

## Original Research Article

## Redefining “Transspatial”: Integrating the Philosophies of Abu Nasr al-Farabi and Christopher Alexander in Architectural Space Creation\*

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### Abstract

**Problem statement:** The interpretation of semantic and spiritual layers in architectural works, especially traditional architecture, through contemporary Western theories is often problematic. Consequently, the need for a new model arises in relation to architectural practices and examples, to effectively revise and expand upon these existing theories.

**Research objective:** The main goal of the article is to examine the potential of Iranian-Islamic intellectual systems in developing new contemporary architectural models. It aims to advance modern theories such as the theory of “Christopher Alexander”, along with the ideas of ‘Abu Nasr Al-Farabi’, so that they can foster innovation and a deeper understanding of architecture.

**Research method:** The research methodology employed in this study is qualitative, relying on comparison, literature review, content analysis, and logical reasoning. Relevant research was reviewed, and data from interviews were summarized, coded, and analyzed using Atlas TI software. The case study focused on the Iranian house, exploring both its physical and non-physical dimensions.

**Conclusion:** Architecture encompasses theoretical, practical, and craft dimensions. However, Al-Farabi classified the craft based aspects of sciences into practical and theoretical parts. As a result, in the field of architecture, the scope of his “al-ri’āsat al-binā” is theoretical-crafts, which corresponds to phases zero and one of architecture, and the scope of his “al-binā” is practical-crafts, corresponding to phases two and three of architecture. At the first levels, physical, objective, and material aspects have less impact. As a result, the semantic aspects of “ṣinā‘at al-ri’āsat al-binā” are more. These levels find normative aspects in his utopian-non-utopian range. This level and scope are not seen in contemporary theories, such as Alexander’s theories of living centers or Punter and Kanter’s sense of place. As a result, Farabi’s architectural model provides the ability to redefine “Transspatial” and “Intraspatial” for the analysis of works. On this basis, the “center” in Christopher Alexander’s thought can be developed with levels of transspatial and Intraspatial.

**Keywords:** *Transspatial, Intraspatial, Farabi, Living Centers, Creation of Architectural Space, Iranian House.*

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## Introduction

While traditional designs, forms, and spaces have a strong spiritual meaning and are different from modern Western materialistic models, how can modern Western models explain the ideas behind these traditional spaces? Even though it is challenging to compare Western contemporary theories and ways of thinking derived from traditional Islamic and philosophical models from an Ontological, epistemological, and methodological approach, these Western models are still used to study traditional forms, spaces, and designs.

For example, Christopher Alexander's theory of the living structure or the three-component model of sense of place by Punter and Canter (from the 1960s) have been used to analyze traditional Iranian spaces like gardens or squares (Hatefi Shojae, 2015; Hosseini et al., 2025 a & b). While the success of these spaces was experienced centuries before Western theories were created, the spiritual meaning of historic symbolic centers, looking at their "transspatial" elements like a language for people, can be studied. But this has not been seriously done yet. It is necessary to review both contemporary and traditional design theories and methods, so that the Potential of theory and method, as well as tradition and modernity, can interact to create an effective new model. This research, therefore, seeks a new model for advancing contemporary theories without ignoring the philosophical frameworks of the past that shaped traditional Iranian architecture.

A comparative study between the theoretical system of Abu Nasr al-Farabi one of the earliest Islamic philosophers, known for his works on science and the Virtuous City and the ideas of Christopher Alexander (the theory of living centers), along with Canter and Punter's sense of place model, can reveal knowledge gaps across theoretical-practical, traditional-modern, and geographical dimensions.

Furthermore, to position architectural works (form, space, and design) within theoretical frameworks, the "analogy model" from Western contemporary design methods can be compared with the principle of "mimesis" in Islamic art. Building this connection between European tradition-modernity and Iranian tradition-modernity can generate new insights. In the model that explains this idea,

analogy serves as a shared foundation of design methods, operating along a spectrum from more direct forms to less direct forms. Within this framework, theoretical systems and design approaches can be evaluated along rational-empirical, product-process, or normative-positivist spectrums (Fig. 1). For instance, Christopher Alexander's theory of living centers leans more toward rationalism and process orientation. By contrast, works such as the Iranian house, garden, or square fall into the less direct analogy spectrum, where metaphors connect the inner world (the unseen) to the real world (the built environment). Their intellectual grounding is intuitive, and their normative processes are transspatial, reflecting a unique ontology and epistemology that, while historically specific, also appear timeless. Such a condition can only be fully explained through corresponding philosophical systems, particularly those of Islamic-Iranian sages. With this background, the present research reflects the ideas of "Abu Nasr al-Farabi" in formulating a new architectural model.

## Literature Review

Other studies have explored the concepts of Farabi and Christopher Alexander (Table 1). This research offers a new approach by combining Alexander's idea of living centers with Farabi's concepts of craft, creating a dialogue between parts and wholes, as well as theory and design practice within foundational Islamic cultural sources. It aims to provide a clear and deep understanding of architecture. From a unique architectural perspective, it especially highlights Farabi's practical wisdom in Iranian houses, revealing hidden aspects that are important for understanding the relationship between theory and practice in architectural design. This approach is significant.

## Research Method

This research used a qualitative method, content analysis, and logical reasoning.

First, related sources were reviewed, and field studies were conducted through interviews with experts. Data analysis was done in three steps: selective coding, axial coding, and open coding using the software Atlas TI, by summarizing and analyzing library studies and interviews. To ensure research quality and validity in qualitative

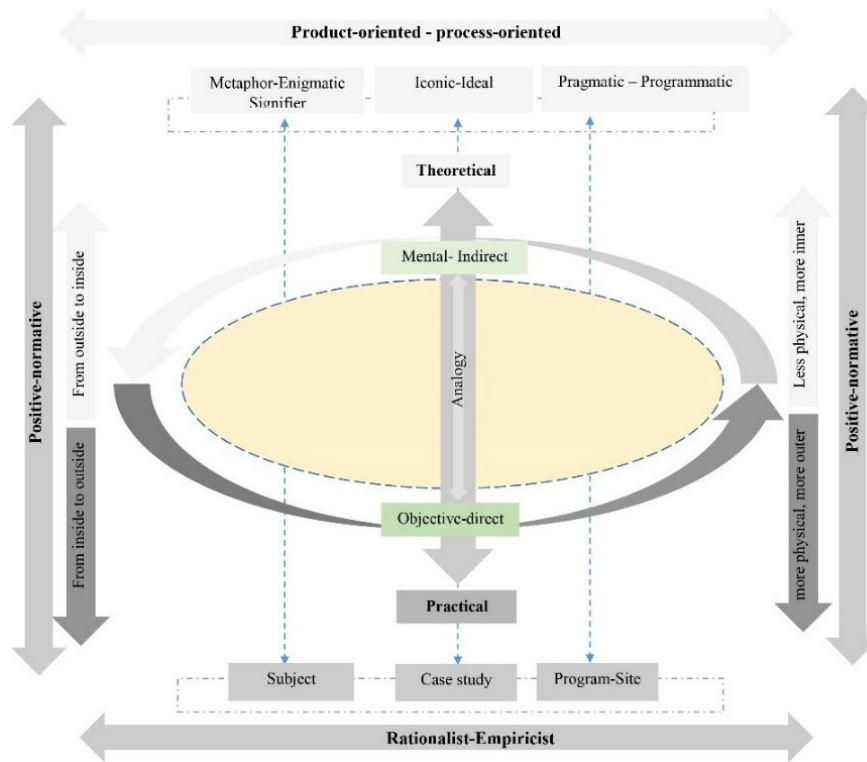


Fig .1. The role of analogy in explaining architectural design methods. Source: Rezaei, 2024, 190; Rezaei, 2014, 284.

studies, two methods were used: 1) Getting expert opinions to confirm the research findings, 2) Presenting a comprehensive result based on theoretical foundations and previous studies, which is proven by a case study.

For validating the proposed model, the first method (expert opinions) was applied by interviewing five faculty members specialized in architectural design education and workshops. These interviews were conducted individually and openly, following a systematic approach. Experts' feedback was used repeatedly to refine and confirm the selected and axial codes, ensuring the research's validity. For the second validation method, a case study strategy was used to deepen the research and apply the theoretical framework with examples from Iranian houses (Fig. 2; Table 2).

### Theoretical Foundations

#### • Research gap in place models

Common models of place, such as the tripartite model of physical, behavior, and perception, or Carmona's eight-part model (Punter & Carmona, 1997, 76; Carmona, 2001, 282) often classify community beliefs under the component

of perception, without considering their normative dimensions. Yet the perceptions of spaces like the Iranian house or garden are clearly distinct from ordinary mental perceptions, because they include both a transspatial (Virtuous) and an Intraspatial (Errant) dimension. Non-spatial theories of architecture and urban planning in the information and communication age emerged after spatial theories (such as those of Lynch, Cullen, Alexander, and Carmona). Thinkers like Mumford, Weber, Toffler, and Castells introduced concepts such as the anti-city, non-place arena, imagined space, information space, and new cyberspace (Rezaei et al., 2022; Rezaei, 2020 & 2024). However, the transspatial and Intraspatial dimensions remain absent from this space–non-space duality. These aspects, however, were present in earlier centuries, before the 1960s, in regions such as Iran, embodied in authentic architectural examples like gardens, squares, and houses, and in philosophical ideas such as connected and disconnected imagination, the imaginal world, and mimesis. Trans-spatial language becomes intelligible to the recipient when place appears not as a concrete icon but as a symbolic phenomenon and assumes agency. In this state,

Table 1. Summary of previous study. Source: Authors.

Titles	Authors	Research topic	Results
Christopher Alexander	(Salingaros, 2025)	Living geometry, AI tools, and Alexander's 15 fundamental properties. Remodel the architecture studios	Using AI to confirm the importance of Living Centers for human well-being, evaluate architectural designs before and after their implementation, and completely rethink design aesthetics.
	(Hatefi Shojae et al., 2021)	Role of local and urban textures in promoting social interactions of residents and emphasizing Christopher Alexander's living centers theory	The role of living center theory features, including strong centers and the void, in promoting residents' social interactions.
	(Moeat et al., 2020)	The Relation between Alexander's Fifteen Fundamental Properties and Sustainability in Office Buildings	The theory's patterns align with the study of 30 eco-friendly office buildings.
	(Sarami et al., 2019)	Origin of the concept of "The Void" in Christopher Alexander's thought	Emptiness, emptiness, immense emptiness, an idea derived from Eastern religions and mysticism and modern physics.
	(Hatefi Shojae, 2015)	Generalization rate of Christopher Alexander's living Structure theory (Case Study: Charbagh and Isfahan Gardens )	The theory's features can be matched with the architecture of Persian gardens.
	(Petruševski, 2012)	Fifteen rules of Christopher Alexander and the methods of generative design as the practical application of the nature of order in architecture.	Using the 15 features of the Living Centers theory in design and examining their connection to modern architecture, aiming for harmony with nature.
Farabi's crafts	(Al Zahra Nassirpour et al., 2022)	Explaining the key concepts of the "Islamic city" in "Madinat Alfadilah" (Virtuous city) theory of Farabi	The theoretical foundation of the concept of the Islamic city in three parts: the sublime ideal, the path of movement, and the operational tools.
	(Mardbari, et al., 2020)	A Survey of the Nature and Thoughts of Farabi with the Thoughts of Saint Augustine in the City of God	Both are the product of a kind of philosophical thought. Seeking human guidance and a desire for true happiness regardless of any circumstances or circumstances.
	(Farshchi, 2022)	Islamic Architecture in Farabi's View: Emphasis on Ehsa al-Olum	Topics like order, logic, mathematics, geometry, and most importantly, observing ethics and civic values in Muslim craftsmanship.
	(Heydari, 2020)	Tracing the Islamic-Iranian Pattern of Participatory Urbanism in Abu Naser Farabi's Views	Justice-seeking, ethics, cooperation, merit-based selection of leaders, thinking with a global city mindset, social acceptance, and obedience to the city leader.
	(Qayyoomi Bidhendi & Mojtahedzadeh, 2018a & b)	Classification of sciences in the early period of the history of science in the Islamic world, from the mid-2nd to the 5th century, based on the ideas of Abu Nasr Farabi	, "sina at al-ri asat al-bina" "sina at al-bina"
Transspatial	(Nasr, 2010)	Sacred art in Iranian culture	Art inspired by a divine and sublime source, aimed at bringing humans closer to the holy world and truth. Sacred art is spiritual, symbolic, and unifying.
	(Eliade, 2009)	Sacred and profane	Sacred places and making the world sacred, sacred time and myths, sanctity of nature and cosmic religion, human existence and consecrated life, history of religion
	(Ardalan & Bakhtiar, 2001)	The sense of unity	Sufism and symbolism in Iranian architecture, traditional concepts and forms from a mystical and symbolic perspective.
	(Guenon, 2004)	Human beings and their nature according to Vedanta	The nature of humans and their development in the Vedanta school, stages of human evolution reaching annihilation in God (fana fi Allah) and subsistence with God (baqa billah), the concept of unity of existence and annihilation in God, in addition to mystical and philosophical ideas of India.
	(Burckhardt, 1986)	Sacred art (language and expression)	Religious and holy art, iconography, divine art, manifestation of unity, and the historical and evolutionary path of Christian art.
	(Tarbiyatjoo & Eslami, 2018)	The dialogue between human and sacred space	Understanding, dialogue, and acceptance of sacred space in the dual tendency toward tradition: the dialectic of return and reception

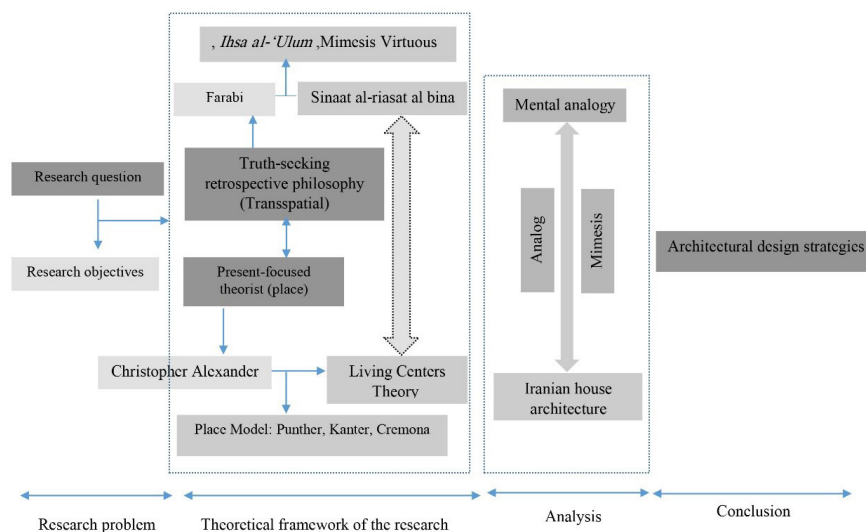


Fig. 2. Research process. Source: Authors.

Table 2. Selected, axial, and open codes from interviews and literature review. Source: Authors.

Selected codes	Axial codes	Open codes
Transspatial	Perception Behavior Physical	The living structure pattern, living centers, Theoretical reason, theoretical aspect, wisdom, revelation and intuition, wise and ethical thinking, active reason, intuition, and spiritual insight, aesthetics, symbolism, spiritual signs, true center, and total whole.
Wisdom	Şina at al-bina Sina at al-ri asat al-bina	Theoretical wisdom, Practical wisdom, Craft wisdom Craft and sciences, a Link between theory and practice Mental craft / Intellectual craft, Architectural craft Foundations of content, Tradition-based reason Craft based on analogy, Phenomenon of life
Imitation	Representation Analogy	Metaphor, Imagination, Representation of the original object, Creation of architectural space, Mental analogy Analogical design

the recipient does not merely ‘be’ in place but actively participates in space, establishing an existential relation with it — a relation that culminates in a sense of unity with place. As a result, other experiences are displaced to the periphery of perception, enabling an elevated experience of meaning and spatial oneness; as if everything outside of meaning is emptied out and observer and observed merge into a phenomenological unity awareness (Hosseini et al., 2025a & b). Therefore, such perceptions can be categorized under a normative approach (Table 3).

• **Concepts of Farabi’s art**

In Ihsa al-‘Ulum, Farabi mentions two concepts related to architecture: şinā‘at al-binā’ and the şinā‘at al-ri’āsāt al-binā’. The şinā‘at al-ri’āsāt al-binā’ is considered an analogical craft, classified under al-ḥiyāl science, which is a branch of the mathematical sciences and is connected to practical reasoning (Qayyoomi Bidhendi & Mojtahedzadeh, 2018b). From Farabi’s point of view, since mathematical rules are

abstract (immaterial), applying them requires strategies and techniques to overcome obstacles. The al-ḥiyāl science deals with these strategies and techniques, and “shows how rational mathematical concepts can be manifested in tangible, natural objects” (Farabi, 2010, 89–90). He then divided al-ḥiyāl science into two branches: numerical al-ḥiyāl, which is a shared field between arithmetic and geometry and includes algebra; and geometrical al-ḥiyāl. Geometrical al-ḥiyāl have several branches: The şinā‘at al-ri’āsāt al-binā’ al-ḥiyāl for measuring areas al-ḥiyāl for making astronomical instruments al-ḥiyāl for making musical instruments al-ḥiyāl for making weapons Manazariyah al-ḥiyāl (perspective) instruments for enhancing human vision (such as lenses) and mirrors, and similar tools. al-ḥiyāl for making unusual containers (ibid., 91). Farabi mentions “şinā‘at al-ri’āsāt al-binā’” in one place,

Table 3. Rating of the perception component. Source: Authors.

Degrees of mental perceptions		Examples in the architectural-urban planning space
Environmental perception	Universal (Historical, Cultural, Social)	Taj Mahal Garden, Pyramids of Egypt
	Interpersonal (collective memories)	Social spaces with historical, cultural, and social events to promote collective identity; Naqsh-e Jahan Square.
	Personal (mental and psychological maps)	Symbolic buildings -Azadi Tower Perceptions of the Five Senses – Iranian Garden.
The world of similitude	Connected dreams (imagination connected)	Dreams, ideals, imaginations, mentalities, and internal material beliefs and lived experience of the designer, derived from sensory perceptions.
	Disconnected dream (Imagination disconnected)	Beliefs beyond material forms based on symbolic and semantic forms and shapes of the designer derived from intellectual, intuitive, and imaginative perceptions.

and “*ṣināʿat al-bināʿ*” in another. The former is classified among the philosophical (Wisdoms) disciplines, while the latter falls under the category of civil practical arts/crafts (Qayyoomi Bidhendi & Mojtahedzadeh, 2018a, 38). He also refers to another level of the architectural concept within the branches of the science of *al-ḥiyāl*. The *ṣināʿat al-riʿāsat al-bināʿ* is the foundation and starting point of *ṣināʿat al-bināʿ*. Like other crafts, it relies on practical reason, specifically, tradition-based practical reason, which focuses on thinking and determining what is appropriate. Tradition-based practical reason identifies what is suitable or unsuitable based on the principles of *ṣināʿat al-riʿāsat al-bināʿ*, while technical practical intellect brings these

determinations into reality using the rules and skills of the *ṣināʿat al-bināʿ*. The *ṣināʿat al-riʿāsat al-bināʿ* is responsible for the principles, foundations, and preliminaries of the physical form, arrangement, position, and proportions of architecture. This craft itself relies on the rules of the science of *al-ḥiyāl*, which in turn depends on mathematics and is considered one of its branches. According to the division of practical reason in to two types, tradition-based (reflective) and professional (skilled). The *ṣināʿat al-riʿāsat al-bināʿ* is the work of tradition-based practical reason (p. 41). Farabi’s concepts of craft are presented with an emphasis on the model of “mimesis” and the idea of “transspatial.” (Fig. 3).

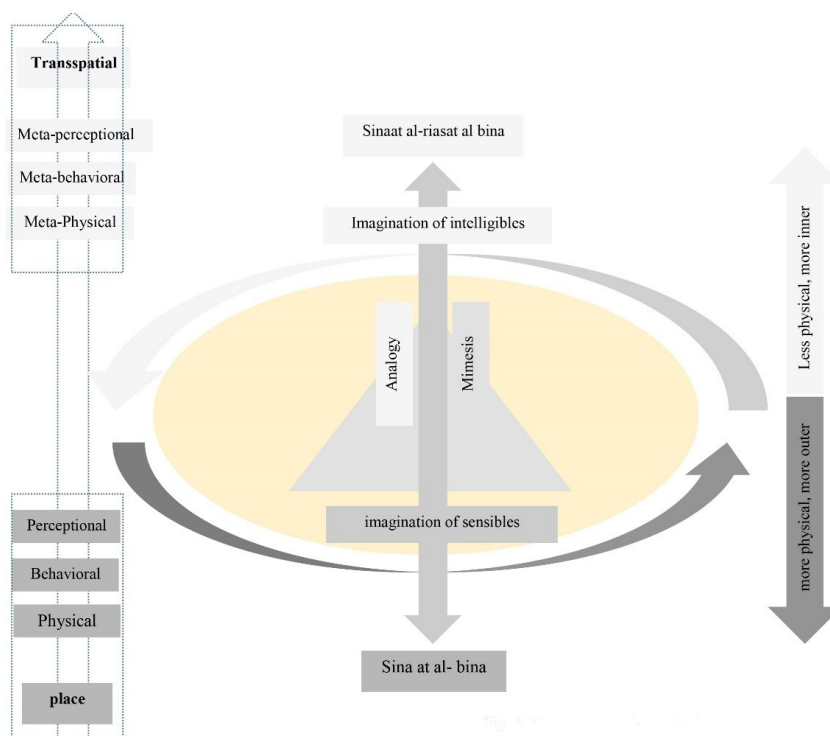


Fig. 3. Theoretical model of Farabi's thoughts. Source: Authors.

### • Norms in Farabi's vision of the virtuous city

Farabi's ideas about Utopia are more systematic and philosophically grounded compared to those of other Muslim thinkers such as Ibn Khaldun, Ibn Rushd, Suhrawardi, and Avicenna. The unique features of Farabi's utopian vision lie in his comprehensive outlook, the structured and organized nature of his thought, his effort to apply Islamic philosophy to society, and his attention to the three fundamental principles—divine, human, and natural—in presenting his theories. These qualities give remarkable strength and stability to his philosophical framework (Al Zahra Nassirpour et al., 2022, 127).

Farabi primarily based his work on philosophy and, in formulating the Virtuous City, emphasized philosophical and theoretical reasoning. According to him, the Virtuous City belongs to the realm of intelligibles (Mahdi & Farabi, 2000). He envisioned it as a comprehensive system designed to lead human beings toward perfection and ultimate happiness. In this system, the world of the seen and the unseen, earth and heaven, the elements of the cosmos, and the human being with its faculties and inner instincts are all harmonized. They even exhibit a structured correspondence with one another. Just as the order of the universe is founded on wisdom and justice, the virtuous city is organized on just and rational principles and is governed under the leadership of a philosopher-king. At the highest level of this order stands the Divine Being (Farabi, 1986, 73). Al-Farabi has divided societies into different categories on the path to achieving happiness based on their goals and qualities. The Virtuous City is an ideal city for achieving happiness. Al-Farabi's other classifications of cities are: the Corrupt city, the Errant city, and the Vicious city.

### • Concepts of Christopher Alexander's theory

From Christopher Alexander's view, the whole world is unified and orderly. The idea of the nature of order in all phenomena of existence can be studied under two categories: "life structures" and "non-living structures." He focused on understanding the pattern of living structures based on the concepts of total whole and strong centers. Alexander's understanding of a living structure depends on words like life, total whole, center, and the pattern of living structures (Hatefi Shojae, 2015).

He believes that every architectural work has some level of life as a living structure, and the more the architecture aligns with his beliefs about The Existence of an "I" and God, the higher its level of life. Christopher Alexander believes that a center is a structured domain acting as a key element within the wholeness of existence and is the source of power that makes these domains appear as interconnected and unified entities, creating a whole. A center is a concentrated entity, and the combination of centers forms a precise and skillful structure, resembling an integrated whole (Nadimi et al., 2022). The presence of centers as the pillars of wholeness and the most important characteristic of a living thing means that the diverse wholes at different levels within an object not only appear as wholes but actually manifest as powerful centers. If the parts, local wholes, and interconnected entities that are difficult to perceive are called centers, then each of these entities inherently acts as a local center within a larger whole and possesses life (Alexander, 2013, 118-126). So, every point in the whole space is either facing the same direction as the center or the opposite way, and all sight lines lead toward the center, making the whole space feel focused around it.

Alexander believes a strong center isn't always the exact geometric middle. Instead, it's a spot that draws attention, made up of many smaller centers at different levels. This center is usually a stable part in the middle or the most important area of the space. Also, these strong centers are key in spatial sequence and how spaces are arranged, especially as you move toward more private areas. The layer hierarchy, nested inside each other, evokes a feeling of depth and reinforces the center feel even stronger (ibid., 126). Centers exist within other centers, and their symmetries create a focused concentration from the surroundings toward each center in a given area. Centers can be either "defined," with something clearly in the middle to draw attention, or "implied." Many centers support and strengthen each other, and instead of being isolated, they connect and overlap, creating an overall sense of balance (Salingaros, 2025). The center is the true core of existence, reflected within humans and all phenomena. The most central part of any phenomenon has a kind of closeness or connection to the human self.

Alexander believes that in the center of all living things, the “face of God” can be seen (Alexander, 2002, 4-146). Alexander focuses on living structures and talks about sublime architecture, living architecture, and architecture as a gift from God. This kind of architecture shows life and a deep connection with the world through different levels of awareness (Alexander, 2002, 35-316; Bagheri et al., 2023). He believes that architecture and understanding its quality based on living structures is the best gift to God, with the highest spiritual level and a sign of God’s presence (Alexander, 2002) (Table 4). According to Christopher Alexander’s ideas, the concept of the center in architectural space is studied through logical design and a conceptual model of place, both in semantic and physical aspects (Fig. 4).

### Discussion

Farabi, unlike Aristotle, who distinguished between theoretical, practical, and productive knowledge, limited his classification to the first two, provided that the productive (craft) dimension could be integrated within them. This does not reduce Aristotle’s tripartite division but rather reinterprets it. Within this framework, architecture in Farabi’s view can be understood in dual terms: theoretical–craft and practical–craft. Of the two concepts related to architecture, “*ṣinā‘at al-binā’*” and “*ṣinā‘at al-ri’āsat al-binā’*” the former corresponds to the practical–craft dimension, while the latter belongs to the theoretical–craft dimension. In this sense, Farabi’s twofold classification helps distinguish between architecture before execution—in its conceptual and initial phases

Table 4. Concepts of Christopher Alexander's living centers theory. Source: Authors.

Concepts		Definitions
Living centers theory	The Phenomenon of life	Life is seen as a quality in the essence of space or functional spaces in a living system from a biological view.
	Total whole	It works like a precise and skillful structure, like an integrated whole, meaning we see it as part of a continuous and connected chain.
	Center	A structured area in space that, because of its internal connection and its relationship with the base it exists in, shows a kind of centrality.
	Pattern of living structures	An integrated whole made of strong and living centers creates the pattern of living structures.

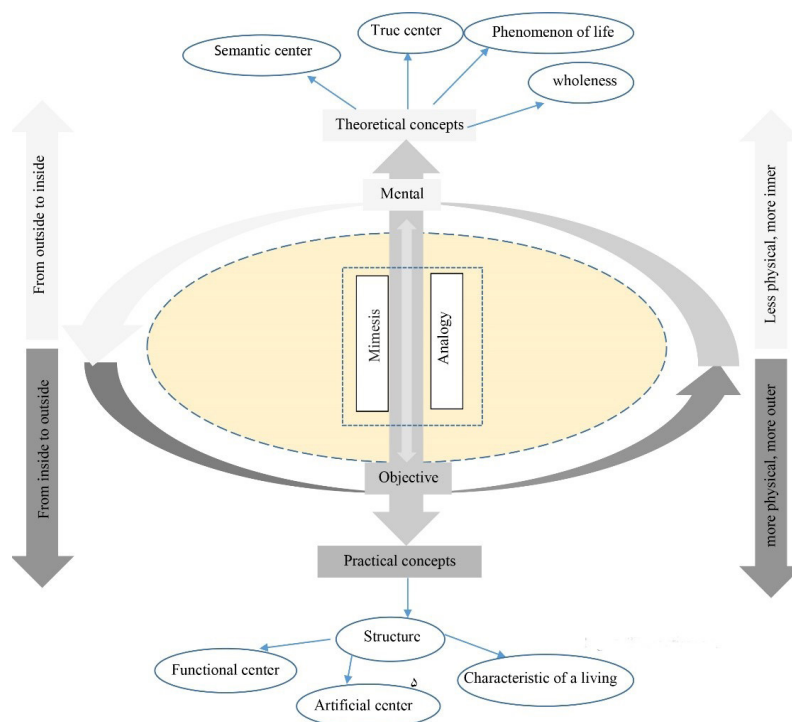


Fig. 4. Theoretical model of Christopher Alexander's ideas. Source: Authors.

(architectural phases zero and one) which falls under the theoretical–craft category, and the subsequent phases of design and construction (phases two and three), which belong to the practical–craft domain. Furthermore, the gradation from Vicious to Virtuous in his theory of the city can be read as a normative dimension, which, when integrated with models of place, can be expressed across transspatial and Intraspatial levels (Fig. 5).

Farabi also regarded mimesis as the driving force of artistic and architectural creation. He spoke of the imaginative faculty, which combines and refines sensory observations. For him, imagination is not merely the preservation, combination, or separation of images; rather, it actively governs sensory perceptions. This faculty, which mediates between the senses and reason, has two principal functions: preserving forms and recombining them. Through these operations, imagination enables imitation and representation, drawing upon both sensory input and rational understanding (Farabi, 1986). According to Farabi’s innovative theory, imagination serves as a tool for cognition and as a bridge between sensory and rational perception. Through mimesis manifested in analogy, resemblance, comparison, or symbolic correlation it translates intellectual concepts into sensory imagery. With his creative and original mind, Farabi extended the discussion of imagination far beyond its conventional scope, ultimately linking it to the philosophy of prophecy. From a Platonic and Aristotelian perspective on epistemology and the notion of craft, Farabi’s theoretical–practical framework demonstrates

how mental ideas are transformed into tangible realities (Objective matters) through imagination and mimesis. This logical process resonates with analogical design methods in architecture, highlighting the creative role of imagination in architectural production. Analogy is a problem-solving strategy and one of the most common ways to develop a concept and produce a design scheme by finding a specific phenomenon, either within or outside the realm of architecture, and using the real relationships between things as a model to guide the desired features of an architectural project (Lawson, 2009, 249). The role of critique and analysis as tools of “analogy” in design is highly significant. The components examined may range from more “objective,” “internal,” and “direct” elements of the design to more “subjective,” “external,” and “indirect” elements drawn from outside phenomena, whether related or unrelated to the design subject. Analogy may be based on the direct and objective imitation of existing solutions to similar problems, or it may take place indirectly through analogy with a mental phenomenon (Rezaei, 2014, 267; Rezaei, 2024, 171). In fact, the process of realizing concepts and creation can be viewed as multiple layers. The corresponding concepts move from the innermost layer—namely the worldview, which is beyond time and place (trans-temporal and trans-spatial) towards the outer layers that depend on specific place and time, until finally the “manifestation” appears in the outermost layer within a particular time and place (Islami & Shahin Rad, 2012, 44).

The manifestation of the center in physical and the

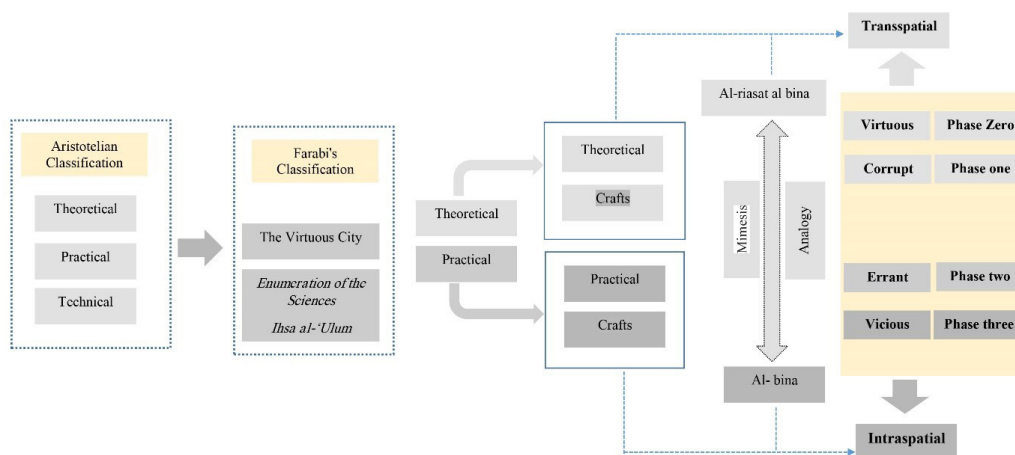


Fig. 5. The position of architecture in Farabi's system of knowledge in relation to the stages of design and the hierarchy of Medinas. Source: Authors.

meaning of Iranian house architecture through the rules of the universe, showing patterns that are beyond time and place. In the Iranian house, the courtyard serves as the generator of central force, engaging with the dimension of time, connecting with nature, and different components of the house to the principle of unity. The space, as the strongest center, can be studied from various perspectives: symbolic, functional, and social (Semantic, functional, sociability). Alexander believes that empty space, as the core and true source of existence, is potentially alive and potentially aware, holding a spiritual closeness to the human self. In a structured, center-oriented system, it expresses the intrinsic nature of the universe.

Empty space is a positive void that carries creation and change from within. Besides its Empty semantic concepts, the courtyard, as part of the place's domain, organizes the surrounding environment geometrically. The functional area of the different parts of the Iranian house acts as a field that influences other strong centers. Physical and Semantic transparency, created by reducing material while moving through space, leads to an expansion of the space. This shows continuity and a spatial and visual flow, along with concepts like hierarchy, dynamism, and fluidity, the dialogue between inside and outside, flexibility and adaptability, comfort and clarity, spatial openness, and rhythm.

The movement of a person through the space from the

lowest floor to the roof represents the human ascent. The pool, centered on water, symbolizes existence and connects the earth with the sky. Water creates a double image of the surrounding space, giving a sense of movement, fluidity, and vastness.

Nature shows the passing of time through changes like green and yellow leaves and different times of the day. This helps us feel the flow of time and life. Every part of the façade, its rhythm and shapes, supports a bigger central point. Plaster decorations show natural elements like the sky, moon, and sun. Each important part of the Iranian house, including the Shahneshin (Alcove), Sedari, and Panj-dari, is a strong center. In the Shahneshin, light is seen as a special place where God's presence gathers. The colorful light coming through the stained glass windows gives the space a deep, spiritual feeling. The wind catcher is a cultural, aesthetic, and functional symbol of the climate, helping to define the identity and readability of buildings in historic neighborhoods.


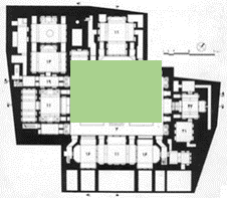

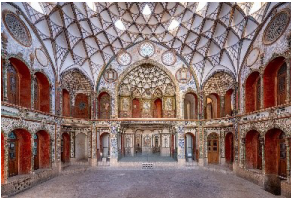


The creation of the Iranian house aligns with the analogical design method and the ideas of Farabi and Christopher Alexander, as shown in Table 5.

The analysis results of the strong centers in the Iranian house, based on the model from the research (Figs. 3 & 4), link the transspatial dimensions to mental comparison and true, meaningful centers, and the spatial dimensions to objective comparison and functional, artificial centers (Table 6; Fig. 6).

Table 5. Creation of form and space corresponding to the method of analogy and the ideas of Farabi and Christopher Alexander in the Iranian house. Source: Authors.

Dimensions	Design process	Analogical design method	Degree of analogy	Alexander Living Centers	Farabi	Iranian house	Design solutions
Non-physical (Transspatial)	Composition of creating a form based on external combinations and factors outside the project	Typology, Nature-inspired, Geometric, Metaphorical Ambiguous	Mental Indirect External Interpretive Dream-like General	The void, Strong centers, Hierarchy, Light, Hidden geometry	Sinā'at al-ri'āsat al-binā	Perception	Science and the surrounding world Semantics Aesthetics Symbolism
Physical (place)	Analysis of form creation based on direct and internal analysis	Program-based, Practical use, Essence	Objective, Direct, Internal, Standard-based, Realistic, More specific	Decorations Physical geometry Structure Pool Green space Elements of a traditional Iranian house	Sinā'at al-binā	Behavior Physical	Case study program and site Analogy with historical types Analysis components Spatial program

Table 6. Research findings (examples of the manifestation of the center in the Iranian house based on the ideas of Farabi's transspatial and Christopher Alexander's place). Source: Authors.

Dimensions	Examples of the manifestation of the center in Iranian houses		
Transspatial (Semantic center)			
	The void- Manouchehri house	Sensory perception and semantic role of the courtyard - Abbasian house	Playing with light and color in the Tabatabaei house
Place (Functional and artifact center)			
	Spatial hierarchy-privacy- interior-exterior - Naraghi house, Hamedan	Living centers in the structure of the facade - decorations - courtyard - Abbasid house	The dome of Borujerdi house

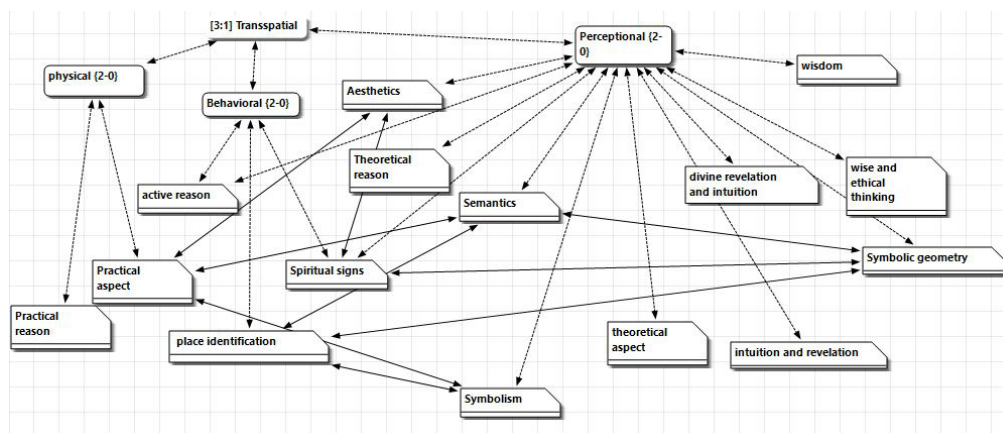


Fig. 6. Research findings (Characteristics of the Iranian house based on the ideas of Al-Farabi and Christopher Alexander). Source: Authors.

### Conclusion

Architecture is a field of knowledge with theoretical, practical, and craft dimensions. The craft aspect of architecture can be classified within Farabi's dual system of theoretical and practical wisdom. The alignment between Farabi's ideas of craft and Christopher Alexander's concept of living centers in both theoretical and practical dimensions can be regarded as the foundation of contemporary form-creation methods in architectural design, especially when understood through analogy and mimesis. Mimesis-Analogy, as a shared

root of design methods, extends across the architectural process from theoretical–craft wisdom (phases zero and one) to practical–craft wisdom (phases two and three). In the same way, the three components of place models (perception, behavior, and physical) can be mapped on to Farabi's dual framework, where the normative aspects of his political philosophy allow for interpretations in both Transspatial and Intraspatial dimensions (Fig .7). Unlike common models, this approach incorporates traditional architectural examples such as the Iranian house and garden within the transspatial dimension while also

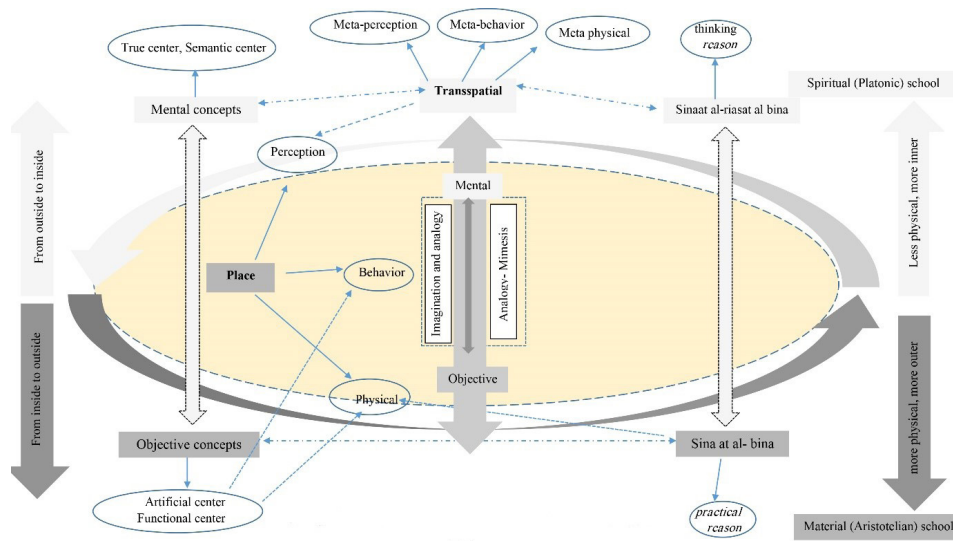


Fig. 7. The relationship between architectural design stages and Farabi's theoretical and practical wisdom, with emphasis on the role of analogy and imitation in the connection between art and the utopia. Source: Authors.

providing a framework for assessing Intraspatial experience. In Farabi's architectural thought, that *ṣinā'at al-ri'āsat al-binā* occupies the highest branch of theoretical-craft wisdom, while the *ṣinā'at al-binā'* belongs to the lower branch of practical-craft wisdom. At one end of the spectrum lies the Platonic side: indirect, inward, mental, and spiritual—aligned with the *ṣinā'at al-ri'āsat al-binā* and the theoretical dimension of Alexander's living centers, representing the peak of transspatial experience. At the other end lies the Aristotelian side: direct, outward, objective, and material, aligned with the *ṣinā'at al-binā'* and the physical aspects of Alexander's living centers. The higher one moves in this model, the less tangible and material the architecture becomes, and the more its spiritual and meaningful dimensions are revealed. Thus, the *ṣinā'at al-ri'āsat al-binā*, at its highest level, contains a spiritual dimension often absent in Western materialist theories (Fig. 8). The case study of the Iranian house illustrates this model through the relationship between inside and outside, emphasizing strong centers in both physical and non-physical dimensions. The inner world corresponds to the mental and spiritual layers of centers, while the outer world reflects their physical and material presence. In the stage of the *ṣinā'at al-ri'āsat al-binā*, focusing on the non-physical dimension of centers and grounded in philosophical concepts, the Iranian house

is interpreted through mental analogy with metaphysical and mystical themes. Here, true and meaningful centers appear through aesthetics, symbolism, hidden geometry, formal principles of mysticism, representations of paradise, and the imagery of divine light. In the stage of *ṣinā'at al-binā'*, corresponding to the physical dimension of center theory and emphasizing practical concepts, the focus shifts to physical and functional centers expressed through objective analogy. These emerge in structural elements, proportions, construction systems, geometry, and ornamentation, which embody the material expression of architectural form.

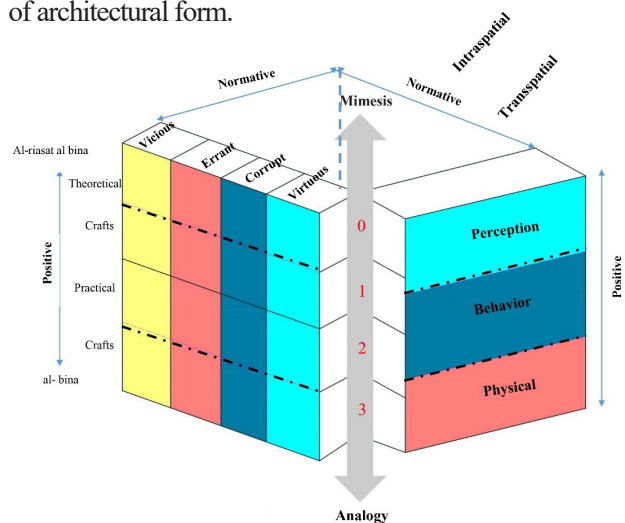


Fig. 8. Theoretical model of redefining the transspatial by adapting the ideas of Abu Nasr al-Farabi and the ideas of Christopher Alexander. Source: Authors.

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