

Original Research Article

Architecture as a Media for Representing Time in Painting: A Comparative Study of Spatial Structures in the Works of Junayd Baghdadi and Masaccio

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Abstract

Time, one of the most complex concepts in the history of human thought, has long been of interest to scholars across disciplines. This inherent complexity has made the philosophical representations of time in works of art a key topic in interdisciplinary studies. Understanding the mechanisms of these representations, while deepening our grasp of the worldviews that govern artistic eras, opens new ground for the philosophical analysis of works of art. The research examines the representation of time's physical nature in 15th-century paintings. This study, which focuses on two artistic schools of the East and the West (Iranian painting centered on the works of Junayd Baghdadi and the Italian Renaissance with an emphasis on the works of Masaccio), highlights cultural differences in the perception of time and reveals philosophical-artistic connections. This fundamental research, with a qualitative-comparative approach, analyzes six prominent works by Junayd Baghdadi and Masaccio. The data were collected from available sources through library research, and the visual and semantic elements of the works were analyzed using a descriptive-analytical approach, with "architecture in painting" as the key medium. Finally, through comparative analysis, the similarities and differences in the attitudes of these two schools towards the concept of time were inferred. The comparative analysis of the works revealed two distinct systems of representation of the concept of time. In Western art (e.g., Masaccio), time is represented linearly and instantaneously, using techniques such as single-point perspective, realistic architecture, and physical depth, which reflect the Aristotelian and anthropocentric worldview of the Renaissance. In contrast, the Eastern school (Junayd Baghdadi), employing a spatial perspective, symbolic architecture, and simultaneous representation of events, presents time in a cyclical and transcendental form rooted in the wisdom of Ishrāqi and a mystical attitude. These two modes of representation, respectively, exhibit predictive correspondences with the concepts of Newtonian physics and Einsteinian relativity. By emphasizing the connection between philosophical worldviews and artistic expression, this research opens new horizons in interdisciplinary studies of the philosophy of art, the history of science, and visual semiotics.

Keywords: *Physical nature of time, Perspective, Junayd Baghdadi, Masaccio, Comparative art studies.*

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Introduction

From the earliest cave paintings to the most complex pictorial compositions of the contemporary era, the visual arts have served as a fundamental medium for conveying human experiences and reflecting cultural worldviews (Honour & Fleming, 2010; Mansourzadeh, 2013). Even in the absence of written documents, these works contain deep layers of cultural, ideological, and semiotic concepts. They are considered one of the most efficient tools for understanding the intellectual structures of societies. Among the various elements essential in reading paintings, “time” occupies a central position because it both shapes the context of visual events and guides the flow of the narrative and the mechanisms of audience perception (Kaesbohrer, 2023). For this reason, the different ways of representing time have always reflected the philosophical, religious, and social systems of each culture.

The 15th century, alongside extensive developments in the intellectual and artistic structures of the East and the West, is a decisive period in the transformation of how time is represented in paintings. Despite the cultural exchanges of this era that facilitated the exchange of ideas, distinctive ways of narrating time emerged, rooted in profound philosophical and religious differences (Aghaei & Piravi Vanak, 2015). In such a context, artists did not limit themselves to representing visible realities; they also sought to establish more complex concepts, such as linearity, cyclicity, and the multilayeredness of time, in the image through the organization of space, depth, and architectural elements.

Among these, the works of Junayd Baghdadi in the Iranian painting tradition (Raeisi et al., 2022) and Masaccio in the Italian Renaissance (Hodne, 2011) are prominent examples. In these works, architecture serves not only as a decorative backdrop but also as a structural element, functioning as a medium for expressing time. The difference in the way these two artists use architecture, from a single-point and linear perspective in the West to a multilayered and spatial

space in the East, shapes the central issue of this research: how the representation of the physical nature of time in these two schools is formulated through spatial and narrative structures and how architecture plays a mediating role for the understanding of time in each tradition.

From this perspective, the question arises: why do Masaccio’s paintings represent time in a linear, instantaneous, and measurable form, whereas in Junayd Baghdadi’s painting, time appears in a cyclical, simultaneous, and semantic form? And how do the architectural elements and spatial structure of each work reinforce and convey these two types of understanding of time? The importance of raising this issue lies in its demonstration that two aesthetic systems with different religious and cultural contexts have taken different paths in the visualization of time, and in the role that architecture plays in shaping the temporal narrative. The research, grounded in a theoretical framework of time and a review of the past, presents a comparative analysis of selected examples. Through it, the methods of representing time and the mechanisms of space-making in the works of Junayd Baghdadi and Masaccio are extracted and compared to enable the formulation of arguments and the presentation of conclusions.

Research Background

Research related to this topic can be classified into two main areas. The first group has examined the concept of time in the visual arts, especially painting. These studies often analyze temporal manifestations at levels such as narrative, perspective, continuity of movement, or spatial organization and try to explain how temporality is transformed into visual expression. In this area, most works are based either on philosophical theories of time or on analyses of form and composition. Still, they usually do not extend beyond a one-dimensional examination of time and have not explored its relationship to the logic of space-making or to the system of mapping space in painting.

For example, Aghaie et al. (2024) analyze, using their threefold typology (complementary, discrete, and continuous), how narrative sequence and time are represented within a single frame of a coffeehouse painting. In another study, Aghaie & Ghadernejad (2018) regard the emergence of linear perspective in Safavid painting as more than an artistic development but a direct consequence of commercial interactions and imported representational practices. Hamdiah & Ardalani (2021) have examined the Impressionists' techniques for recording the "transient moment" (light, movement, speed of execution) in painting. Additionally, the article by Baharam & Fahimifar (2025) emphasizes the enduring capacity of traditional Iranian painting (such as the Maghami perspective) in time-based media, including animation.

The second group of studies examines painting from an architectural perspective or through a space-based approach. This group has often sought to elucidate the mechanisms of space-making, the formation of depth, the role of spatial structure, and its relationship to the viewer's perception. However, in most of these studies, time has received little attention as a fundamental component in organizing space or shaping meaning, and they have focused more on the geometric, visual, or technical aspects of space-making. Such studies include Rafiei Rad (2022), who states that architecture in Afghan painting has become a multilayered element of meaning-making with narrative, aesthetic, and ideological functions. Moafi Ghafari et al. (2023) emphasize that space and architecture in Iranian expressionism play a key role in shaping the work's emotional and social expression and are not merely imitative. Mohammadzadeh & Mesineh (2017) introduce the architecture of the Herat school as an active and organizing factor in creating depth, multiple perspectives, and guiding the composition and narrative. Also, Vali et al. (2023), through semiotic analysis, have characterized the architectural space in Iran Darroudi's works as a meaning-making mechanism that organizes the work's perceptual structure.

Based on these studies, the novelty of the research is in linking these two separate fields and reinterpreting painting through the mechanisms of space-making based on the concept of time; an analysis that, beyond seeing the component of time as a narrative or decorative element, considers it as a factor organizing space and structuring composition in painting. Additionally, a comparative analysis of the two pictorial systems of the East (Junayd Baghdadi) and the West (Massaccio) from the perspective of "time-space" remains underexplored in existing research. Therefore, the present study enables the formulation of a new explanation of the relationship among time, space, and image.

Theoretical Foundations

• Time, space, and motion

"Time" is one of the most complex human concepts, and philosophical and scientific efforts throughout history have shown that it is not possible to provide a single, definitive definition. The meaning and limits of the time of operation of the theoretical system have been used. In every intellectual tradition, from theology and metaphysics to physics and phenomenology, "time" is formulated with different components and in various languages. However, to clarify the subject's horizon in this research, a selected rereading of the definitions of philosophers and theorists is needed. Even when the focus is on the physical definitions of time, the concept's philosophical layers directly affect its interpretation. In this study, the definitions of operational operations are analyzed. Still, to "calibrate" this basis, a set of philosophical review categories is created to make a common state and distinction of time consumption. The characteristics of different/relative, linear-cyclic, continuous/discrete, and directional/non-directional (time arrow). A summary of these dual perspectives -philosophical and investigative- is summarized in Table 1. The table is derived from multiple sources and serves to define concepts and criteria for subsequent research.

Table 1. A review of the definition of time from the perspective of philosophers and its classification in physics. Source: Authors.

		Time	Influential on
Philosophy	Plato	Time is a moving image of eternity, constantly in motion according to the multiplicity of numbers (Cornford, 1997).	
	Aristotle	Time is neither the same as motion nor independent of motion; time is something that belongs to motion (Norouzi, 2005, 55). Time is the number of motions, understood as forward and backward (Aristotle, 2011, 188).	Avicenna
	Avicenna	Time is the quantity of movement, not in terms of distance, but in terms of precedence and backwardness that do not add up (Avicenna, 2008, 291). Time is a contingent reality, not an essential one. The measure of constant renewal is time (Yasrebi, 2004, 125). Time does not occur or materialize in another time, but it is time itself that creates the past, present, and future (Norouzi, 2005, 55).	Suhrawardi
	Suhrawardi	Time is the quantity of motion, but not every motion creates time; the motion of the sun creates time. (Suhrawardi, 1994, 14).	Mulla Sadra
	Mulla Sadra	In the external world, there is no more than one existence, and time, space, and distance are one existence (Mesbah Yazdi, 1994, 155). The essence of objects is temporal; it can be measured by time. If they do not have time, they cannot be measured with the scales of length and time (Motahari, 1996, 111). Time is nothing other than motion; it is necessary that the essence and substance of objects also be mobile (ibid., 111). Time is the fourth material dimension; unlike the previous extensions, this dimension is transient and continuous. Time and motion are interdependent, and without time and motion, there is no possibility of change (ibid., 190).	
	Ancient definition	Time was experienced for him (Human) in the form of repeating cycles; cycles that were in harmony with the patterns of nature, such as the sunrise and sunset, the change of seasons, and the movement of the stars. Religious rituals and myths also sought to reenact primordial time to renew the cosmic order. In this view, each new year was a symbolic re-creation of the world, and each annual celebration was a return to that sacred, eternal moment. This vision saw time not as a progression into the future, but as a cyclical movement in which the continuous resurrection of life became possible (Eliade, 2001, 35).	
Physics	Classical definition	According to Aristotle, time is the proportion between motions and the basis for distinguishing between the two concepts of before and after. It is used to measure the extent of change. However, it cannot be considered synonymous with motion or change, because he regarded change and movement as the container and conditions for understanding time. He also believed in the continuity of time and did not regard it as a minimal unit; instead, he posited an intervening time between the two periods (Moosavi Baygi & Afzalzadeh, 2023).	
	Newton's definition	Newton conceived of time as a mathematical coordinate axis, defined in an absolute and independent manner with respect to matter. Time is also described as a geometric axis that is, like the axis of countable length, formalized, linear, and directional, which is somehow transferred to the axis of space, and in the science of mechanics, time is understood and calculated like space with an independent axis (Newton, 1687/1999, 410).	
	Einstein's definition	In the theory of relativity, we accept that time is not entirely separate from space, but instead forms a unified entity known as spacetime. Since an event occurs at a specific point in space and at a particular time, each event can be characterized by four numbers or coordinates. In this theory, there is no fundamental distinction between the coordinates of space and time, and the two coordinates differ little (Hawking, 1988/2010).	

Examining the interpretations of time, motion, and attitudes toward space in Eastern and Western paintings requires an analysis of the philosophical and mystical foundations that shape these concepts. There are commonalities between Eastern and Western philosophers, but ultimately, fundamental differences in attitudes toward the world have led to distinct artistic manifestations (Khoshtinat & Safavizadeh, 2015, 26). In this regard, the concept of “time” as a central element is decisive. In the Western intellectual tradition, time has been understood primarily as

a linear, measurable quantity that unfolds as past, present, and future. This view has its roots in Greek philosophy, particularly in Aristotle, who considered time “the number of motions in terms of precedence and backwardness” (Aristotle, 2011, 188). During the Renaissance, this attitude was transformed into a visual language with the invention of linear perspective, placing art at the service of representing a “definite moment” (Shairi, 2021, 74).

In contrast, in Eastern wisdom, especially in the Iranian mystical tradition, time is more cyclical,

recurrent, and qualitative. This time is “sacred time” or “eternal time” that finds meaning within the framework of myth and mysticism. As Eliade (2001, 35) states: “In the ancient view, each new year was a symbolic repetition of the re-creation of the world.” This qualitative view of time has also given rise to more complex forms, such as “ecstatic time” and “mystical time.” Ecstatic time refers to the experience of suspension and passage from linear and mundane time (chronos) and arrival at sacred and eternal time (kairos); an experience that places the individual in a transhistorical “now,” and the work of art itself is a means for the audience to enter this sacred time (Eliade, 2016, 78). This concept is tied to mystical time, understood as the intuition of the fundamental unity of all moments in the light of eternity. In this view, which is formulated based on the teachings of Rumi, if the “body” remains confined within its temporal and spatial limitations, it will never find the possibility of liberation and joining the “soul” (Shairi, 2024, 200). Time is not a linear flow, but rather a time of overlapping circles around a fixed center, and the mystic, by crossing the “veil of time,” sees the “now” as a permanent manifestation of the God Almighty; a concept that has been manifested in Persian mystical poetry as well as in recurring structures in traditional visual arts (Nasr, 2011, 145). These fundamental attitudes to time have directly influenced the conception and representation of “space” in art. In Western painting, space is generally based on the human perspective and visual geometry, especially single-point perspective, which brings the representation of space closer to the objective and measurable world, just as in the works of Masaccio, architectural space provides a context for the Christian historical narrative (Gardner, 2002, 210). In contrast, in Eastern painting, space and time are interpreted not as material representations of the world, but rather in terms of the “ideal world” or the “dissociated imagination”. In this view, the precise and objective reflection of

nature is not the goal; rather, the transformation and distancing from matter are intended to reach its truth (Goudarzi & Keshavarz, 2007). This space is an independent and real realm between the tangible and the intelligible world; A world in which imaginary forms are objective and real, and “the world of the example is a world that is both abstract and material, both spiritual and sensory” (Corbin, 2016, 87). For this reason, the space of Eastern painting is neither entirely two-dimensional nor three-dimensional, and it lacks the rules of single-point perspective common in the West (Sakhtemangar et al., 2023). In this “imaginary space” that is the geography of the inner self and the land of true dreams (Corbin, 2009, 55), the inside and the outside coexist. Time manifests as “multidirectional” and “transcendental.” Naturally, this duality in attitudes toward time and space leads to a fundamentally different form of “movement” in the image.

In Renaissance painting, motion is usually arrested at a single moment. This movement is both physical and narrative within the context of linear time, which he calls “the fixation of the transient in a static frame” (Panofsky, 2013/2017, 123). In contrast, in Iranian painting, motion is depicted as a “journey” and “behavior” that are qualitative and internal, manifested through multi-scene arrangements and the use of cumulative perspective. This feature is noted as a “break from visual representation and a tendency towards conceptual expression” (Pakbaz, 2011, 89). Here, even the four elements are not only representations of nature, but also symbolize “states of existence” and “levels of the soul” (Rahmati, 2013, 156). Through color and form, they present “qualitative time” in the work, such as the four seasons or periods of existence. As Burckhardt (2018, 67) notes: “The four elements in Islamic art symbolize the transition between states of the soul.”

It can be seen that the traditional Iranian artist moves in an “imaginary space, intuiting symbolic

forms in that space and receiving this intuition in “mystical time, which is the time of unity. The final work immerses the viewer in an “ecstatic time” and separates him from material time. This complete cycle constitutes the theoretical framework for the differences in the representation of time, space, and motion between the two artistic traditions of the East and the West.

Case Studies

In this study, three works were selected from each of two contemporary artists, one from the East and one from the West. In the West, Masaccio (active period: 1401–1428 AD), an Italian painter and one of the pioneers of Renaissance painting, is known as the first person to use Brunelleschi’s method of depth perception (Bryant, 2007/2022, 200). His works are primarily murals in Florentine churches that, by using space and architectural elements as a medium, established the first serious links between painting and architecture.

In the East, Junayd Baghdadi (active period: 1382–1410 AD), nicknamed Junayd Soltani and Junayd Negargar, a prominent painter of the Ilkhanid and Jalayirid Sultanate era, was active in the bookbinding workshops of Baghdad and collaborated with artists such as Mir Ali Tabrizi. Among his notable works are the illustrations of the Divan of Khwaju Kermani (799 AH/1397 AD), which are held in the British Museum and include nine, two of which are signed by Junayd (Hasheminejad, 2014, 17). The selected examples for this study are from the entries of Hoday and Hodayun of the same edition, in which the architectural structures are more prominent than in the other illustrations. This study focuses on comparing how the concept of time is represented and the effects of architectural structures in the works of these two artists. The aim is to analyze the conceptual narrative of time in the context of architecture, rather than to compare styles or techniques. Table 2 provides a brief overview of the characteristics of these examples.

Research Method

Comparative studies are a method for comparing two or more phenomena to identify similarities, differences, and relationships among them. This approach typically draws on data and perspectives from multiple scientific disciplines and, to examine a topic in a specific temporal context, requires a specific analytical framework and tools so that the research path leads to valid and documented results (Zarandi, 2022). In this research, “Architecture in Painting” has been chosen as a medium for analyzing and comparing time perceptions in the works of Junayd Baghdadi and Masaccio. The overall research process, as shown in Fig. 1, is carried out in three main stages:

- **Data collection:** includes identifying relevant paintings and selecting samples, along with library study and collecting artistic, historical, and theoretical documents.
- **Data analysis:** identifying physical theories related to the concept of time, then explaining the physical manifestations of time in the paintings, and descriptive-analytical analysis of this data. At this stage, the measurement device and comparison criteria are also defined.
- **Comparison and conclusion:** Identifying the physical manifestations of time in selected works, comparing these manifestations in Eastern and Western paintings, conducting comparative-analytical comparisons, and finally drawing a general conclusion about the attitude of each school to the concept of time.

In terms of nature, this research is qualitative and aims to study the fundamental phenomena. The data analysis method also involves a comparison based on structural and content analyses of the works.

As an analytical tool and criterion for comparison, the research employs a structural-semiotic measurement device designed to study the representation of space-time in selected works. This device examines four main components of each work: spatial structure,

Table 2. Brief introduction of case studies. Source: Authors.

Name of the work	Characteristics					Picture
	No.	Period	Artist	Location	Description	
Trinity	1	Early 15th century, Early Renaissance	Masaccio	Santa Maria Novella, Florence	The dimensions of this work are about three by 6.5 meters. In general, Brunelleschi's perspective is evident in it. The characters in the painting correspond to the portrait of a contemporary man of the fifteenth century. In terms of the direction of the observer's view, the observer's eye observes the painting from the bottom up. Part of this painting depicts a real church platform. The size of the figures increases from bottom to top according to their spiritual status. Its architectural part is inspired by the triumphal arch of ancient Rome (Gardner, 2002).	 Source: https://en.wikipedia.org
The Tribute Money	2	Early 15th century, Early Renaissance	Masaccio	Fresco in the Brancacci Chapel, Santa Maria del Carmine, Florence	This work also adopts a Brunelleschian perspective, in which two backgrounds are visible: one is the architectural space, and the other is the natural landscape at the frame's periphery. The focal point of the perspective corresponds to Christ's head. The narrative type is central, and the way the characters are positioned suggests a kind of invitation (Paoletti & Radke, 1997)	 Source: https://en.wikipedia.org
The Raising of the Son of Theophilus and St. Peter on the Throne	3	Early 15th century, Early Renaissance	-	Fresco in the Brancacci Chapel	The painting measures 230 x 590 cm. Masaccio sets the scene in a contemporary church, with contemporary ecclesiastical figures (actually Carmelite monks from Santa Maria del Carmine) and a congregation that includes a self-portrait and portraits of Masolino, Leon Battista Alberti, and Brunelleschi (Baldini, 1992, 110)	 Source: https://en.wikipedia.org
The Arrival of Homay at the Door of Humayun's Palace	4	Early 15th century, Ilkhanid period, Jalayirid Sultanate	Junayd Baghdadi	Khwaju Kermani's poem Homay and Homayun	The painting of Homay and Homayun is painted in the margin of Khwaju Kermani's Masnavi with dimensions of 274 x 381 mm. This painting depicts the meeting of Homay, the Iranian prince, with Homayun, the Chinese princess. The painting features two open and closed spaces separated by an architectural barrier, and its content can be observed from both external and internal perspectives simultaneously (Ghaffari, 2022).	 Source: https://en.wikipedia.org
The Wedding of Homay and Humayun	5	Early 15th century, Ilkhanid period, Jalayirid Sultanate	Junayd Baghdadi	Khwaju Kermani's Poems of Homay and Homayun	School: Jalayiri This painting is also painted in the margin of Khwaju Kermani's Masnavi. Its dimensions are 175 x 240 mm. This painting depicts the day after the wedding of Homay and Homayun, and the architectural structure plays an essential role in the narrative. Walls separate the story's parts, and the viewer sees a distinct narrative in each part. This painting has been considered the initiator of the style of later-period paintings (Ashouri & Hosseini, 2011).	 Source: https://en.wikipedia.org
Homay and Humayun Celebrating in the Garden	6	Early 15th century, Ilkhanid period, Jalayirid Sultanate	Junayd Baghdadi	Homay and Homayun poetry collection by Khwaju Kermani	School: Jalayiri Like the previous examples, this example is also written in the margin of Khwaju Kermani's Masnavi. (Javadi, 2011) In this painting, the symmetrical composition of a circle of guests around the two central figures became a typical pattern in Behzad's work almost a hundred years later, in a more complete and magnificent form (Pakbaz, 2011).	 Source: https://en.wikipedia.org

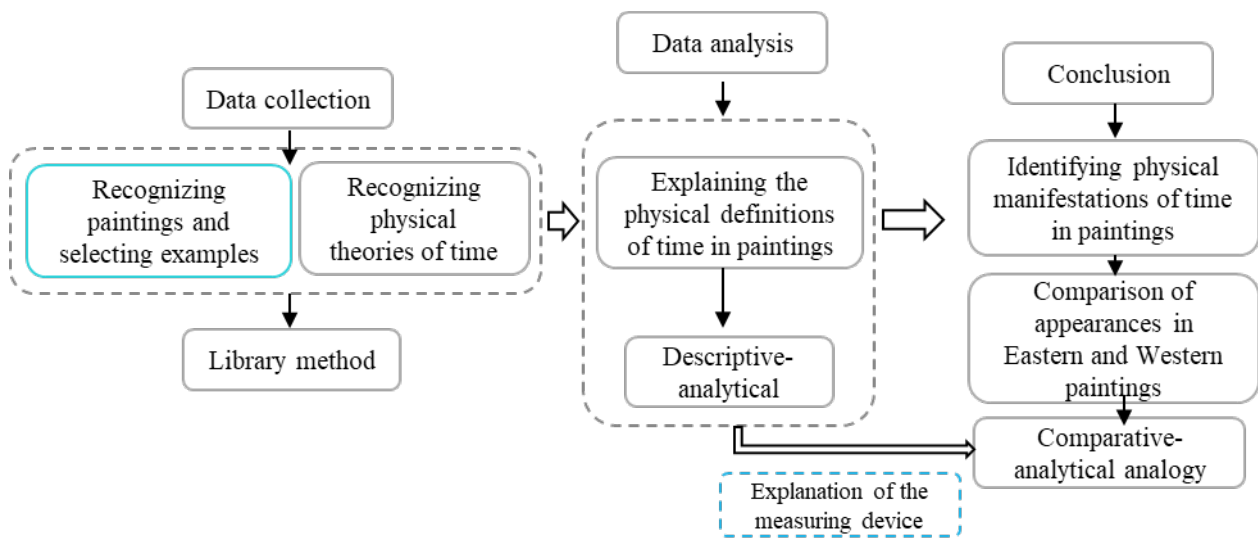


Fig. 1. Model of different research stages and research methods in each stage. Source: Authors.

temporal representation, the role of architectural elements, and the audience's position. Each of these components has specific operational indicators; spatial structure is evaluated based on the organization of depth, type of perspective, and gaze control; time representation is analyzed based on temporal patterns, narrative, or temporal signs; the role of architecture is measured with respect to spatial function, style, and the manner of demarcating space; and the position of the audience is examined through the angle of view and the hypothetical relationship of the audience to the scene. The data analysis process is carried out in four steps: first, each work is coded based on the above indicators; second, an in-school analysis is carried out to determine the patterns of each artist's works; Third, the coded data is subjected to a comparative comparison and the differences between the two schools are extracted; and finally, these differences are interpreted within the framework of the semiotic theories of space-time and the philosophical foundations of each school.

The Period of The Study

The 15th century holds a distinguished place in social, political, and philosophical history. This century witnessed the consolidation and expansion of universities, the flourishing of scholastic

philosophy, and the formation of great intellectual systems; a period in which philosophers, as university professors, wrote extensive philosophical and theological texts (Gelernter, 1995). Another significant event of this century was the establishment of educational and religious institutions throughout Europe, which provided an essential platform for establishing scientific and philosophical contacts with the Eastern world. This was a continuation of a trend that emerged following the church reforms and the ideas of Thomas Aquinas; a thinker who, believing in the non-conflict between philosophical reason and Christian faith and relying on Aristotelian philosophy, initiated fundamental changes in the structure of the church and, consequently, intellectual and social transformations in Europe (Ghorbani et al., 2021). Before the widespread acceptance of Aristotelian thought, the Christian world began its philosophical path with Platonic and then Neoplatonic teachings. In the twelfth and thirteenth centuries, familiarity with the works of Muslim philosophers deepened Christians' understanding of Aristotle's philosophy, without eliminating the influence of Platonic and Neoplatonic philosophy (Azad et al., 2016, 8). In these centuries, the intellectual efforts of the church led to the translation of the works of thinkers such as Avicenna, Al-Farabi, Al-Ghazali, and Averroes,

and these texts made a significant contribution to the scientific movement and the revival of philosophy on the eve of the Renaissance (Bréhier, 2001, 318). Therefore, despite the communication and ideological limitations of the Middle Ages, philosophical and theological interactions between the East and the West played a decisive role in the expansion and development of philosophical ideas. Accordingly, the 15th century is chosen as the period for this research because of the sudden and fundamental changes in European painting after centuries of stagnation. These changes paved the way for the early Renaissance.

Findings

This study aims to compare the representation of time in the works of Junayd Baghdadi and Masaccio, examining the visual and semantic components of their compositional structures. Inspired by physical concepts such as relativity and quantum superposition, this study explores each painter's distinct perspectives on time from a physical and philosophical perspective. The findings are presented from two main perspectives: first, the analysis of visual elements (such as figures, architecture, and lighting) and semantic elements (such as depth, narrative hierarchy, and timelessness) in physical structures, narrative, natural elements, and characterization; and second, spatial systems focusing on architectural elements, vanishing point, and depth hierarchy. These analyses, presented in comparative tables, reveal fundamental differences between Iranian painting with its surrealist and cyclical approach to time, and Renaissance painting with its emphasis on realism and linear time.

• Semantic and visual representations of Time in the compositional structure of the works of two painters

To examine how the concept of time is represented from physical and philosophical perspectives, the first part analyzes the visual and semantic representations within the compositional structures of the works of

Junayd Baghdadi and Masaccio. Visual elements, including figures, architecture, natural elements, lines, and shapes, provide an objective context for the representation of time, while semantic elements, such as depth, narrative hierarchy, lighting, and color, convey inferential concepts that shape each painter's attitude towards time. This analysis is based on four principal axes: physical structure (the spatial framework of the work); narrative structure (the way the story is told); natural elements (reflecting cyclical or linear time); and characterization and communication with the audience (the observer's position and the valuation of the characters). Table 3 compares these components across the works of the two painters and reveals fundamental differences between Iranian painting with a surrealist approach and Renaissance painting, with an emphasis on realistic representation of time.

• Matching spatial systems based on the component of time in the works of two painters

Following the analysis of visual and semantic elements in the compositional structures of the works of Junayd Baghdadi and Masaccio (Table 3), this section examines spatial systems, focusing on the representation of time from physical and philosophical perspectives. Table 4 analyzes the spatial structure of the paintings based on three key components: architectural elements, which form the work's spatial framework; the vanishing point, which guides the visual and narrative focus; and the depth hierarchy, which determines the spatial and temporal valuation of elements. These components, which have the most significant explanatory impact on the concept of time, reveal how space is organized and how it affects the transmission of temporal meaning, drawing on the ideas of relativity and quantum superposition. Recognizable visual elements (such as arches, converging lines, and figures) and their semantic effects (such as freezing time or narrative multi-layering) play a key role in this representation. The following table, which describes

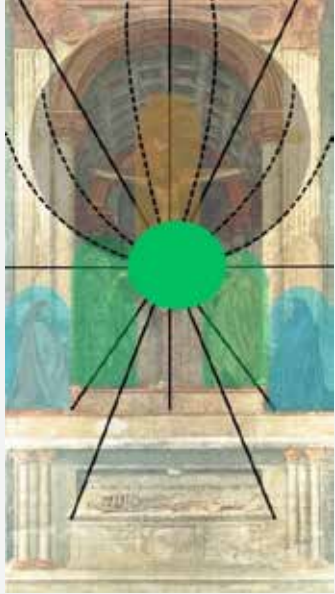

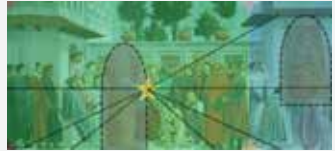
Table 3. Visual and semantic elements in the compositional structure of paintings by Junayd Baghdadi and Masaccio. Source: Authors.

	Works of Junayd	Description	Components of analogy	Works of Masaccio	Description
Physical structure	<p>The multi-shot structure and simultaneous narration, using architectural elements such as walls, create a space that simultaneously depicts the inside and the outside. These elements are not merely separators; they function as visual devices that establish a surreal connection between characters in separate scenes. This arrangement, while creating a dual sense of place (inside-outside) for the characters, elevates the audience to an active, holistic viewer who is aware of several parallel scenes.</p>	<ul style="list-style-type: none"> - Visual elements: walls - Semantic elements: uniform segmentation of the story within the painting frame 	Composition	<p>Based on Brunelleschi's principles of perspective, a central theme at a turning point, an architectural structure in the near background, and nature in the far background create a linear progression in the story, with the turning point located at the center of the frame. This type of structuring typically involves narrating an event and recording a moment or a brief process in a specific place, and its role is to create depth in the painted scene. Sometimes, a deeper perspective (the Trinity) is employed to develop a sense of mystery and contamination.</p>	<ul style="list-style-type: none"> - Visual elements: depth and distant background - Semantic elements: capturing a moment in time alongside depth
	<p>The background in the paintings is inseparable from the narrative body. In other words, the concept of "depth" is presented in these works in different ways. All surfaces are the same in terms of visual precedence and backwardness. The architectural body and natural elements are used solely to assist other components. The use of numerous decorative elements in the frame symbolizes the elevation of Iranian art in painting.</p>	<ul style="list-style-type: none"> - Visual elements: color, uniformity of light, and absence of shadows and decorations - Semantic elements: equivalence of different elements 	Background	<p>The background is drawn to give greater emphasis to the foreground. In most paintings, the architectural structure in the background has little to do with the subject matter and serves merely to highlight the heyday of ancient Roman architecture and art. In addition, the use of more neutral background colors enhances the prominence of the foreground.</p>	<ul style="list-style-type: none"> - Visual elements: shadow and light, background gray, and depth - Semantic elements: conceptual elements of the central elements of the story
	<p>In general, the decorations are part of the structure of nature and, along with natural elements, constitute the painting's narrative context. These decorations can be interpreted as drawing on Timurid and Seljuk architectural traditions in the body's tiling and brickwork, and the painting employs the architectural style typical of its period to convey the story's natural richness. Also, calligraphy has been used in some margins (complementing the poetry related to the painting).</p>	<ul style="list-style-type: none"> - Visual elements: Natural elements in the decorations - Semantic elements: Showing the whole story in the frame 	Architectural decorations	<p>Decoration emphasizes the art and architecture of ancient Rome. The Ionic and Corinthian capitals, the depiction of the triumphal arch in the Trinity painting, and the arches and porticos in the other two paintings emphasize this issue. Additionally, the placement of the architectural structure within the paintings adds depth to the frame. In a sense, part of the story in the narrative in question may have been shaped by the architectural structure, which is not visible to the audience.</p>	<ul style="list-style-type: none"> - Visual elements: Architectural elements and decorations - Semantic elements: Representing a section of the story
Narrative structure	<p>In Iranian painting, the three-dimensional structure cannot be considered perspective. Three-dimensionality in Iranian painting enables the depiction of outer and inner spaces more effectively and uses the background's structure to narrate events within the painting simultaneously. This type of three-dimensionality in Iranian paintings is known as the Maghami perspective. Therefore, the figures and elements do not have superiority over each other in terms of distance from the viewer's view.</p>	<ul style="list-style-type: none"> - Visual elements: the exact size of the characters, three-dimensionality without scale - Semantic elements: the simultaneous expression of history 	Narrative perspective	<p>The three-dimensional structure of these paintings is realistic and grounded in the principles of perspective. The figures vary in size depending on the story's priority. At the beginning of the frame, a pre-narration precedes the main image. The turning point is always at the center of the story, and a single-point perspective focuses the gaze on the center of the frame. This structure has led to the valuation of different parts of the story.</p>	<ul style="list-style-type: none"> - Visual elements: mathematical and measurable perspective - Semantic elements: the significance of a particular moment in the narrative
	<p>In most parts of the painting, events are depicted simultaneously (without a linear progression). Each part of the story can be read separately and is a single part. There are no turning points in a painting frame, and the events can be seen as part of the overall story. The different parts of the frame balance and equalize the narrative.</p>	<ul style="list-style-type: none"> - Visual elements: the visual independence of each part of the frame - Semantic elements: the independent meaning of each sequence of the narrative 	Content narrative process	<p>As in the architectural section, the narrative follows a linear structure. The location is rendered in a highly realistic manner, and, through perspective, the story begins at one point, peaks at another, and ends at the same point. Depending on the proportions of the painting frame, the storyline may be horizontal or vertical.</p>	<ul style="list-style-type: none"> - Visual elements: The visual entirety of the story in the overall frame - Semantic elements: Understanding the meaning of the story from the entire frame of the painting


Rest of Table 3.

	Works of Junayd	Description	Components of analogy	Works of Masaccio	Description
Natural elements	Natural elements such as trees and stars, as well as figures and architecture, are integral to the work's decorative texture. The use of symbolic plants is based on their symbolism, such as the cypress tree with red fruits, which signifies fertility and emphasizes a sense of mystery. The stars also appear with a symbolic function. The simultaneous presence of night and day suggests that the narrative unfolds in a surreal temporal context. The absence of elements such as clouds, which symbolize the passage of linear time, underscores the narrative's timelessness.	<ul style="list-style-type: none"> - Visual elements: the synchronicity of natural elements of day and night - Semantic elements: non-linear and eternal time 	Natural elements (clouds, trees, ...)	In outdoor paintings, elements such as mountains and trees are depicted realistically and in neutral colors. It seems that Masaccio used them in some of these paintings to add depth to the image, and at times, they are decorative within the frame. However, the natural elements in these paintings have little impact on the story's subject matter; although they can be considered a sign of the passage of linear time.	<ul style="list-style-type: none"> - Visual elements: Naturalistic, realistic elements - Semantic elements: Linear and temporal time
	In Iranian painting, unified and surreal lighting prevails, so that no specific, directional light source is identifiable within the frame. Even symbols of light, such as candles, serve both decorative and symbolic functions without affecting the overall illumination of the scene. This uniformity of light, which gives equal value to all parts of the work, even allows the simultaneous display of symbols of night (such as a lamp or a star) and day alongside the same lighting. This results in the complete elimination of shadows, underscoring the narrative space's timelessness and symbolic nature.	<ul style="list-style-type: none"> - Visual elements: absence of a light source - Semantic elements: timelessness in expressing day and night 	Light and shadow	The light source illuminating the paintings' content appears to be external to the frame, highlighting the story's main elements with greater brightness and clarity, akin to photographic lighting. The darkness creates a mysterious atmosphere, and ambiguous elements are placed in deep shadows. The shadows of the figures, which are simple spots, indicate the direction of the light, but lack detail. This use of shadow gives his works a Renaissance realism. The absence of shadow in some places suggests that the light source is placed at a height higher than the viewer's eye level.	<ul style="list-style-type: none"> - Visual elements: a specific light source, even outside the frame - Semantic elements: a specific moment in time
	The colors are apparent and pure, distinct from the realism produced by light and shadow. The use of color conveys the story's mystery, bringing it closer to the example's world. Therefore, none of the elements has color superiority over the others, and even the color of the characters' clothing can be considered part of the painting's natural structure.	<ul style="list-style-type: none"> - Visual elements: purity of colors and lack of neutral colors - Semantic elements: equivalence of painting colors 	Color	Colors confer value on the elements of a painting, depending on the structure that shapes it and the adopted perspective. In other words, unlike Iranian paintings, where there was a kind of equivalence in the intensity of colors, the colors are more intense based on the priority of the figures and the importance of the turning point of the story, and the further away from the background they are, the less intense they become and the more neutral they become.	<ul style="list-style-type: none"> - Visual elements: Shadows and highlights of colors and the use of gray - Semantic elements: Valuing elements in order of priority of the story's turning point
Characterization and communication with the audience	The audience is present within the frame; in other words, they can observe the various parts of the painting's compositional structure. This is an interpretation of the audience becoming one with the work.	<ul style="list-style-type: none"> - Visual elements: the changing position of the audience - Semantic elements: the movement of the audience as part of the story in the frame 	Audience position	The audience is outside the frame and is in contact with the work. The horizon line in the observer's visual field is discernible. Sometimes this horizon line is higher than the observer's eye can reach, creating a mystery. On the other hand, the background of the paintings is even further from the observer, as if the observer is compelled to understand the foreground's story.	<ul style="list-style-type: none"> - Visual elements: the audience as the observer of the work - Semantic elements: the temporal and spatial independence of the audience from the work
	The figures are similar in appearance and clothing, despite differences in size, to emphasize the narrative. The faces are depicted as a three-faced figure, the most complete form of facial representation. In "The Wedding of Homy and Homayun," the bowing statistics are shown with the body in frontal view and the head in a three-faced position to maintain equality of value between the figures.	<ul style="list-style-type: none"> - Visual elements: symbolic representation of faces - Semantic elements: representation of the most perfect human state while being unreal 	Characterization	The figures differ in their facial shapes, which reflects the style of the people of the painter's era. The human value of the figures can, in most cases, be discerned from the angle of the face; important figures are shown from the front. In the Trinity painting, the social status of the figures is determined by their clothing.	<ul style="list-style-type: none"> - Visual elements: the actual representation of faces - Semantic elements: the actual concept of the mundane human face


Table 4. Comparative analysis of spatial systems in the paintings of Masaccio and Junayd Baghdadi. Source: Authors.

	Architectural elements	Architectural elements	Depth hierarchy
1	 <ul style="list-style-type: none"> - The painting is drawn in a vault (a simulated view of church architecture) that combines elements of Romanesque (triumphal arch) and Gothic (pointed columns); - The architecture is divided into two parts: <ul style="list-style-type: none"> - Bottom: terrestrial space and human observers with slow time - Above: divine space (Trinity: Father, Son, Holy Spirit); a space with the intense gravity of static time. - Relativistic interpretation: the depth of the inner vault is farther than the outer one, which is symbolic of the ambiguity of the depth of the field. 	<ul style="list-style-type: none"> - Is located precisely on the cross of Christ; - The lines of the architecture (floor, columns, vault) and even the direction of the characters' gaze converge to this point; <ul style="list-style-type: none"> - This point acts like a singularity in a black hole; - Space-time curvature: parallel lines in architecture, like starlight, are bent in a gravitational field; - Freezing of time: the moment of Christ's crucifixion is frozen forever, like the "space plane" in relativity; - Relativistic interpretation: the point acts like a central mass above Christ's head in relativity (symbolizing the power of God). 	<ul style="list-style-type: none"> - Bottom: Donors (patrons of the painting) at life-size, but at the lowest depth level; - Middle: Mary and John, larger than the Donors but smaller than the Trinity; - Top: Trinity, largest and at the highest point (despite apparent distance); - Relativistic interpretation: The reduction of sizes towards the viewer is the opposite of the contraction of length in relativity, which refers to Christ.
2	 <ul style="list-style-type: none"> - The scene is depicted in a semi-open space with a combination of Roman architecture (stone arches) and nature (mountains); - Architecture is used as a framework to divide the narrative: the three parts of the story (Christ's command, the payment of tribute, the miracle) are displayed in a single frame; - Relativistic interpretation: The structure of the arches acts like geodesic lines (the shortest path in curved space) that connect the events. 	<ul style="list-style-type: none"> - The vanishing point is located precisely on Christ's head in the center of the painting; - The architectural lines and the characters' hands converge towards this point; - Relativistic interpretation: This point acts like a central mass in relativity that influences the surrounding space (symbol of Christ's divine power). 	<ul style="list-style-type: none"> - Close figures (Christ and the apostles) are larger and more detailed; - Far figures (like the man taking a coin out of the fish's mouth) are smaller and fainter; - Relativistic interpretation: The size reduction is similar to length contraction in relativity; distant figures seem to be moving away from the observer at "visual speed."
3	 <ul style="list-style-type: none"> - The scene is set in a church with Greek architecture; - The architecture is divided into two parts: the interior of the church (foreground) and the urban space (background); - Relativistic interpretation: This duality is like two frames of reference in relativity that the observer can move between. 	<ul style="list-style-type: none"> - The vanishing point is in the hand of Saint Peter performing a miracle; - The lines of the church floor and the columns converge towards this point; - Relativistic interpretation: This point is like the event horizon of a black hole, attracting all attention towards itself. 	<ul style="list-style-type: none"> - The foreground figures (St. Peter and Theophilus' family) are drawn in fine detail; - The background figures (the spectators) are shown as smaller and more numerous; - Relativistic interpretation: The difference in size is like a change in the space-time metric, which is drawn closer to the main event (the miracle).

Rest of Table 4.

	Architectural elements	Architectural elements	Depth hierarchy
4	 <ul style="list-style-type: none"> - Trussed arches, colonnaded porches, and walls decorated with geometric tiles; - Division of space into two distinct parts: the exterior (nature with cypress trees) and the interior (reception hall); - Transparent walls: The palace walls symbolically represent both the interior and exterior at the same time (possibility of seeing from two perspectives); - Architecture acts as a narrative framework, not a reflection of physical reality; <ul style="list-style-type: none"> - Non-linear perspective: Parallel lines of walls and columns do not converge, but create a flat, multi-layered space; - Relativistic interpretation: Positional perspective and nonlinear structures with transparent walls are an allegory of four-dimensional space (3 dimensions of space + 1 dimension of time). 	<ul style="list-style-type: none"> - The painting lacks a point of convergence of architectural lines (unlike Renaissance works); <ul style="list-style-type: none"> - The visual focus is on the faces of Homay and Homayun in the center of the painting, but this focus is achieved through tools such as compositional symmetry and the use of warm colors. - The vanishing point in Iranian painting is spiritual, not geometric; - Homay and Homayun attract attention as the heart of the narrative, without the need for converging lines; - Relativistic interpretation: multifocality as the principle of uncertainty. 	<ul style="list-style-type: none"> - In Maghami's perspective, the size of the figures is determined by social importance, not physical distance; - Homay and Homayun are depicted larger than the servants, even if they are in the background. - Spatial layering in three parts: foreground: Homay and companions (palace entrance); middle ground: the interior of the palace with Homayun; background: nature and sky; - Relativistic interpretation: simultaneous representation of events and characters, such as the theory of parallel universes.
5	 <ul style="list-style-type: none"> - Simultaneous combination of open space (courtyard/garden) and closed space (wedding hall) without a clear boundary; - Use of decorative walls with Islamic motifs as a separating element of spaces; - Timurid-style architecture with pedimented arches and narrow columns; - Flooring with geometric designs (symbol of cosmic order); - Hall ceiling with golden bergamot (symbol of the sky); - Lattice windows to create visual rhythm; - Narrative role of architecture: Each architectural part narrates a scene of the ceremony: <ul style="list-style-type: none"> * Right side: Pre-wedding ceremony * Center: Wedding moment * Left side: Post-ceremony banquet - Relativistic interpretation: Simultaneous display of interior and exterior space as the principle of quantum superposition. 	<ul style="list-style-type: none"> - Absence of mathematical vanishing point and Western convergence, and presence of parallel architectural lines; - Decorative motifs are scattered in different directions; - The primary focus on the clasping hands of Homay and Homayun; the fruit basket in the foreground; - The use of gold for the central part; - The density of the figures in the center of the image; - The halo of light around the heads of the bride and groom; - Relativistic interpretation: The multi-focality of the narrative allows for understanding each part separately. 	<ul style="list-style-type: none"> - Main characters (Homay and Homayun) are larger than the others; - Servants and musicians, smaller but with full details; - Relativistic interpretation: the exact size of the figures, relativistic temporal opening.

Rest of Table 4.

	Architectural elements	Architectural elements	Depth hierarchy	
6		<ul style="list-style-type: none"> - Garden as an earthly paradise; - Combination of open and closed space: Garden walls with Islamic motifs enclose the festive space; Central pavilion with tent roof in the Ilkhanate style; - Spiral watercourse as the axis dividing the space; - Time relativity: Non-linear division of the garden to display the components simultaneously as a principle of quantum overlap. 	<ul style="list-style-type: none"> - Iranian Chaharbagh: Dividing the garden space into four parts (symbol of the four elements); - Flooring with colored bricks in a geometric design; - Main point: The royal throne in the geometric center of the painting; Silver samovar in the foreground, golden cedar tree in the background; - A halo of light around the heads of the royal couple and the royal throne in gold color to create visual focus; - Relativity interpretation: Non-convergence of lines and emphasis on semantic rather than physical relationships. 	<ul style="list-style-type: none"> - Maghami's perspective on the elements of the painting is divided into three main parts: background and foreground; The cypress trees are drawn at different distances of equal size; The servants further away are shown with the exact details as the foreground. Relativistic interpretation: the fixed size of the figures and the simultaneous presentation of events, such as the concept of parallel universes.

these components in the works of the two painters, shows the fundamental differences between Iranian painting, with its flat, hyperrealistic spatialization, and Renaissance painting, with its three-dimensional, realistic depiction of time.

Discussion

A comparative study of the concepts presented in Table 5 clearly shows that a fundamental difference in worldviews has led to the creation of two distinct visual languages for representing time and space. The data in this table confirm the previous qualitative

findings and provide structural precision to the analysis. Junayd Baghdadi's paintings, by rejecting single-point perspective and employing symbolic architecture and flat and multi-layered spaces, consciously emphasize "conceptual significance" rather than "physical validity". The simultaneous display of interior and exterior space and the use of transparent walls are not simply a visual technique, but a philosophical necessity to break the boundaries of space and time and to demonstrate "unity in plurality. The absence of a mathematical vanishing point and the presence of multiple narrative foci remove the

Table 5. Matching the concept of time in the paintings of Masaccio and Junayd based on the criteria of architectural components, vanishing point, and depth hierarchy. Source: Authors.

Matching Criteria	Junayd Baghdadi (Iranian painter)	Masaccio (Italian Renaissance)
Architectural Components	<ul style="list-style-type: none"> - Symbolic and decorative architecture - Flat and multi-layered spaces - Simultaneous display of interior and exterior space - Transparent walls with the role of dividing the narrative 	<ul style="list-style-type: none"> - Realistic architecture - Single-point perspective - 3D deep space - Architecture as the physical Framework of the scene
Vanishing Point	<ul style="list-style-type: none"> - Precise mathematical vanishing point - Convergence of lines to a point - Emphasis on a specific moment in the narrative 	<ul style="list-style-type: none"> - Absence of mathematical vanishing point - Visual focus with symmetry and color - Multiple simultaneous narrative foci
Depth Hierarchy	<ul style="list-style-type: none"> - Linear perspective: distance equals decrease in size - Smaller, less detailed distant objects - Light shadows for depth 	<ul style="list-style-type: none"> - Local perspective: conceptual importance and physical distance - Larger main figures - Far and near elements with equal detail
Summary: Time Display	<ul style="list-style-type: none"> - Cyclical and simultaneous time - Multiple narrative moments in one frame 	<ul style="list-style-type: none"> - Linear and instantaneous time - capturing a specific moment of the narrative

viewer from a fixed, passive perspective and equip him with a fluid eye, enabling him to perceive the entire narrative in a transcendent, integrated manner. The spatial perspective and relative uniformity of detail in the foreground and background of the work emphasize that time is not a linear, transient flow, but a recurring, ever-present loop. In contrast, Masaccio's paintings, with scientific precision, confine themselves to single-point perspective and the exact recreation of physical reality. The convergence of lines to a vanishing point locates the viewer in a particular and unrepeatable place and moment. This choice is not accidental; it reflects a worldview that regards the "now moment" as an objective, measurable reality. The reduction in the figures' size within the work's perspective and the use of chiaroscuro to create depth both serve to create a complete visual illusion of a three-dimensional, tangible space. Here, the architecture acts as the physical framework of the scene, recording a historical event in its precise temporal context. Yet, despite this structural contrast, a deeper examination of Masaccio's work reveals that even within the rigid, realistic framework of linear perspective, symbolic meanings can be sought. The careful composition, positioning of figures, and use of light can convey moral or theological messages that go beyond the mere recording of a historical event.

Conclusion

This study aimed to explain how time and space are represented in the two pictorial schools of the Italian Renaissance and Iranian painting and to identify the epistemological foundations affecting these differences. The comparative analysis, based on a semiotic and spatial framework, shows that each of these two artistic traditions rests on an independent model compatible with its own intellectual and cultural system; these models are also depicted in [Fig. 2](#) as two separate structures.

Masaccio's works are structured along a "linear-realistic spatiotemporal system." In this system, time

is organized as a sequence of moments and in relation to historical narrative, and space is formulated in terms of a single-point perspective, Euclidean depth, and representational architecture. Such a structure is a direct reflection of Aristotelian thought on the linearity of time, as well as the anthropocentric worldview of the Renaissance; a worldview that considers visual order to be aligned with cosmic order, and for this reason, architecture in Renaissance works becomes a tool for epistemological, not merely visual, organization.

In contrast, Junayd Baghdadi's painting relies on a "symbolic-simultaneous spatiotemporal system." In this approach, time is conceived as a succession of moments rather than as a linear sequence, and space is organized into interwoven layers based on the semantic significance of elements. The spatial perspective, the transparency of the walls, the lack of adherence to geometric depth, and the equal amount of detail in the near and far elements create a structure that originates from the logic of *Ishrāqi* wisdom and a mystical view of existence. In this view, space is the field of emergence of meaning, and time has an inner quality that is perceived through the artist's spiritual experience.

The findings show that these two visual systems do not have common origins in the structures of thought, and each offers a different answer to the problem of representing the world, the relationship of man to the transcendent, and the role of the image in conveying meaning. Such differences are not limited to the choice of technique or rules of composition, but are rooted in deeper epistemological and ontological layers. Therefore, the present comparative study, by clarifying these underlying layers, enables a more precise understanding of the relationship between visual systems and systems of thought.

Finally, it can be stated that the Renaissance and Iranian painting offer two independent ways of formulating the relationship among space, time, and meaning, and examining these patterns allows for

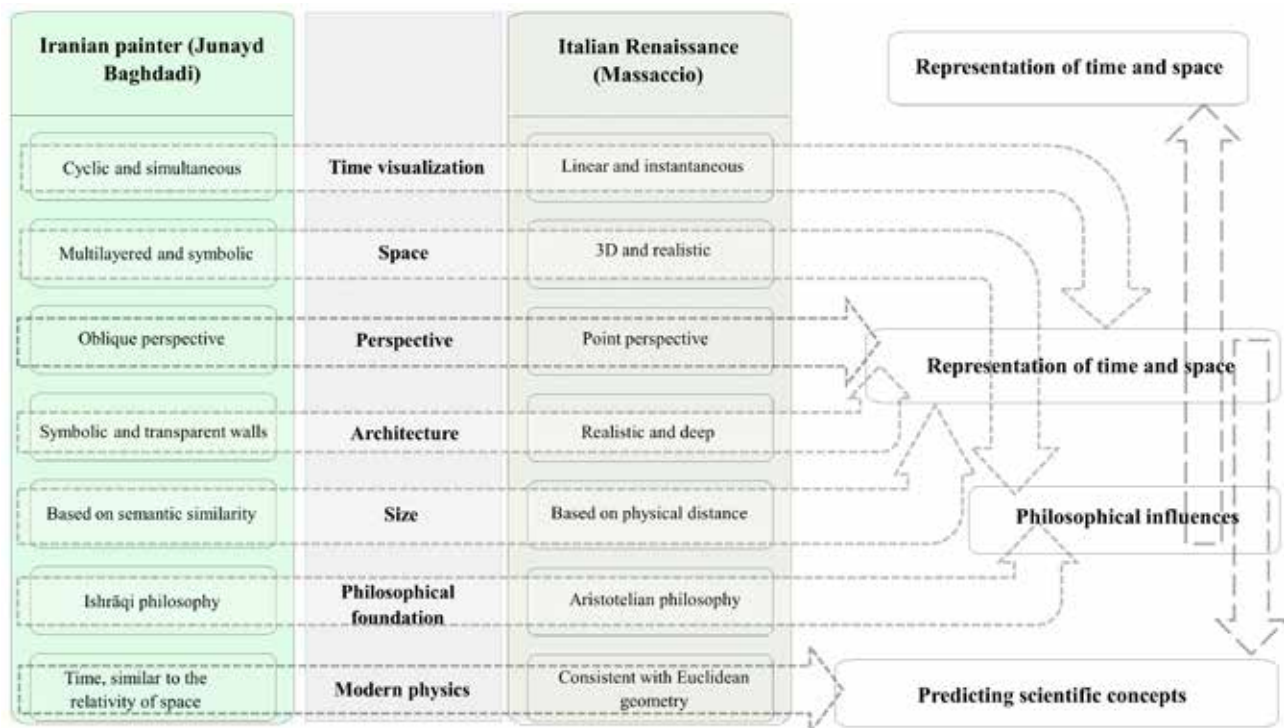


Fig. 2. Comparative model of the representation of the concept of time in the works of Masaccio and Junayd Baghdadi. Source: Authors.

a broader reinterpretation that links art history to contemporary questions in space-time, the philosophy of image, and the phenomenology of perception. Extending this research and its questions to other periods and schools of art can further reveal the theoretical capacity of the proposed pattern and pave the way for a more comprehensive analysis of the evolution of space-time concepts in art history.

References List

- Ashouri, M., & Hosseini, M. (2011). تحلیل نگاره ازدواج همای و همایون [Analysis of the painting of the marriage of Homāy and Homāyūn]. *Visual Arts Studies*, (1), 39–48. <https://en.civilica.com/doc/1465992/> [in Persian]
- Aghaie, A., & Ghadernejad, M. (2018). Perspective as a commodity: The economic context of linear perspective appearance in Late Safavid Painting. *Bagh-e Nazar*, 15(58), 89–100. https://www.bagh-sj.com/article_59580.html
- Aghaie, A., & Piravi Vanak, M. (2015). The metaphysics of encounter of space at the meet of Persian miniature with Renaissance painting. *Metaphysics*, 6(18), 33–48. https://mph.ui.ac.ir/article_19216.html
- Aghaie, A., Nasiri, F., & Ahmadi, B. (2024). Frames of time: Types of embodying narrative time in qahvehkhaneh painting. *Negareh Journal*, 19(69), 111–125. <https://doi.org/10.22070/negareh.2022.16219.3032>
- Aristotle. (2011). *Metaphysics= Aristoteles metaphysik* (M. H. Lotfi, Trans.). Tehran: Tarh-e No. (Original work published ca. 350 BCE).
- Avicenna. (2008). *Al-Shifa* (M. Mohaqeq, Trans.). Anjoman-e Āsār va Mafākher-e Farhangi Publications.
- Azad, A. R., Azad, T., & Rahmatabadi, A. (2016). The influence of Ibn Sina's opinions on European philosophy in the Middle Ages. *Islamic Philosophical Doctrines*, (17), 3–23. <https://www.sid.ir/paper/251820/en>
- Baharam, B., & Fahimifar, A. A. (2025). Visual narrative in traditional Persian painting a premeditative capacity to extend in temporal media. *Journal of Literary Criticism*, 9(17), 496–450. <https://doi.org/10.22034/jlc.2023.420659.1598>
- Baldini, U., & Orlandi, L. (1992). *The Brancacci Chapel Frescoes*. Thames & Hudson.
- Bréhier, É. (2001). *Histoire de la philosophie: L'antiquité et le Moyen Age* (4th ed.; Y. Mahdavi, Trans.). Kharazmi.
- Bryant, J. (2022). *Art history for dummies* (S. Borumand, Trans.). Hirmand. (Original work published 2007)
- Burckhardt, T. (2018). *Art of Islam, language and meaning* (M. Rajabniya, Trans.). Soroush.
- Corbin, H. (2009). *de l'Iran mazdeen a l'Iran shi'ite* [Corps spirituel et Terre celeste] (I. Rahmati, Trans.). Sofia. (Original work published 1979)
- Corbin, H. (2016). *L'Imagination creatrice dans Le*

Soufisme d'Ibn Arabi [Creative imagination in the Sufism of Ibn Arabi] (I. Rahmati, Trans.). Sofia.

- Cornford, F. M. (1997). *Plato's cosmology: The Timaeus of Plato* (A Running commentary, Trans.). Hackett Publishing Company. (Original work published 1935)
- Einstein, A., Podolsky, B., & Rosen, N. (1935). Can quantum-mechanical description of physical reality be considered complete? *Physical Review*, 47(10), 777–780. <https://doi.org/10.1103/PhysRev.47.777>
- Eliade, M. (2001). *The myth of the eternal return, or, cosmos and history* (B. Sarkarati, Trans.). Tahoori. (Original work published 1954)
- Eliade, M. (2016). *Traite d'histoire des religions* [Treatise on the history of religion] (J. Satari, Trans.). Nashr-e Soroush. (Original work published 1949)
- Gardner, H. (2002). *Art through the ages* (M. T. Faramarzi, Trans.). Negah. (Original work published)
- Gelernter, M. (1995). *Sources of architectural form: a critical history of Western design theory*. Manchester University Press. https://books.google.com/books/about/Sources_of_Architectural_Form.html?id=Ri6qER8Ej6kC
- Ghaffari, L. (2022). مواجهه مخاطب با طبیعت در نگاره رسیدن [The audience's encounter with nature in the painting "Homāy's Arrival at Homāyūn's Palace Gate" from the perspective of Maurice Merleau-Ponty's phenomenology]. *Muṭāli'āt-e Honarhā-ye Zībā*, 3(7), 121–124. https://journals.ut.ac.ir/article_89132.html?lang=en [in Persian]
- Ghorbani, D., Mohseni, A., & Motahar Nia, M. (2021). The affiliation between religion and aesthetics from the perspective of Thomas Aquinas in the European Middle Ages and its reflection in Italian architectural Works. *Islamic Art Studies*, 18(43), 480–496. <https://doi.org/10.22034/ias.2021.251408.1373>
- Goudarzi, M., & Keshavarz, G. (2007). بررسی مفهوم زمان و مکان در نگارگری ایرانی [A study of the concept of time and space in Persian miniature painting]. *Honar-ha-ye Ziba*, (31), 89–101. [in Persian]
- Hamdieh, H., & Ardalani, A. (2022). Examining of the achievements of Impressionist artists in representing the concept of the passage of time in painting. *Art and Aesthetics Studies Quarterly*, 1(2), 46-64. <https://11nq.com/VDMuq>
- Hasheminejad, A. (2014). نسخه‌شناسی سه مثنوی خواجهی [Manuscript study of three Masnavis by Khajavi Kermani: Homāy o Homāyūn, Kamālnāmeḥ, and Rauzat al-Anvār]. Nashr-e Matn. [in Persian]
- Hawking, S. (2010). *A brief history of time : from the big bang to black holes* (M. Mohajoub, Trans.). Sherkat-e Ketab. (Original work published 1988)
- Hodne, L. (2011). Masaccio's skeleton and the Petrarchan concept of time. *IKON*, 4, 133–142. <https://doi.org/10.1484/J.IKON.5.100690>
- Honour, H., & Fleming, J. (2005). *The visual arts: A history*. Pearson Education. <https://books.google.dm/books?id=qGb4pyoseH4C&printsec=frontcover#v=onepage&q&f=false>
- Javadi, S. (2011). Nature landscape in Iranian miniature; Landscape analysis of Homa and Homayoon Figures. *MANZAR, the Scientific Journal of Landscape*, 3(15), 12–15. https://www.manzar-sj.com/article_153.html?lang=en
- Kaesbohrer, B. (2023). Time as space; visualizing time in painting, sculpture, or video art. In *Time and space* (pp. 289–293). CRC Press. https://doi.org/10.1201/9781003260554-42?urlappend=%3Futm_source%3Dresearchgate.net%26utm_medium%3Darticle
- Khoshtinat, V., & Safavizadeh, S. (2015). The comparative study of time in Mulla Sadra's perspective and theory of relativity in physics. *SADRĀ'I WISDOM*, 4(1), 25–36. https://pms.journals.pnu.ac.ir/article_2324.html?lang=en
- Mansourzadeh, Y. (2013). An analytical study on essence of European Prehistory Cave paintings. *Journal of Fine Arts: Visual Arts*, 18(2), 1–15. <https://doi.org/10.22059/jfava.2013.36318>
- Mesbah Yazdi, M. T. (1994). آموزش فلسفه [Teaching philosophy] (Vol. 2). Islamic Development Organization. [in Persian]
- Moafi Ghafari, P., Ayvazian, S., & Khansari, Sh. (2024). Representing the concept of space in Iranian expressionist paintings. *Life Space*, 3(2), 219–234. <https://srb.sanad.iau.ir/en/Article/951934?FullText=FullText>
- Mohammadzadeh, M., & Mesineh Asl, M. (2017). Architecture in the paintings of Herat school. *CIAUJ*, 2(2), 27–45. <https://doi.org/10.29252/ciauj.2.2.27>
- Moosavi Baygi, S. M., & Afzalzadeh, M. A. (2023). Platonic and Aristotelean roots of the concept of time in Islamic philosophy. *History of Philosophy*, 13(4), 81–102. <http://hop.mullasadra.org/en/Article/40507/FullText>
- Motahari, M. (1996). حرکت و زمان در فلسفه اسلامی [Movement and time in Islamic philosophy] (Vol. 3). Entesharat-e Hekmat. [in Persian]
- Nasr, S. H. (2011). معارف اسلامی در جهان معاصر [Islamic knowledge in the contemporary world] (I. Rahmati, Trans.). Elmi Farhangi. [in Persian]
- Newton, I. (1999). *The Principia: Mathematical principles of natural philosophy* (I. B. Cohen & A. Whitman, Trans.). University of California Press. (Original work published 1687)

- Norouzi, M. H. (2005). زمان در فلسفه اسلامی [Time in Islamic philosophy]. *Rahnemoon*, (13-14), 47–66. [in Persian]
- Pakbaz, R. (2011). *Iranian painting: Form past to present*. Zarrin & Simin.
- Panofsky, E. (2017). *What art is* (N. Akhavan Aghdam, Trans.). Cheshmeh. (Original work published 2013)
- Paoletti, J. T., & Radke, G. M. (1997). *Art in Renaissance Italy*. Harry N. Abrams.
- Raeisi, I., Shairi, H. R. and Hasanvand, M. (2022). First painter, the first signature (Raqam); A study of signatures (Raqam) in Persian painting, before the advent of Junaid Sultani. *Rahpooye Honar-Ha-Ye Tajassomi*, 5(2), 109–120. <https://doi.org/10.22034/ra.2022.545761.1152>
- Rafei Rad, R. (2022). An analysis of architectural representation in the paintings of Afghanistan over the last four decades. *Journal of Art and Civilization of the Orient*, 10(35), 13–22. <https://doi.org/10.22034/jaco.2022.330463.1235>
- Rahmati, E. (2013). Islamic art and spirituality. Academy of Arts.
- Sakhtemangar, M. R., Sharifzadeh, M. R., Davodi Roknabadi, A. and Aref, M. (2023). The effect of environmental restoration on the content and performance of the artwork (A comparative case study between the Estrabad painting School and The School of Tabriz 2). *Journal of Art and Civilization of the Orient*, 11(42), 6–17. <https://doi.org/10.22034/jaco.2023.404924.1326>
- Shairi, H. (2024). Rumi: On the semiotics of body and metabody. *Literary theory and criticism*, 9(1), 179–201. <https://doi.org/10.22124/naqd.2024.28364.2611>
- Suhrawardi, Y. (1994). پرتونامه [Partonameh] (S. H. Nasr, Trans.). Institute for Humanities and Cultural Studies. [in Persian]
- Vali, E., Panahi, S., Foroutan, M., & Ardalani, H. (2023). The representation of architectural space in painting with a layered semiotic approach (Case study: Iran Darroudi artworks). *Hoviatshahr*, 17(1), 37–48. <https://doi.org/10.30495/hoviatshahr.2023.69467.12266>
- Yathrebi, Y. (2004). فلسفه مشاء: با گزیده جامعی از متون [Peripatetic philosophy] (Vol. 1). Boostan-e Ketab Institute. [in Persian]
- Zarandi, S. (2024). An overview of comparative research methods: Theories, approaches and perspectives. *Comparative Studies in Public Administration*, 1(4), 1–21. <https://doi.org/10.22098/cpa.2024.14476.1029>

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