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Original Research Article

Formal-Spatial Approach in Architecture and Painting: a Case Study on the Works by Mehrdad Iravanian and Alireza Taghaboni*

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Abstract

Problem statement: The architecture-painting relationship is one of the study fields in the theory of art and architecture. Although architecture is a combination of practical concepts, it can be studied in relation to painting focusing on form and space. Meanwhile, in creating an artwork, if an “artist” is assumed as a fixed variable; the question is that how his intellectual structure affects the creation of form and space in two media, and how it connect the two art regimens.

Research objective: This study addresses the works by architects who work in both areas. It is assumed that the architect’s skill from the distance of imagination to depicting mental schemas as a painting leads to the dissemination of his thought, affecting the creation of his architectural work and spatial thinking.

Research method: The present study was performed using a qualitative comparative analysis technique concerning Kerry Walk’s model. The study model was a combination of spatial tendencies and semantic approaches of form and space. In the first section, the paintings by Mehrdad Iravanian and Alireza Taghaboni were analyzed using Wolf Lane’s formalism method. Next, the concepts of their architecture form and space were examined. The achievements were concluded based on theoretical studies and experimental data through a descriptive method. Finally, a comparative analysis was performed to clarify the architecture-painting relationship.

Conclusion: It seems that the artist deals with the objective concepts of the work at the levels of “basic” and “functional” in two completely independent areas, and the subjective concepts at the “value” level, which can be adapted to the intellectual structure of the artist. At the “symbolic” level, by transferring some formal approaches from painting to architecture, the architectural work gets closer to its artistic aspect and acquires an aesthetic aspect.

Keywords: *Formal-spatial approach, Architecture, Painting, Mehrdad Iravanian, Alireza Taghaboni.*

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Introduction and problem statement

It seems that in half of the studies in art history, architecture is considered as a branch of fine and visual arts. Although architecture is a combination of practical approaches, it can also be studied as an artwork related to other art disciplines, including painting. In the history of world architecture, there are always architects-painters who brought these two artistic media together. The study of the works of architects in modern times such as Le Corbusier, Gerrit Rietveld, Michael Graves, Zaha Hadid, Lebbeus Woods confirms this statement that the architect is an artist who steps into space, escape from the functional aspects of architecture for a moment, paints and achieves a new expression in the creation of architectural space by overlapping the layers of architecture and painting. It can be seen that the basis of the architecture of the houses designed by Corbusier is the same as the basis of modern painting (Giedion, 1995). In a study on the works by contemporary Iranian architects, a great number of architects, including Kamran Diba, Houshang Seyhoun, Ali Akbar Saremi, Simon Ayyazian, Mehrdad Iravanian, Alireza Taghaboni, Reza Daneshmir, etc. during their artistic activity, also work as a painter. With this in mind, if the architects' painting is considered as a manifestation of mental schema and a model of graphic thinking, it is a unique language of the architects' capability that allow them for adventuresome representing their spatial thinking and mental image. These paintings can be mental conceptual structures that allow the architects to study and identify space and form. He/she magnifies his artistic imagination and inspiration in his mind and masterfully depicts the distance between subjectivity and objectivity. When an architect paints, he/she gets away from the real world and gains a more accurate understanding of the reality of his mind through an empirical path.

Research background

Among the conducted studies, by publishing the book entitled 'Civilization of the Renaissance in Italy,'

Burckhardt showed that the different domains of art and culture were seen together (Foroutan, 2008,10). Giedion (1995) compared spatial imagination in painting and architecture. Bacon (1967) gained a perception of urban space by analyzing the residual representations of every period. In the book "Architecture and Cubism," Hitchcock emphasized the direct relationship between painting with modern architecture (Blau & Troy, 2002). It is the book of Zaha Hadid and Suprematism, where the new development domains have entered the territory of the plan painting world (Douglas, Obrist & Gmurzynska, 2012). Norouzitalab, Moghbeli and Jodat (2014) studied psychoanalysis of painting and architecture in the context of World War I to World War II. In Iran, what has been remained from the long past is recognized as miniatures whose relationship with the architectural space has been extensively studied. Foroutan (2008) revealed that the architectural space's structural characteristics were observable in the depictions of the seventh and eighth Hijri centuries. Samiei, Khodabakhsh and Foroutan (2016) investigated the painting works by Parviz Kalantari and the architectural works by Mirmiran and examined the conceptual relationship between these two arts according to the traditional Iranian architecture. We can observe that neither of the studies in the contemporary Iran domain has compared the architectural and painting works by an artist and examined the relationships of the painting and mental schemas of an architect to his designing process. This paper tries to recognize, artistically and aesthetically, the architectural space of contemporary Iran in the recent decade.

Methodology

The present study was performed using a qualitative comparative analysis technique in the two architecture and painting fields concerning Kerry Walk's model. Based on the model, in the first step, the comparison bed should be determined, so to do this, formal-spatial approaches were selected as a reference framework, which were the basis

of study theoretical model. The second step in the comparison field, the works of today's Iranian architects were consciously selected in a specific period to control the historical period and production context as effective variables in the creation of the work. There were different case studies among the abstract and semi-abstract works. In the first step, the works of artists were selected whose paintings was numerous for analysis, and their architectural works were avant-garde and leading in terms of form and space. Then, the paintings and architectural works by Mehrdad Iravanian and Alireza Taghaboni were selected as case studies. In the third step, it was assumed that the architectural and painting space represents the architect's mental schema, and in the architects' painting, it is possible to discover the architectural spatial relationships that have been added to its aesthetic dimension in the distance from imagination to drawing. The fourth step dealt with data collection and coding based on the study theoretical model to achieve structural order. Finally, a comparative analysis answered the question of how the interactions of the architect's mental schemas in

painting and architecture are manifested and what effect they have on each other (Fig. 1).

There are different approaches to reading painting, which are based on the method of formalism and emphasize the importance of shape and visual features instead of contextual analysis. Wölfflin proposed form theories based on formal analysis and dual opposing principles, including linear versus painterly, open versus closed form, plane versus recession form, multiplicity versus unity, and absolute clarity versus relative clarity (Wölfflin, 1998).

Theoretical frameworks

According to comparisons based on Kerry Walk's perspective, a reference frame is a platform of specified resources according to which two selected issues are juxtaposed (Piravivanak, 2016). The relationship between the two texts can be evaluated in different respects. In this article, the representation manner of the space and the spatial-formal elements were selected. According to them, the space reading approach in architecture and the semantic formal and

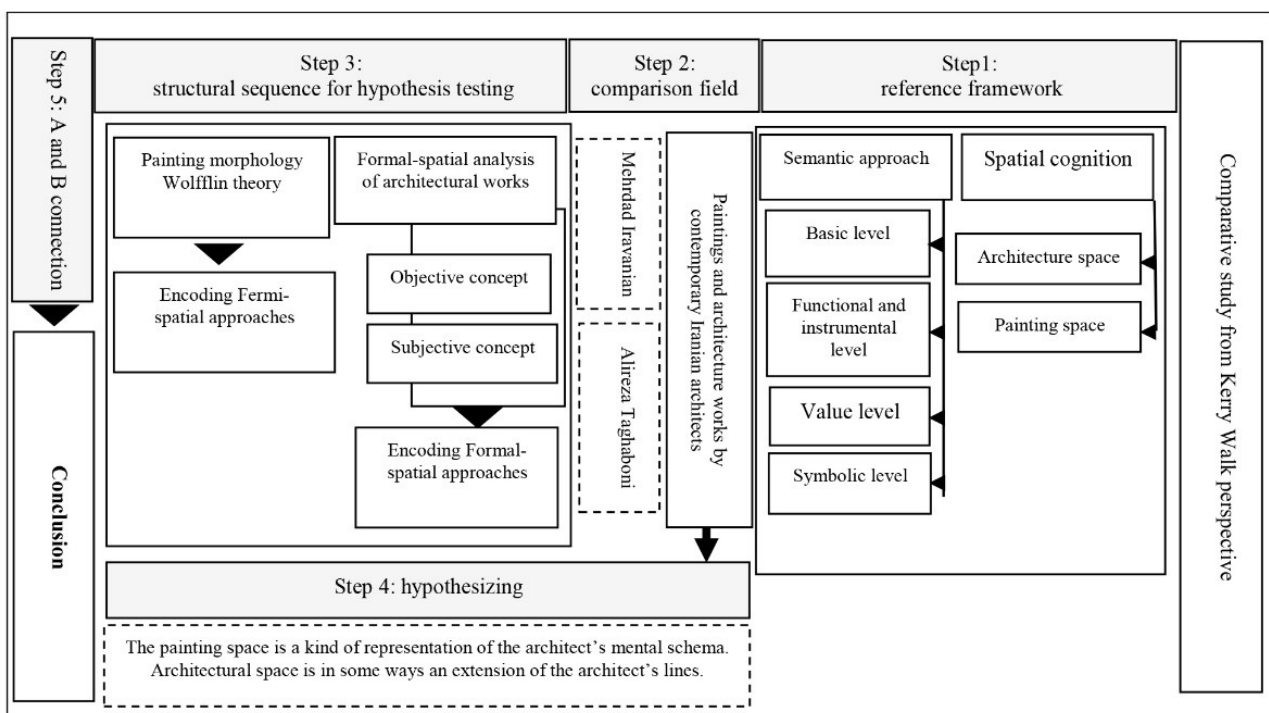


Fig. 1. Research structure. Source: Authors.

spatial approaches, as the theoretical framework, were discussed.

• An approach to space

When the research topic associates with spatial analysis, the first concern turns to the space-related theoretical aspects. Any claim made in relation to the architectural space knowledge is dependent on the topic, arguing that based on what parameters space is defined. The complete definition expresses that space is rooted in different sciences. In the abstract-physical approach, space is defined in relation to the physical situation. Krier presents a geometrical definition of space. Giedion recognizes spatial imagination as the space recognizing factor. Zevi poses the spatial experience and argues that the achieving spatial dynamics lies in free geometry, surface analysis, asymmetry, anti-perspective architecture, and spatial fluidity (Memarian, 2014). In the cognitive approach, a concept beyond the physical body, namely environment, and concepts like mental maps, space perception, concreteness, and abstractness of space are posited (Jalili & Foroutan, 2015). In cognitive sciences, space is the result of interactions among activity, perception, and spatial distribution. Lang and Rapoport posed a behavioral approach to space. De Certeau called the place the limiter and space the new freedom. The place is the situation of objects in relation to each other, and space is where these objects are experienced (Zarghami & Behrooz, 2015). Lefebvre (1991) sets forth representation spaces. Soja (1990, 120) believes in the spaciousness concept and refers to sensory-concrete, mental-perceptual, and living spaces when categorizing space. In the phenomenal approach, Norberg-Schulz (1979) became popular by his *genius loci* pursuing to discover meaning with some ideas like "dasein" "where space was seen in the form of a place-center and path-domain. Partovi (2013) argues that the most important factors that phenomenologically define space are the dialectic between inner and outer realm, boundary, centrality, and confinement. In Iranian studies, Falamaki (2002) has posed space along

with some topics like time, shape, and perception. Mirmiran (2004), in his architecture continuation theory, perceives spatial valuing as a criterion for measuring architecture and recognizes evolution in the inauguration, transparency, and lightness of space. Foroutan (2008) applied physical, abstract, cognitive, sociocultural, philosophical, and religious approaches to defining the space.

In conclusion, it can be said that architectural space cannot be summarized through a single approach. In the research course, the movement from the space as a symbol of the form and physical body is more evident. Then, in the comparison stage, the perceptual space is posed and proceeds towards relational cognition. What is significant in the perceptual space section is meaning. The separation of spatial perception and meaning processes is difficult since both are guided by mental schemas (Lang, 2011).

• Semantic approaches to form and space

Form embraces a wide range of concepts. As interpreted by Tatarkiewicz, five concepts can be presented by form: the pattern and order of the components, external similarities, the periphery and boundaries of a phenomenon, transverse manifestations, and, finally, phenomenology in mind (Jamali, 2015). In architecture, it seems that knowledge of form has recognized three form-idea, form-figure, and form-space replacements. The first results from linguistic equivalence in translation, and they detach from each other in modern applications. The second derives from semantic resemblance in the language. The term figure denotes the observable appearance separated from the modern architectural form. Eventually, the third replacement is the result of matching the content with the innate concept of form. The form is the boundary between mass and space in the Newtonian paradigm; however, in the Einsteinian paradigm, space or the lived human experience encompasses anything. Space is formed by the energy-substance materialization and interconnects with the concept of form. Generally, on the one hand, the form addresses the result and

product in architecture. On the other hand, as a theoretical concept, it denotes the formation process of the work. Moreover, in a formalist approach, it can involve perceptual and cognitive generalities, as well (Bazrafkan, 2016, 64-66).

Based on this knowledge, the architectural form can reflect different semantic loads, which sometimes influence the human mind to the extent that they synonymize the physical body with the same meaning (Falamaki, 2002, 387). The meaning differs in different theories and approaches. In empirical theories, the meaning is given to the events after structures are recorded. The gestalt theoreticians recognize meaning as the result of the geometrical personality performance of the environment. In the psychological approach, the meaning results from the interaction among three components, including the physical body, activity, and concepts. The ecologic approach considers the meaning of perception based on mental schemas (Lang, 2011, 108). In the domain of the architectural design process, the schema is an insight owned by an architect in vis-e-vis his work topic and considered as the mental geometry (Noghrehkar, Muzaffar & Noghrehkar, 2010, 137). Hershberger (1970) proposed a base model for architecture meaning. He believes that humans never record the space and form but only their representations. In other words, the stimulant form within the human organism is represented as an idea, imagination, and concept (objective meaning). These representations operate as mediating stimulants to respond to another intermediate. This model of meaning or process encompasses an intermediate that is emotional,

evaluative, or prescriptive (subjective meaning). The artist embarks on his practice with what is developed in his mind. This stage includes artistic imagination and inspiration. i.e., developing a thought by not imitating the outside. This is based on personal ideals and beliefs and mental values, in varying layers (Taghvaei, 2010, 76) and gives birth to subjective concepts.

Gibson clarifies the six levels of meaning: the primary and tangible meaning, the meaning of use, the meaning of tools, an object's meaning and value, and signs and symbols. Some of these meaning levels are equivalent to Hershberger's. The first is the external meaning, which includes shape and form. The referential meaning relates to the function of the form and, to some extent, to symbols. The emotional meaning or values are at the next level. Lastly, the prescriptive meaning denotes a degree of compulsion in the behavior by relying on the environment structure (Lang, 2011, 108); however, it is out of this study's scope. What is used as a basis for inference in this article is presented in Fig. 2.

Discussion

• Comparison field

The comparison field is based on the works of architects who have worked in the field of painting besides their professional architectural activities. An attempt has been made to select a fixed time variable related to the works of Iranian architects in the recent decade. It should be mentioned that holding an exhibition titled "Poems on Scaffolding" for works by contemporary Iranian architects has contributed to selecting case studies. Architecture and painting

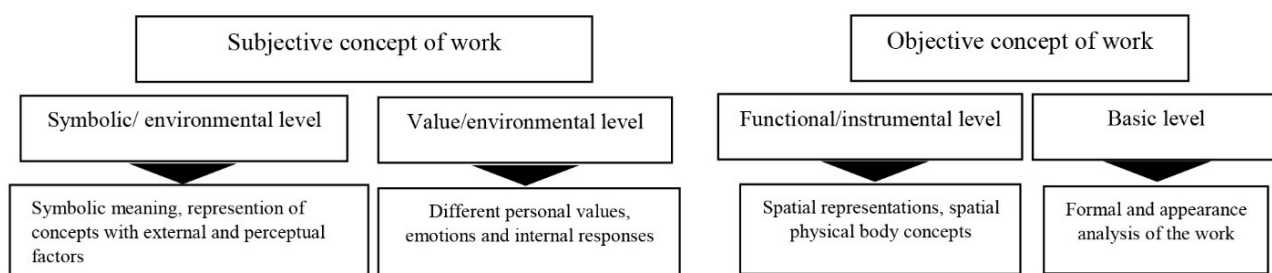


Fig. 2. The theoretical model of the research. Source: Authors.

have a common point in different aspects of meaning, as two branches of art. However, the abstract principles cannot be applied in architecture as painting, and the concept of sculpture sets the architectural world apart from other mediums of art. In the realist paintings of these architects, space is accompanied by a detailed and clear representation. There is a meaning in the abstract and semi-abstract paintings with an intuitive space in the background of work, and it communicates only with those who can understand it (Ocvrik, Stinson, Wigg, Bone & Cayton, 2017, 27). The artist uses artistic elements to create a form, leading to the desired content that includes an artist's emotions and mental images. The artist uses his/her visual perception in reconstructing the objective space, which is explicitly perceptible. However, the conceptual perception is used in depicting the intuitive space. According to Table 1, the artists with spatialization in their works were classified in terms of conceptual and figurative aspects. The realistic (sketch) drawings were ignored due to the detailed drawing of space by the observer and the faint role of mental schemas in creating a work. There were different case studies among the abstract and semi-abstract works, the works of artists were selected, first, whose paintings was numerous for analysis, and their architectural works were avant-garde and leading in terms of form and space. Finally, the visual and architectural works (focusing on villa use) by Mehrdad Iravanian (semi-abstract)

and Alireza Taghaboni (abstract) were selected. Due to the scope of the article, a limited number of images were included in the text.

• Works by Mehrdad Iravanian

Mehrdad Iravanian, painter-architect, graduated from USL University. He has created different urban designs and carried out architectural projects in Shiraz when he returned to Iran. First, he started his work by holding an exhibition for visual works and then presented significant works in the field of architecture. The forms and spaces created by Iravanian do not remain at the physical body level and produce meanings by passing through the surface of the form (Sarmastani, Foroutan, Tahouri, 2018, 68).

• Morphology of paintings

In all paintings, the type of space representation is semi-abstract and intuitive, with an expressionist style. According to the limitation of the article have been selected limited samples (Fig. 3) and the reading images are as follows:

- **Painterly versus linear:** the dominant forces are linear with clear boundaries. The lines are represented with two perpendicular lines, defining an urban-scale space platform; the eye is directed to a recognizable concept point and represents an architectural space with compact and non-standard elements.
- **Plane versus recession:** lines and sides in the same direction are directed to the center, up, and

Table 1. Case study of paintings by architects. Source: Authors.

Painting style	Conceptual aspects	Features	Artists
Abstract	<ul style="list-style-type: none"> - Origin: Subjective - Quantity: Total - Quality: Affirmation - Clarity: Ambiguous 	<ul style="list-style-type: none"> - In-out perception Creative subjective scheme based on - mental schemas - Lack of space creation 	<ul style="list-style-type: none"> - Alireza Taghaboni, Reza Daneshmir, Catherine - Spiridonoff, Zia Javed, Kourosh Hajizadeh, - Babak Rostamian, Saeid Saadatnia, Hamid Noorkeyhani
Realism Semi-abstract	<ul style="list-style-type: none"> - Origin: Objective - Quantity: Top-down and down-top - Quality: Affirmation and negation - Clarity: clear yet distinct 	<ul style="list-style-type: none"> - Internal perception in dealing with external - Representation of objective schemas - Objective space modeling 	<ul style="list-style-type: none"> - Mehrdad Iravanian, Kamran Diba, Ali Panahi, Mahan Javed, Baharak Keshani, Farid Shamsavarian, Kourosh Rafiey
Realism	<ul style="list-style-type: none"> - Origin: Observation - Quantity: Detailed - Quality: Denegation - Clarity: clear 	<ul style="list-style-type: none"> - Out-in perception - Observation - Data collection - Space reconstruction 	<ul style="list-style-type: none"> - Hooshang Seyhoun, Ali Akbar Saremi, Faramarz Sharifi, Simon Ayvazyan

down and leading to the creation of powerful and oriented movements that lead the eyes to the depth of the paintings. Finally, it induces an illusion of forwarding movement in recession.

- **Open versus closed forms:** Fully open and continuous images intensified by vertical and horizontal oriented axes. Space is beyond the human scale, where the observer's sense of control over space has been deprived. Upward or downward open space is felt as an asymmetric space without logical boundaries.

- **Multiplicity versus unity:** In all the images, the extension integrates the composition and a harmonious space is created through the focal attraction.

- **Absolute clarity and relative clarity:** The absolute clarity of the images is quite relative, and the purpose was not to give the observer a clear impression of the space. Relative clarity is perceived in the situation discovery.

Images cannot be independent of their inner meanings. The response of an artist to the elements of line and surface is, to some extent, the same as his response to sensory experience in the world (Adams, 1996). Here, targeting is implicitly clear, which comes from the mental excitement of an artist. The in-depth movement of the line indicates the space (Okurik et al., 1998), which provides the observer with the expectation of discovering other things in new areas due to the strong directed attraction. This lead the observer to a new place and to be exposed to a tangible experience of a

new reality. It represents architectural space on an inhuman scale to some extent. In all images, the abstract components of the image, through metaphorical relationships, refer to the ambiguous spatial relations in the architectural structures and create an image of compaction and collapse in an observer's mind, representing a perfect example of pure imagination. This spatial abandonment is another concept that can be mentioned in relation to the environment, and it refers to "standard deviation" and "non-referral" as the internal cognitive traits of Iravanian at the level of subjective meaning. The space between the two factors is an integral part of the image. There is no vacuum in this middle space that creates a field of perceptual forces in the surrounding space, based on which the psychological and social aspects of spatial distances between humans can be realized in everyday communication, for example, what social contracts are made in dealing with other people. It is thought that in the internal traits of Iravanian, the horizontal and vertical structures are defined based on responsibility and authority, respectively. The workspace structure is vertical, and the living structure is horizontal (Table 2).

Spatial analysis with a physical approach to architectural works:

The considered architectural works with residential use include houses No. 15 and No. 12, and according to the scope of the article, only how to deal with form and space is addressed.

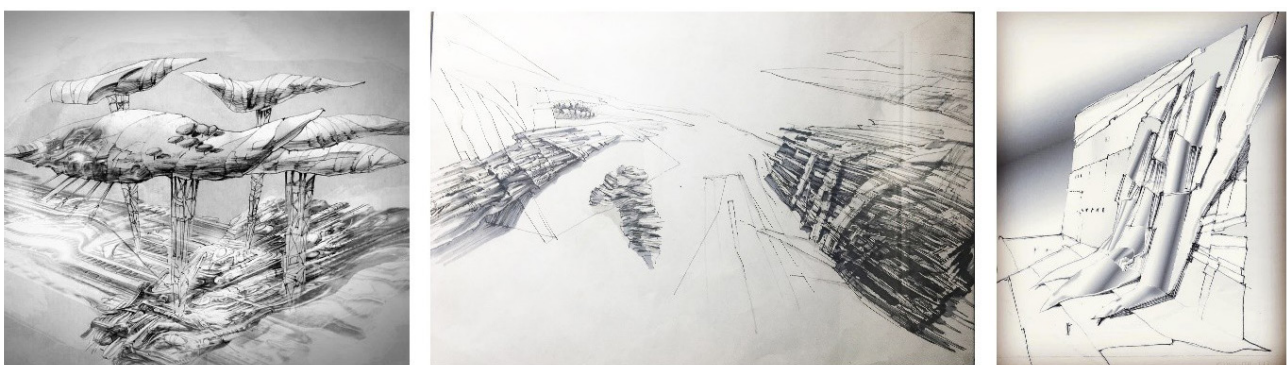


Fig. 3. Paintings by Iravanian. Source: www.mehrdadiravanian.com.

Table 2. Formal-spatial analysis of Iravanian's paintings. Source: Authors.

Painting	Formal analysis	Spatial approaches	Internal concepts (symbolic/value)
Structure	<ul style="list-style-type: none"> - Linear and colorless images - Representation of depth and direction <ul style="list-style-type: none"> - with lines convergence - Open and continuous images <ul style="list-style-type: none"> - Asymmetry - Relative resolution and no optical value 	<ul style="list-style-type: none"> - Creation of strong directed attraction - Creation of spatial distances between two factors - Oriented and Avant-garde space 	<ul style="list-style-type: none"> - Lack of background and standard deviation <ul style="list-style-type: none"> - No need to read signs - Observer expectation to discover things - Creation of ambiguity in the observer's mind
Concept	<ul style="list-style-type: none"> - Unity resulting from a conceptual point - A space representation on an architectural and urban scale 	<ul style="list-style-type: none"> - Spatial abandonment - New and dynamic space 	<ul style="list-style-type: none"> - Spatial structure of work based on the authority - The structure of life is based on responsibility - Spatial distances in everyday interactions

- House No. 15 (2005)

This project has been built in Shiraz, and its design consists of a set of surface elements. The architect has made a painting curtain out of the house, manifesting his sign. Every internal or external surface is a bed for innovation eruption. Surfaces like islands in space display the dynamics of fields. The surfaces are not parallel but are exactly convergent, with the earth as the center of their convergence. A hierarchy of weights can be seen, each of which acts as the center of its domain. The upper parts of the building have considerable freedom and perceptually create downward pressure. Perceptual outcomes from the edges and surfaces are the products of the nervous system, and therefore, very dynamic forces are explained conflicting. The spatial experience in this work is based on the arrangement of different layers of surfaces, irregular geometry with free and unexpected forms, and the observer understands a part of the building by walking around the building. Eventually, the house has reached existential centrality with the concept embedded in it through these components. The open space is drawn inside the building and reaches a common border with the inside in a point. With his anti-perspective architecture and the principle of freedom, the architect distances himself from the suspension of life and the absurdities behind it (Fig. 4).

- House No. 12 (2010)

House No. 12 is a well-known work by Iravanian in Shiraz. At first glance, pluralism is the feedback of the use of random materials that avoid accepting their

interactive role. Metal parts when entering the house, the curved surface leading to the yard, and explicit stone and concrete surfaces play a unique role due to their intangible meaning, as they are not decorative, despite being full of patterns. Attention to material, texture, color, and light shows the architect's mastery in the use of spatial elements, which is a metaphor state with creative and unexpected aspects. Here the issue of "standard deviation" is raised, which, regardless of any standard, is designed in the form of contemporary architecture, and finally, addressing the hidden aspects of space has shaped the main approach in such a way that the innovation of space is accepted in the memory of its inhabitants with time and the views are driven from materials to space. The connection between the natural elements and the house forms an occupied object (Fig. 5).

Iravanian attempts to find his architectural identity, so he is sometimes a narrative architecture and sometimes a contextual architecture. The aesthetics of his works is at a point on the boundary between architecture and visual arts (Bani Masoud, 2015, 456). This composition emphasizes the narrative nature of the project. Transparency is a representation of the explicitness in used material, and the geometric architecture is seen as a connecting basis in the corners of the building. Surfaces have been differentiated in both mass and material. Ultimately, it is an unexpected anti-perspective architecture, part of which is perceived from an angle. Residential space has not been created uniformly, and borders have caused environmental differences. A new



Fig. 4. House No. 15. right: Surfaces with irregular geometry and free forms, Left: upper levels of the building. Source: [www. http://mehrdiravanian.com](http://mehrdiravanian.com).



Fig. 5. House No. 12. Right: Metal parts at the entrance. Left: explicit stone and concrete surfaces in the interior space. Source: [www. http://mehrdiravanian.com](http://mehrdiravanian.com).

Table 3. Formal-spatial analysis of Iravanian architectural works. Source: Authors.

Building name	Formal description of buildings	Physical concepts of space	Internal concepts (symbolic/value)
House No. 15	<ul style="list-style-type: none"> - Differentiated surfaces with Form diversity - Anti-perspective architecture with the convergence of surfaces in the center of the earth - Freedom and spatial integrity - Irregular geometry and asymmetry 	<ul style="list-style-type: none"> - Deviation from the standard language - Dynamics of field - Centrality with a hierarchy of weights - Space abandonment - Interference of outside and inside space and integration of borders 	<ul style="list-style-type: none"> - Spatial defamiliarization - Creation of a painting curtain symbolically - Internal innovation - Elimination of absurdity and suspension of life - Unbound space - Intuitive and random - Reference-free Structures
House No. 12	<ul style="list-style-type: none"> - Unbound joints - Proximity of opposing elements together with a hybrid relationship - Attention to non-functional aspects of spatial elements - Different applications of materials - Anti-perspective architecture and asymmetry - Resolution of surfaces with a variety of materials 	<ul style="list-style-type: none"> - Deviation from the standard language - Transparency in the explicit use of materials - Dual confrontations - New semantic birth 	<ul style="list-style-type: none"> - Emphasis on transience - Combination of time and place dimensions - Use of metaphorical mode and ambiguity in the use of materials - Emphasis on the concept of proximity and contrast - Narrative - Unexpected and random

meaning has been revealed in the way of dealing with space, leading to the creation of a center. There is formal-spatial analysis in Table 3.

• Works by Alireza Taghaboni

Alireza Taghaboni is a contemporary architect-painter who has won different awards in the field of architecture in the last decade. In general, his works can be divided into figures, abstract paintings, and architectural works. In paintings, figures lack a spatial reference, which its introduction and analysis are ignored.

• Morphology of paintings

Morphology represents the visual language of an artist (Adams, 1996, 30). Paintings are two-dimensional images with an in-depth illusory. Understanding the difference between the depth of reality and illusion requires the consideration of form elements with real quality in architecture and illusory quality in painting. However, an artist's responses to these form elements are somehow the same as his/her responses to sensory experience in the world based on mental imagery (ibid.,31). In Fig. 6, the reading images are as follows:

- **Painterly versus linear:** In all images, there is a painterly field of color and form in the background with a contrasting color. Silent distances arranged in harmonious directions in negative spaces represent negative and positive, light and dark, and far and near spaces.
- **Plane versus recession:** The images are completely

allegorical, and in terms of the intensity of contrast between the colors and the background, they come out of the plane mode and are displayed in a recession form. It is as if the images have been queued up to draw the observer's view to the depths of the image, but the contrast between the color and black background is predominant, and the form appears to be a recession. The overlap factor has also been used in addition to the color contrast. Depth and perspective are not visible and remain at the surface.

- **Open versus closed forms:** In the earlier drawing, the compactness of combinations and the dominance of positive space over the negative space of the background can be seen that negative space between the compositions more penetrates gradually.

- **Multiplicity versus unity:** The unity created with plane surfaces has been formed by a visual connection that has little ability to create a spatial reference but is emphasized from an abstract perspective. The repetition of regular or irregular visual units has led to extensive interconnectedness. In fact, in these images, a repetition of a pervasive pattern has been created based on abstraction and creates a smooth transition of the view between visual units.

- **Absolute clarity and relative clarity:** In this regard, Wölfflin refers to the nature of light and color (Adams, 1996, 30). Here the colors are quite clear, illuminating the continuity of the structure, masses, and margins of the form. There is absolute clarity in



Fig. 6. The selected works by Alireza Taghaboni. Source: [www. http://nextoffice.ir](http://nextoffice.ir).

terms of contrast with the background, but in terms of reference to mental or environmental concepts, there is absolute ambiguity (relative clarity).

A simple work comes to mind by seeing abstract images. However, this phase in the search for inference of the work's inner concepts is consistent with the mental schema. Thus, the concepts of contrast and harmony can be described as first-hand concepts. Soft movements have led to a dynamic and fluid space, results in dissemination through the open space. By moving from form to internal concepts of works, concerning the creation time of the work, the situation of society is also influential, which a kind of unity is expected in elections. The pervasive pattern has grown steadily and in a closely compacted manner, while in subsequent images, the compaction decreases gradually, and the dialectic between inside and outside spaces increases (Table 4).

Spatial analysis of selected architectural works with a physical body approach

- Amir Villa (2012)

This villa, located in Karaj, was reconstructed and designed as a supplemental structure, and eventually, the whole volume was converted into a thatched building to which a white volume was attached (Fig. 7). Emphasis on contrast, such as limitation and independence, reconstruction, and supplemental, have covertly added to space's sensory richness. Boundaries are focusing on the principles of conflict in the use of materials, colors, and realms, leading to environmental differences. By

creating a distance between the floor and the ground, the building is felt to be floating. Permanent gaps are the turning point of the audience's visual focus, which pulls the space in with a soft motion, the same motion that is quite evident in abstract paintings. Of course, its intensity in this project is small and has been summarized in one frame. In terms of spatial connections, it has the least reach for the outdoor space. However, the relationship with spatial transparency has been resolved. It cannot be seen completely from one perspective, and the observer can see a part of the house by walking around. This is the fourth dimension of architecture (Memarian, 2014). It is somewhat enclosed compared to other projects, which has become a center. Every place where meaning is revealed is a center (Partovi, 2013). The spatial structure of the work is horizontal. All components affect the quality of the whole building. The behavioral inner realm involves a careful attention to paths, signs, and spatial elements.

- Kouhsar Villa (2014)

Kouhsar Villa, located in Kordan, was transferred to him in the middle of the project. Physically, it can be considered a formalistic framework. It is a "free form symbolizing power and popular life" (Memarian, 2014, 238). The surfaces are differentiated, and with the soft movement of the wall, it draws the space in and offers the dialectic between inside and outside spaces to some extent more than before. Paths have been created by removing restrictive elements in a collective space, which leads the observer motion out of the straight line and rotates in space. Permanent gaps, such as windows

Table 4. Formal-spatial analysis of Taghaboni paintings. Source: Authors.

Painting	Formal analysis	Spatial approaches	Internal concepts (symbolic/value)
Structure	<ul style="list-style-type: none"> - A field of color and form versus a background of contrasting color value - Creation of a raised form by contrasting with the background - Creation of unity with a visual connection with repetition of identical units and all-round pattern 	<ul style="list-style-type: none"> - New and dynamic space - Diffusion of positive space among the negative space of the background - Internal and external communication - Spread among the external space 	<ul style="list-style-type: none"> - No need to read signs - Creation of a form based on emotional perception - Formalist approach and lack of attention to historical concepts and marking - Type of pattern repetition, influenced by
Concept	<ul style="list-style-type: none"> - Movement from closed forms to open forms in the time sequence of creating works. - Clarity of soft dominant form. 	<ul style="list-style-type: none"> - Contradictory and harmonious space. - Creation of fluid space. 	<ul style="list-style-type: none"> - Structure upgrades - Separation from the past - The artist's inner interest in playing with form environmental events in society, such as elections

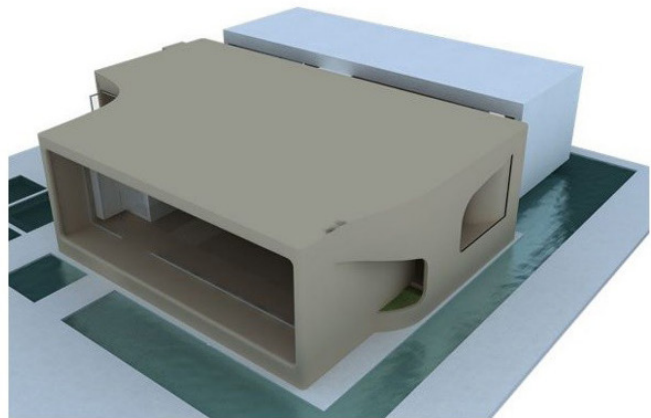


Fig. 7. Amir Villa. Right: Emphasis on contrast. Left: Gap as a visual focus. Source: [www. http://nextoffice.ir](http://nextoffice.ir).

or fireplaces, are a turning point in the audience's visual focus. Here the contrast is obvious with the difference between the main view and the other view. This villa is a form that awaits the reading of "concepts mixed with the internal feelings of the artist and without external reference." This abstract work has an evolutionary structure, and the observer is not confronted with a cube that tends to look like nothing other than a cube. In creating an art form, the role of emotion is emphasized rather than comparison, resulting in the creation of architecture with a phenomenal space (Fig. 8).

The strong point of this project is mastering the form, which can be the product of the architect's association with the art of painting. At least one of his most important demands of the form is an endeavor that contributes to the closure of the architectural space. It can be said that for Taghaboni, the form has not been an intermediary for meaningful signs from the past. He avoids representation in most projects. The idea is that the use of the material in

an evolutionary construction in his works makes the association between architectural forms and painting abstraction closer. The phenomenal space in this project is flexible at the borders. Spatial continuity is perceived by the continuity of surfaces, the trapping of space, the feeling of being torn and cut from the past, the spatial openings in wall surfaces, and the physical body's spatialization. How to deal with space is a reflection of the artist's subconscious, and eventually, curiosity and contrast yet harmony can be perceived (Table 5).

Architecture-painting relationship

To answer the research questions, following the Kerry Walk method, the connection between form and spatial approaches of the two artistic media of architecture and painting was achieved in the mental world of the artist, which is shown in Figs. 9 & 10. In the painting stage, the artist begins his work with what is formed in his mind, which is based on his ideals concerning the form, space, social values, and



Fig. 8. Kouhsar Villa. Right: Two main views. Left: Interior space. Source: www. <http://nextoffice.ir>.

Table 5. Formal-spatial analysis of Taghaboni architecture works. Source: Authors.

Building name	Formal analysis	Physical body concepts of space	Internal concepts (Symbolic/value)
Amir Villa	<ul style="list-style-type: none"> - Current status/ Supplemental, Plastic/right-angled, rough/polished - Horizontal communication - Asymmetry and anti-perspective architecture - Creation of surfaces differentiation and split cubes - Horizontal spatial structure 	<ul style="list-style-type: none"> - Creation of an internal behavioral area - Spatial duality - Gathering together dual times and spaces in unit scale - Correlation and proximity between components - Dialectic relationships between inside and outside spaces by framing space - Creation of space gap, border, and fences 	<ul style="list-style-type: none"> - Emphasis on contrast - Group cohesion - Reduction of power height in behavioral space
Kouhsar Villa	<ul style="list-style-type: none"> - Form-oriented architecture with changed surfaces - Continuity of spatial connection between outside and inside - Formal gaps and surface decomposition - Asymmetry and anti-perspective architecture - Creation of a dynamic and fluid space 	<ul style="list-style-type: none"> - No external spatial reference - Emotional reference to abstract patterns - Creation of a turning point and visual focus - Progressive space inside the form - Dialectic relationships between inside and outside 	<ul style="list-style-type: none"> - Representation of abstract painting - Representation of a coherent whole - Cut from the past - Emphasis on contrast

individual beliefs or the same mental image. This nonlinear stage, without borders and fluidity, is born in the distance between imagination and fantasy, and its semantic burden is clarified in a new way each time. However, in the stage of creating space in architecture, a more complex process has taken place that is effective beyond the mental image of the architect, the fence of the physical body, and the functional plan. Some small signs can also be seen in the architecture, which is first practiced in the architect's painting and then find their way into the physical world.

Conclusion

In the present study, the inner projection of two

contemporary Iranian architects was investigated. It was assumed that dealing with space has a dialectical relationship in both painting and architecture fields. By analyzing the case studies, the two artists' approaches can also be compared in addition to inferring the type of relationship between the two media. In the works by Iravanian, one can follow common value concepts in both domains, which take different forms in the instrumental and functional concepts. Iravanian is a painter-architect whose architectural space is the continuity of the painting lines, which begin with the mental images and inner emotions, are depicted in the painting, and are frozen in the physical body with non-referential approaches. The criterion is elusive

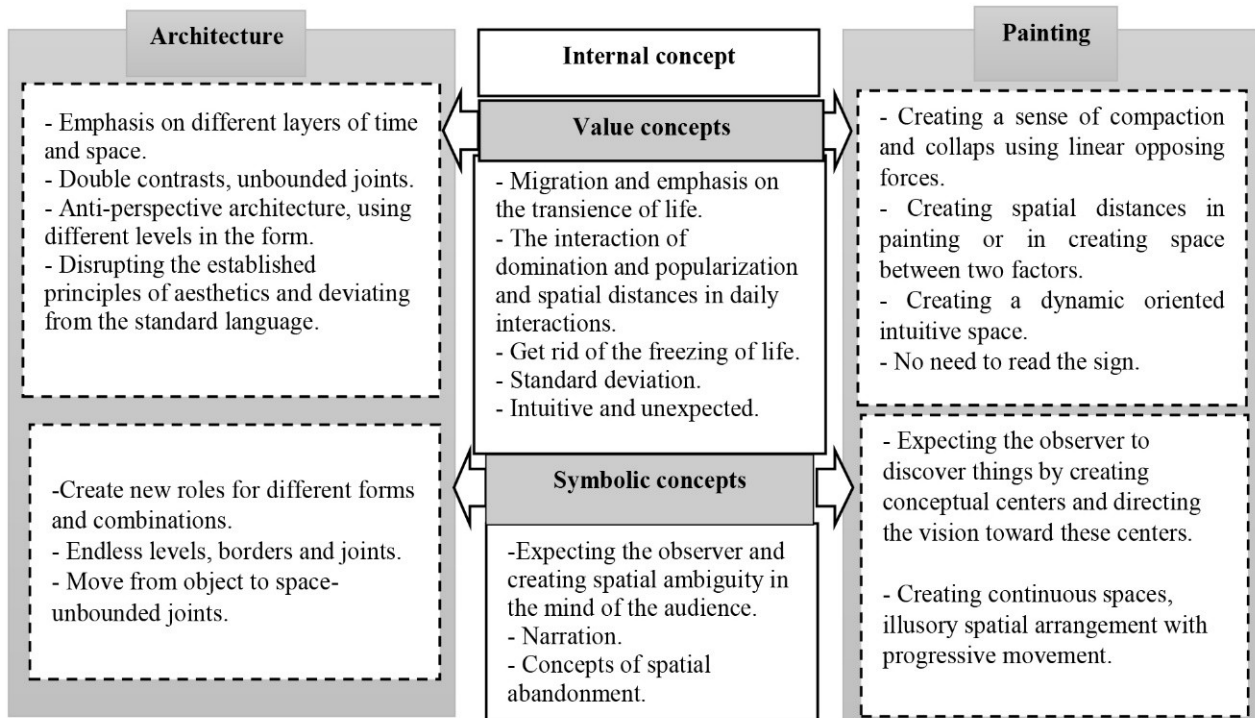


Fig. 9. Comparison of formal-spatial approaches of Iranian works. Source: Authors.

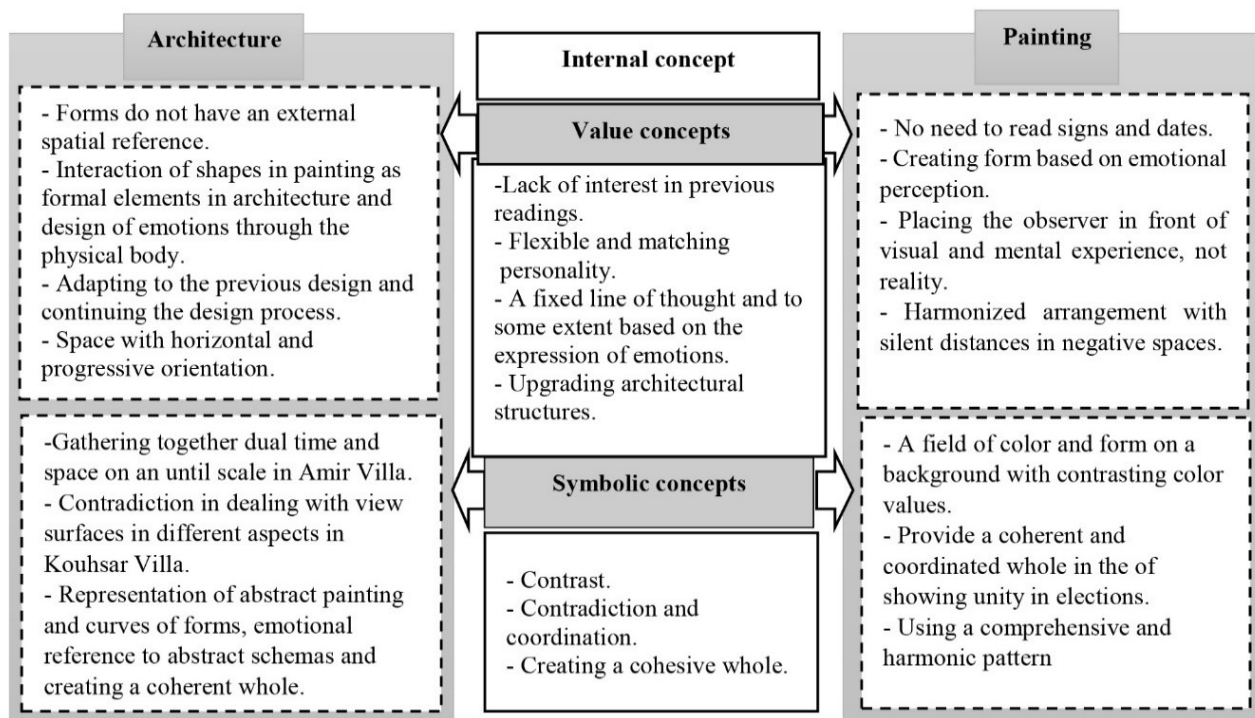


Fig. 10. Comparison of formal-spatial approaches of Taghaboni works. Source: Authors.

and narrative. The issue of form formation in his works is intuitive and unexpected, which delays the audience perception. He uses expectation and

ambiguity in painting and architecture to provide new experiences.

In the works by Taghaboni, the intrinsic value

concepts, such as spatial arrangement in harmony with silent distances, the absence of previous spatial readings, and a fixed line of thought are partly based on the expression of emotions in both branches of art, which have been achieved differently in the sense of instrumental concepts of architecture and painting. For him, the form is not the starting point of the design, but it is the scope of design that challenges the development of architectural structures. His mastery of form is the product of his association with painting and exposes evolutionary construction to reading. Both architects have an empirical model, but in the works by Iravanian, non-referential and random structures resulting from the painting's symbolic dimension are more emphasized.

The architect can use the subject of the painting in architecture to transfer form by turning his mind. By comparing the form's semantic layer, in both value and symbolic domains, the concepts extracted in both case studies are comparable and applicable. Thus, the research questions can be answered so that the architectural space is a kind of representation of the architect's paintings, helping him create a better space. The type of connection between two contexts is primarily derived from an artist's mental schema and is placed in a subset of value concepts. In the next step, by transferring symbolic concepts from painting to architecture, the architectural work approaches its formal aesthetic dimension. This study is limited to formal and spatial approaches but future studies can focus on semiotic studies by receiving deeper layers of meaning.

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