affinity toward light
	Hearing	*	*				
	Tactile	*	*				
	Olfaction	*	*	*			
Mohammd Shahi Courtyard	Sight		*		*	Elongated space harmonies toward motion, High-rise minarets and blue tile-work of wall, clay surface of floor. Serious touching of sunlight on skin, orientation of space toward sky	Embodiment of myth of time, myth of sky as source of blessing and sustenance, connection between earth and sky in universal order is experiential in this space.
	Hearing						
	Tactile		*	*	*		
	Olfaction						
Shah Abbasi Courtyard	Sight		*		*	Stretched proportions of space harmonies in opposite to path orientation, pause and inertia, presence of water and trees, variety of light forms and shades, monochromatic clay walls, sound of branch of trees under wind breezing, reflection and mirror shape of water	Loneliness and silence myth, internal trend and pondering in genesis order, death myth
	Hearing		*				
	Tactile	*	*	*	*		
	Olfaction		*		*		
Vakil Al-Molk & Atabakan Courtyard	Sight	*		*	*	Large water pool, facility for performing ablution and washing, humid smell in space, mass plantation of trees, water fountain sound, sound of trees in wind, moderated air temperature in artificial micro climate, shade of trees	High heavens myth, purity and cleanness, enthusiastic and dynamic life
	Hearing	*	*				
	Tactile	*					
	Olfaction		*		*		

Table 5. Presence of Elements Proportion in percent in every courtyard based on volume in space

spce	Presence of Elements Proportion in percent			
	Light	Soil	Wind	Water
Jelo Khan	25	86	9	5
Mohammadshahi courtyard	60	100	0.00	0.00
Shah Abbasi courtyard	40	70	22	8
Vakil Abad & Atabakan courtyards	10	20	55	25

5. 3. Metaphysical theorem: Spatial perception based on phenomenology of space perception

Based on the model of interaction between layers of representation structures in Pierce's paradigms, implicit denotations of signs make ontological frameworks of spatial perception in Fig 3. Architectural space is a visual statement that is incorporated immediately in humans' mind (Pallasmaa, 2016: 135) and spatial quality experienced by users is considered as foremost tool to perceive them. The interaction between the users and space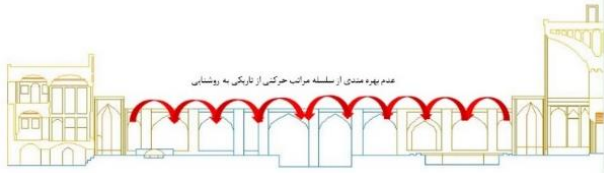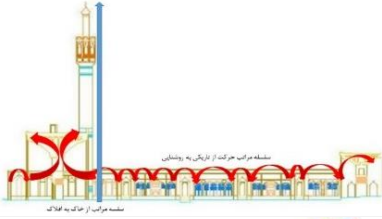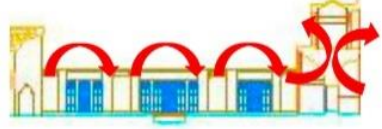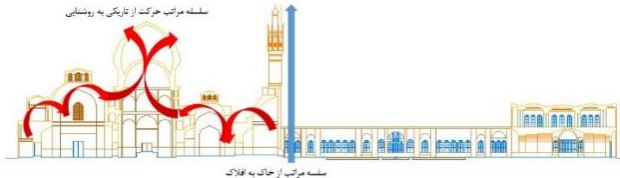 is the exchange of emotions and feelings of individuals with the given monument. Subjective notions and images and memories of individuals about space gives it identity. Appearance of concepts for the activity outside of human mind is subject to their presence in the space, their living experience and getting their attention to it (Ahmadi, 2019: 55). More than any other form of art, architecture is involved in human's immediate sensual perception. Passing time, light, shade and transparency, texture, material and details all play role in full architectural experience (Holl et al., 2017: 53). The tested subject is examined in place phenomenology: First one is basic properties and interconnectivities of experience of

environment; the second is the Formative features of space and their interactions; and the third is the communicative fields among human and environment (Partovi, 2015: 165). Accordingly, quality of various spaces in shrine of Shah Nematollah Vali may provide different experience for pilgrims at any phase.

Presence of water in Jelokhan large pool denotes invitation for performance of ablution and washing. Being there staying in the shade of trees provides the conditions to prepare for the start of the journey toward this pilgrimage shrine. Similarly, it is a mirror to reflect the image of Jelokhan Courtyard as well as a source of fresh air and pleasure. Water pool is enclosed by trees in Shah Abbasi, Vakil Al-Molk and Atabakan Courtyards and it adds to paradise quality of the space and provides space for individuals to sit on the ground beside it and experience the space while sitting. They may smell the soil

and be linked to earth as the source of human existence. Experiencing the absolute sunlight through Shah Abbasi Courtyard encourages the visitor to look toward sky and to stare at earth and heavens. Silence is the dominant element in this courtyard as well as Shah Abbasi small courtyard and experience of individuals' presence is based on moving toward pilgrimage shrine. Presence in the shrine is accompanied by visual experience of the blue dome toward sky where eye movement is converted from linear and direct status to rotary motion and this may remind pilgrims of origin and resurrection day. Using mainly brick and monochromatic materials in spaces, except in Mohammad Shahi Courtytard where it is composed of blue tile-work, may manifest texture, temperature, color and smell of soil more than any other thing for individuals and shows emphasis of this monument on earthly essence and genesis source.

Table 6. Analysis on Classical Elements in subsequent yards in monument and role of decrease and increase in Classical Elements to achieve from world of being to the world of ideas

Space	Analysis of monument	semiotic interpretation of journey
Jelokhan (Courtyard)	عدم بهره مندی از سلسله مراتب حرکتی از تاریکی به روشنایی	Signifying systems for signs of daily life with Classical Elements represent as journey start point by rebirth after purgation. In this building, vertical harmonies in northern entrence and two minarets and emphasis on Vertical proportions, draw audience's attention toward journey from earth to skies in Jelokhan Courtyard.
Mohammad Shahi Courtyard	سلسله مراتب حرکت از تاریکی به روشنایی / سلسله مراتب از خاک به افلاک	Motional hierarchy from material brightness to darkness and searching for spirituality light in cemetery and passing from soil yard (Journey on earth)
Shah Abbasi Courtyard		Passing through water yard (Journey over water), limited sunlight and space deepening by the aid of darkness and creation of depth
Atabakan Courtyard	سلسله مراتب حرکت از تاریکی به روشنایی / سلسله مراتب از خاک به افلاک	To achieve to destination manifested by passing through soil and water, absolute darkness of space and absence of wind in order to search them (Journey thought air) and to achieve sunlight in imaginative and spiritual life at shrine and dome.

6. CONCLUSION

Shrine of Shah Nematollah Vali is one of the special historic buildings in Iran in which every space represents a specific quality. Spatial qualities, elements, materials, signs and relations and various human's presence in spaces exceed from embodiment of material case. Accordingly, the results of discussion show that spatial hierarchy in cemetery complex of Shah Nematollah Vali and variety of appearances of Classical Elements, as well as hierarchy order of visitation from entrance to cemetery, are significant based on the semiotic approach of existence

elements. With reliance on perception of four mystic journeys in analysis of monument, passing from soil to water, air and fire; passing from this world to purgatory and resurrection worlds in comparison with classical elements, it is understandable that sensual receptions of spaces, simulacra images of elements, harmonies and moving toward imaginative world has been consciously used in this monument. By passing through spaces, representation of genesis and death myth can be perceived and known. According to empirical, analytical and metaphysical premises based on mind phenomenology, intuitive conception to perceive space is required for

archetypical behavior in users in order to pay attention to metaphysical world and to perceive divine action. The bare presence of Classical Elements in Jelokhan Courtyard and absolute and dominate presence of soil in Mohammad Shahi Courtyard walls, water in Shah Abbasi Courtyard and light and air in dome has created a mysterious spatial quality that strengthens praying experience linking to the foundation of material world and universal knowledge about life.

Therefore, intrinsic connection between Classical Elements and genesis is deemed as symbolic realization of genesis myth, life and posthumous life. The advent of these elements relied on their essential nature, is the fundamental action in creating divine spaces and making perceptual- spiritual quality by Iranians. This point can be the basic strategy to generate praying spaces today.

REFRENCES

Ahmadi, B. (2019). *Heidegger and history of existence* (5th ed.). Nashr Markaz. https://b2n.ir/u47976

Akbari, A. (2018). *A Philosophical Notes on Theoretical Bases of Architecture*. Jahade Daneshgahi. https://www.researchgate.net/publication/339612885_A_Philosophical_Notes_on_Theoretical_Basis_of_Architecture

Akbari, A. (2019). Investigation of Built-Space Narratives based on Ratio of "Dialectic of Space-Time" and "Body." *Iranian Journal of Anthropological Research (IJAR)*, *8*(2), 75–97. https://doi.org/10.22059/IJAR.2019.71599

Amélie Razavifar, * (Neuve-Eglise), & Ghaffari, H. (2012). Peirce's Semiotics in the light of His philosophy, Epistemology and His Vision of pragmatism. *Philosophy*, *39*(2), 5–37. https://jop.ut.ac.ir/article_35799.html

Bachelard, G. (2015). *L'eau et les rêves: essai sur l'imagination de la matiere* (M. Keyfarokhi (ed.); Persain tr). Porsesh Publications. https://b2n.ir/d02025

Ball, P. (2004). The Elements: A Very Short Introduction. In *The Elements: A Very Short Introduction*. https://doi.org/10.1093/actrade/9780192840998.001.0001

Barthes, R. (2015). *Mythologies*. Média Diffusion.

Barthes, R. (2019). *Myth, Today* (S. D. Daghighian (ed.); Persian tr). Nashr Markaz. https://b2n.ir/e34369

Bazargan, A. (2019). *Introduction to qualitative and mixed research methods* (9th ed.). Didar Publication. https://b2n.ir/197726

Berrio-Zapata, C., Moreira, F. M., & Sant'Ana, R. C. G. (2015). Barthes' Rhetorical Machine: Mythology and Connotation in the Digital. *Bakhtiniana: Revista de Estudos Do Discurso*, *10*(2), 135–157. https://doi.org/http://dx.doi.org/10.1590/2176-457321910

Boyd, T. J. M., & Sanderson, J. J. (2003). *The physics of plasmas*. Cambridge University Press. https://b2n.ir/m98757

Campbell, J., & Moyers, B. (2019). *The Power of myth* (A. Mokhber (ed.); Persian tr). Nashr Markaz. https://b2n.ir/x88313

Cassirer, E. (2017). *Language and Myth* (M. Salasi (ed.); Persian tr). Morvarid Publications. https://b2n.ir/x09884

Corbin, H. (2013). *L'homme de lumiere dans le soufisme Iranien* (F. Javahernia (ed.); Persian tr). Golban. https://b2n.ir/g13356

Corbin, Henry. (1978). *En Islam iranien : aspects spirituels et philosophiques*. Gallimard. https://www.worldcat.org/title/en-islam-iranien-aspects-spirituels-et-philosophiques-tome-iv-lecole-dispahan-lecole-shaykhie-le-douzieme-imam/oclc/38262410

Eliade, M. (1961). Myths, dreams, and mysteries: The encounter between contemporary faiths and archaic realities. In *The Library of religion and culture*.

Eliade, M. (2011). *Sacré et le profane* (B. Saleki (ed.); Persian tr). Elmi Farhangi Publications. https://b2n.ir/h04658

Eliade, M. (2013). *Aspects du myth* (J. Sattarie (ed.); Persian Tr). Toos Publications. https://b2n.ir/m26919

Everaert-Desmedt, N. (2006). *L'esthétique d'après Peirce*. Signo.

Farahi Farimani, M., & Haghighatbin, M. (2016). Analysis the Perception of the Iranian in the face of Nature (Case Study: Scrutinizing Scientific Products in the Fields of Landscape Architecture, Art and Architecture). *Journal of Studies on Iranian-Islamic City*, *6*(4), 33–42. http://iic.icas.ir/Journal/Article_Details?ID=185

Foroozan Kia, E., & Ostaji, I. (2017). Fire manifestation in myths and religions. *The 5th Conference on Language Studies and Persian Literature*. https://search.ricest.ac.ir/dl/search/defaultta.aspx?DTC=36&DC=69489

Ghaemi, F., Yahaghi, M. J., & Poor Xhaleghi, M. (2009). An Archetypical Criticism of the Symbolic Aspect of the Elements "Earth" and "Air" in Mythology and Ferdowsi's Shâhnâmeh. *Journal of Adab Pazhuhi*, *3*(10), 57–82. https://adab.guilan.ac.ir/article_355.html

Ghavipanjeh, Z. (2009). Decoding the symbol of soil in the art of the Land of Secrets. *Honar Quarterly*, *79*, 158–173. https://b2n.ir/f33483

Ghavipanjeh, Z. (2015). Symbolism of triangles in Classical Elements (water-wind-soil-fire). *First International Conference on Art, Crafts and Tourism*. https://civilica.com/doc/543577/

Hamzehnejad, M., Rabbani, M., & Torabi, T. (2015). Wind's Role in Human Health in Islamic Medicine Approach and Its Impact on Locating and Structure of Iranian Traditional Cities. *BSNT*, *5*(1), 43–57. http://bsnt.modares.ac.ir/article-2-10352-fa.html

Holl, S., Perez-Gomez, A., & Pallasmaa, J. (2017). *Questions of Perception: Phenomenology of Architecture* (A. Akbari & M. A. Sharifian (eds.); persian ed). Parham Naghsh. https://b2n.ir/x30205

Honko, L. (1972). The problem of defining myth. *Scripta Instituti Donneriani Aboensis*. https://doi.org/10.30674/scripta.67066

Kalantar, N., Sadeghi Tahsili, T., Hasani Jalilian, M. R., & Heydari, A. (2016). The journey of fire from myth to

mysticism (Mythical roots of fire-related symbols in mysticism). *Classical Persian Literature*, *7*(3), 27–51. http://classicallit.ihcs.ac.ir/article_2582.html?lang=fa

Kermani, A. (2011). Arrangement of world system based on attitude of Ibn Arabi. *Hekmat Erfani (Mystic Wisdom)*, *1*(1), 43–68. http://erfani.nashriyat.ir/node/10

Madadpour, M. (2007). *Spiritual wisdom and the realm of Art*. Monadi Tarbiat. https://b2n.ir/f14014

Mirjani, H. (2010). LOGICAL ARGUMENTATION AS A RESEARCH METHOD. *SOFFEH*, *20*(50), 35–50. https://www.sid.ir/En/Journal/ViewPaper.aspx?ID=211171

Mohammadi Asl, A. (2020). *Anthropology of Claude Levi-Strauss (need of modern world to myth)* (2nd ed.). Arman Roshd Pub. https://b2n.ir/e44534

Naeima, G. (2015). *Persian Garden* (6th ed.). Payam Publications. https://b2n.ir/086009

Namvar Motlagh, B. (2007). Bachelard: Founder of imaginative critique. *PazhouheshNameh-e Farhangestan-e Honar*, *1*(3), 57–72. http://pazhouheshnameh.ir/article-1-50-fa.html

Nasr, S. H. (2015). *Knowledge and the Sacred* (E. Rahmati (ed.); Persian tr). Sohravardi Research and Publication Office. https://b2n.ir/h87299

Nasr, S. H. (2018). *Conceptions of nature in Islamic thought* (3rd ed.). Tehran University Press. https://press.ut.ac.ir/book_2916.html

Pallasmaa, J. (2016). *The Embodied Image, Imagination and Imagery in Architecture* (A. Akbari (ed.); Persian tr). Parham Naghsh. https://www.researchgate.net/publication/339775065_khyal_mjsm_tkhyl_w_khyal_p rdazy_dr_mmary

Partovi, P. (2015). *Phenomenology of Place* (4th ed.). Art Academy Press. https://b2n.ir/247521

Peirce, C. S. (1992). *The essential Peirce: selected philosophical writings. Vol. 2.* Indiana University Press. https://b2n.ir/w32893

Pirdehghan, M., & Pirbabaei, M. T. (2013). Representative nature of Classical Elements in Islamic art based on philosophical primary texts. *International Congress on Culture and Religious Thought*. https://civilica.com/doc/301242/

Qayyumi Bidhandi, M. (2011). *Articles on the basics and history of architecture and art*. Elimi va Farhangi. http://opac.nlai.ir/opac-prod/bibliographic/2250479

Sabri, C. R. (2014). *Evolution in design: myths and images in design process* (A. Akbari (ed.)). Parham Naghsh. https://b2n.ir/h52305

Sattarie, J. (2014). *The world of mythology* (4th ed.). Nashr Markaz. https://b2n.ir/g52764

Shayegan, D. (2013). *Henri Corbin, horizons of intellectual doctrine in Persian Islam* (B. Parham (ed.); 6th ed.). Farzan Rooz Pub. https://b2n.ir/z53006

Vasegh Abbasi, A., Mashahdi, M. A., & Rezaei, R. (2015). Mythic structure analysis "wind" in the Shahnameh. *Journal of Poetry Studies (Boostan Adab)*, *7*(3), 153–170. https://doi.org/10.22099/jba.2015.3032

Warner, R. (2020). *Encyclopedia of world mythology* (A. Esmaeilpour (ed.); Persian tr). Hirmand. https://b2n.ir/k37623

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