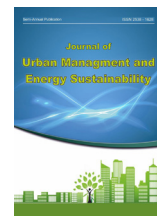


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Analysis of the Approach of Physical Contextualism in the Bazar of Ardabil City

Elham khanghahi bala¹, Hassan Ebrahimi Asl^{2*}, Masoud Haghlesan³, Saeedeh feizi⁴

1 PhD Student in Architecture, Jolfa International Branch, Islamic Azad University, Jolfa, Iran

2 Assistant Professor of Architecture, Jolfa International Branch, Islamic Azad University, Jolfa, Iran*

3 Assistant Professor of Architecture and Urbanism, Ilkhchi Branch, Islamic Azad University, Ilkhchi, Iran

4 Assistant Professor of Architecture and Urbanism, Azarshahr Branch, Islamic Azad University, Azarshahr, Iran

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ABSTRACT

Contextualism has evolved with the comprehension of its underlying message, emphasizing the link between environment and space in architecture. The traditional Bazar, as the most significant space, is considered a functional element and a pillar of the urban fabric. The research hypothesis is both correlational and directional, suggesting that the architecture of the Bazar embodies the principles of contextualism, and the concepts of signs can serve as tools for analyzing the value and semantic system to identify the guiding principles of contextualism within the framework of Umberto Eco's semiotics theory. The research methodology initially employs a qualitative approach, specifically descriptive-analytical. It elaborates on the concept of contextualism by drawing from scholarly sources and formulating the physical contextual components. Utilizing the dimensions of Umberto Eco's semiotics. In the subsequent phase, an analytical-comparative method is used to pinpoint the context and physical signifiers of the Ardabil traditional Bazar. The resulting findings indicate that the criteria of contextualism encompass two spatial and visual aspects, with nine criteria including position, volume, height, setback, scale, orientation, rhythm, material construction, and color. Furthermore, the physical components within the structure of the Ardabil traditional Bazar, aiming to establish order, spatial coherence, hierarchical structure, grandeur, and influence in the collective consciousness, affirm the interplay between physical contextualism and the concept of signs. This is because the physical structure represents a form of connection that, through its representational expression, establishes behavioral and functional patterns towards achieving objectives, subsequently symbolically representing the accomplishment of cultural goals.

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*Corresponding Author:

Email: hassan.ebrahimi@gmail.com

Phone: +989354012528

ORCID: <https://orcid.org/0000-0001-6693-6037>

1. INTRODUCTION

Today, urban management plays an essential role in the stability and development of urban life in Iran, despite the long history of urban management institutions, we still see the division of management and the division of municipal duties among the various institutions involved in urban management. In the management of urban wateContextualism pays attention to the special features of a place and their application in contemporary design. In architecture and urban planning, it is one of the holistic perspectives that looks at context as an evolutionary event (Majedi & Zarabadi, 2010: 8). Every building that is built is presented as a part of the context and as a part of the context it creates the context for the building after itself (Fardin & et al, 2017). Context-oriented architecture in every culture and nationality has its roots in the architecture of the near and far past. At the same time that it considers the distinction of the place, it explicitly demands the continuity of the physical and non-physical values of the existing place or context. Among the physical factors, the material features are analyzed in an independent platform and the role features of the lands are analyzed in a set of related elements (Abedi & Irvani, 2016: 159; Mohammadhasani & et al, 2014). Contextualists believe that the components of the city are not under the cover of their internal forces and characteristics, but are dependent on the environment and the group around it (Stokols & Altman, 1987: 15-18).

Contextualism has been explained to three physical, cultural-social and historical approaches. The physical approach was proposed by Brolin in the book "Contextual Architecture" and European and American case examples were used to develop the concepts. According to Toloie, physical contextualism is not only the object itself but also its mutual relationship with other objects in the context. The shape of the buildings affects the adjacent shapes (Ahmadi, 2017). One of the most important theories of physical contextualism is the city collage idea, which was

first proposed by Colin Rowe and Fred Kotter. In this idea, they considered the buildings of the city as architectural objects and designed them alone and with different faces and separated from the context. A city collage that includes opposite poles such as past and future spatial relationships. According to the experts on city collage, in the traditional city, the buildings are the background and the spaces show connected forms and an interwoven pattern of spatial periodicity (Hashempuor & et al, 2018: 110).

The Bazar is one of the most important urban spaces and functional elements that always relates to its physical context. The traditional Bazar in Iranian-Islamic cities, with its multiple social, economic, political, physical and cultural functions, is considered as one of the most important urban spaces that accepts social interactions in a historical-cultural context and has high quality and artistic values (Irandoust & Bahmani Ormani, 2011: 50; Talaei & et al, 2018; Habib, 2006: 27). The current research tries to answer these questions: What are the criteria and components of the physical context of the traditional Bazar? What are the signs of the traditional Bazar of Ardabil and what is the relationship between these signs and the physical context of the building? The presence of signs in the architecture of the Bazar as a tool for analyzing its value and meaning system will be helpful in the process of identifying the contextual criteria. Recognizing architectural signs is actually the forms made by man and the continuation of his thinking process, and semiotics, relying on the concept of signification, makes the audience connect with the architectural space as much as possible. According to Umberto Eco's classification of signs, the Bazar is placed in the category of artificial signs with a combined function; Because in addition to having the primary function as a place for trade and economic interactions, it also has a set of secondary and symbolic functions. Due to the fact that Ardabil city is located on the Silk Road, it has been blessed with large and prosperous continental Bazars for many

years, but its importance, fame and expansion were during the Safavid period. Therefore, the building of Ardabil Bazar in some parts belongs to the Safavid period, and some of the palaces, timchehs and rows have been restored and revived in the periods after that. The traditional Bazar of Ardabil city, the occurrence of different and diverse functions such as commuting, economic-commercial, cultural-social, recreational, political, informational activities, etc., the investigation of meaning and function in Ardabil Bazar emphasizes the role of semiotics in the formation of meaning (Jamei, 1993). While emphasizing the importance and necessity of knowing the semiotic theory of Umberto Eco's architecture, this research seeks to present one of the practical aspects of this theory in a semiotic analysis of the traditional Bazar building of Ardabil in its physical context.

Background and theoretical foundations of the research

Umberto Eco considers semiotics to be the study of signs and how they work (Eco, 2022). According to Feridan Dossoor, signs paradoxically enable the text to resist the direct relationship of signs with specific meaning (Nojomeian, 2006). The semiotic reading of architecture seeks to reproduce the design based on the relationship between the layers and based on the perception of the audience, because people based on experience, culture, historical past, worldview, etc., make meanings metaphorically, ironically, reflectively, etc. from environmental elements. (Ghaffari, 2016; Mirgholami & et al, 2011). Urban spaces can be full of signs that, after being decoded by the audience, complete the perception of the space and present urban spaces as an interpretable text that adds to the richness of the space with its semantic implications. Urban semiotics are considered a valuable tool for representing reality in cities (Sarmastani & et al, 2018; Mohammadhasani & et al, 2016; Majedi & Zarabadi, 2010; Soujouidi, 2008). The view of the city is the first field that the observer encounters in the city. The dynamism

and visual diversity in the environment attract more attention from the audience than other works (Mohammdi & Rezazade, 2019; Ahmadi & Vafi, 2018; Ostvar, 2013). In the discussion of contextualism, the extraction of contextual factors affecting the formation of an architectural building, on a metropolitan scale and the architectural program related to physical and functional dispersion, shows that its formation and development and its elements over the ages are influenced by the environmental, cultural, social, and governmental structure. And the economy of the city has been located (Bahrieh & et al, 2020). The variables of structural, visual and spatial coherence have a direct and significant effect on the dependent variable of the physical life of the traditional Bazar, the variable of activity and perceptual coherence of the new building as a predictor variable on the functional life of the traditional Bazar and predict its changes. For this reason, it is necessary to address the components of comprehensive scaling and the distribution of scales in the traditional Bazar (Alavizadeh & Eslami, 2019; Alavizadeh & et al, 2017). By studying the research carried out by some researchers, one can get a complete understanding of the topics raised in the research title. In general, it is possible to categorize the researches related to the research title in a separate spectrum and examine each category separately.

Physical contextualism

Contextualism is a point of view that pays attention to the special features of a place and their use in design. At the same time, it refers to the spatial differentiation, it demands the continuity of the physical values of the existing place or context (Fardin & et al, 2017). Context in architecture is the same text, platform and environment in which architecture is formed and includes forms and content together. The context in architecture is everything that is related to architecture, a function of time and place or a set of conditions, characteristics or facts related to the specific place and time of the desired

Category	Classification of researches based on the field of study	Researchers
1	- Studying signs and how they work - The resistance of the text to the direct relationship of signs with specific meaning	Eco, 2022 Nojomeian, 2006
2	- Reading signs based on the audience's perception of the representation of architectural and environmental meaning	Ghaffari, 2016 Mirgholami & et al, 2011
3	- Contribution of meanings in the signs of urban spaces to the perception of the space by the audience	Sarmastani & et al, 2018 Mohammadhasani & et al, 2016 Majedi & Zarabadi, 2010 Soujoudi, 2008
4	- Environmental graphics of the city as urban signs in the eyes of the audience	Mohammdi & Rezazade, 2019 Ahmadi & Vafi, 2018 Ostvar, 2013
5	- Background factors affecting the formation of the Bazar under the influence of the city's environmental, cultural, social, governmental and economic structure	Bahrieh & et al, 2020
6	- Continuity of texture pattern language by inclusive scaling components and distribution of scales	Alavizadeh & Eslami, 2019 Alavizadeh & et al, 2017

Table 1: Classification of researches based on the field of study

building site (Naghavi, 2019). Contextualists believe that the physical components of the city are not under the cover of their internal forces or characteristics; Rather, they are dependent on the environment and the complex around it. Therefore, it is not possible to only look for the properties and dimensions of phenomena and look at the essence of phenomena without considering the time dimension and the context in which they are located. The unit of analysis in this approach is the study of buildings or spaces in relation to its environmental factors, and any change and interference in them are also dependent on these factors (Stokols, 1987). Contextualism emphasizes age-orientation and the connection between the environment and space, and it is formed by understanding the message of its context, and in fact, it materializes the message conveyed by the architectural and urban context (Hashempuor & et al, 2018). In this type of architecture, every building is designed and implemented based on cultural, social, historical, physical, climatic and specific context conditions (Mahdavi & et al, 2011: 32).

Criteria and components of physical contextualism

The physical dimension of the concept of contextualism consists of many components

and micro-components, which include: building location (building orientation, mass and space percentage), scale and size (facade proportions, yard proportions), shape and form (door and window form, skyline, Porch form, central courtyard form, familiar cultural symbols), materials and details (type of materials, color of materials, composition of materials), organization of physical components and elements (spatial hierarchy, space arrangement, front of space placement) (Nezamdoust & et al, 2010).

Every visual sign can be separated from the context or text and create new contexts and texts, but urban design is successful if it can create a positive coexistence between mass and space. Urban spaces appear when they are surrounded by close or connected buildings. If the distance between the buildings is too much, the buildings will be completely separated; In this case, it is not possible to create a positive space and the relationship between shape and context is lost. In fact, the most pleasant urban spaces have continuity and rhythm created by buildings.

Signs of architecture in Umberto Eco's theory

Semiotics in the structural analysis of the text studies how the meaning of the text is formed. A text is a combination of signs that can appear

Dimension	Components	Sub-components		Indicator		
Physical contextualism	space	Access network (routes and nodes)	The width of the roads and grading of the rider access network		Location	Spatial aspect
			The ratio of width to height in passages			
			Hierarchical patterns in access network			
			Hierarchical patterns in pedestrian access networks			
			Hierarchical patterns at the junction of the rider and pedestrian network			
			Hierarchical patterns at the junction of the network of nodes			
			Connection and paving of passages and access networks			
		Nodes and open urban squares				
		Natural scenery in space				
		Artifact landscape in space				
	Mass (architectural body and full space)	Architectural building volume clip	The style and history of the building		Volume	
			Granulation, density and proportion of filled and empty spaces			
			General proportions of the volumes			
			Materials	type		
				Color		
				Texture		
		How to combine materials				
		Facade and wall of the building	Skyline		Height	
			floor line			
			Openings and entrances			
			Divisions, facade lines and horizontal and vertical rhythm			
			The play of light and shadow on the views			
	executive details					
Decorative arrays						
land use						
How mass and space interact	The retreat of the building to the roads for respect		retreat	Visual aspect		
	The division of land plots - the size and proportion of the building in relation to the subjects around it		Scale			
	Considering respect in placing the entrance to the surrounding buildings (building orientation)		orientation			
	Spacing - The organization and measurement of elements of a building that are usually repeated on the facade.		rhythm			
	Views, sequences and perspectives are applied to landscape elements and masses - making materials and colors as statements to represent the local traditions of the building.		Fabrication and paint			
	Answer Distinctive details from neighboring buildings		details			

Table 2: Components and criteria of physical contextualism

in the form of words, images, sounds, moods and objects and be interpreted in a form of communication by referring to the conventions of a semantic system (genre) (Chandler, 2015). Architecture as a denotative process is perceptible and meaningful in its cultural context. Recognition of signs can be effective in the semantic phenomenon of architecture (Habib, 2006: 6). The principles of semiotics are rooted in many perceptual sciences and by relying on the concept of signification, they make the audience connect with the architectural space as much as possible. Therefore, examining symbolic factors that consider different functional, structural and semantic aspects simultaneously in shaping the architectural space can be a step towards giving meaning to the space in the audience (Falahat & Nouhi, 2012). Umberto Eco, influenced by Peirce's works, developed his theory of semiotics in 1973. Proposed in 1988, reviewed in his theory of general semiotics, man is evolving in a system of signs, both in industrial civilizations and in nature. His primary classification of signs goes back to the origin of the signs and the cause of the signs (Cossette & Guillemette, 2006: 53). A sign is basically an element of a communication process. In this process, a link is established between an element of an expression system and an element of a content system, and the role of signs is the result of this communication process (Eco, 2014: 20; Karimi & Dadvar, 2020). Architectural works are of special importance both based on the purpose of their creation and according to Eco's classification from a functional aspect, so that according to the key factor "function", Eco also divides those artificial signs that are produced for a specific application into three groups. : "signs with primary function, signs with secondary function and combined signs (Karimi & Dadvar, 2020). Eco distinguishes between "communication" and "signification" and considers the semiotics of communication and the semiotics of signification to be different. He defines the communication process as the transmission of a signal

from a source, using a transmitter and through a channel, to a specified destination, but the denotation process happens when the destination is a human being. Such a process is made possible by the existence of a "code" device. Until it connects the present beings to the absent units. He describes codes in four different phenomena:

- A) "Syntactic system": a set of signals that are governed by the rules of internal composability.
- b) "semantic system": a set of different situations that turn into a set of meaningful communication messages.
- c) "behavioral system": the set of possible behavioral reactions from the addressees that are independent of the system (b).
- d) "Legal system": a law that connects elements of system (a) with elements of system (b) (relationship between the other three systems) (Soujoudi, 2002: 94-96)

Eco calls the link between the signifier and the signified from the point of view of the observer and addressee the role of a sign (Eco, 1976: 57). By criticizing the opinion of those who believe that architectural form should follow its function, Eco puts forward this principle in a different way and by emphasizing a key point. From his point of view, the form of the architectural object, in addition to implementing the function expected from it, must clearly show this function (Eco, 2005: 178). His concepts in the general context of architectural semiotics are presented in such a way that the relationship between the form of the architectural work and its function is a communication process. This communication process is semiotic like other analyzable communication processes. In his opinion, the form should clearly express the function so that the relationship between the function and the form is understandable. Since the architectural work is created not to communicate but to respond to the need of human living space, the semiotic examination of architecture may seem challenging. But from this point of view, all aspects of a culture, including architecture, can be examined with a semiotic approach. His theory makes

sense where the link between function and communication is raised. This means that it examines architectural functions from a semiotic point of view and makes their functional nature more understandable (Karimi & Dadvar, 2020).

Physical signs of the Bazar in accordance with Umberto Eco's theory

Although architecture, as one of the cultural aspects of any society, is related to many other fields in that society, and understanding and receiving its meanings is related to all political, social, and historical fields, but in his theory, while confirming these codes, Eco has his own division of codes. has presented in the field of architecture (Karimi & Dadvar, 2020). In the theory of eco architectural semiotics, the applied fields of architectural semiotics are considered. By considering the functions of architectural works based on Eco's point of view, it is possible to better understand and define the functions and their other capabilities are also revealed. Therefore, by considering the primary function and the set of secondary functions of architectural elements of the bazaar as a building with the context of Islamic architecture and other buildings related to this building, based on the Eco theory, the relationship between the exterior and the interior can be easily explained in them on a cultural and physical basis. The important point in the Eco theory is that it includes

the symbolic and esoteric meanings of the architectural work among its secondary functions.

The architecture of the bazaar has always had a special place based on its important features and is known as a symbol of the city, and its symbolic elements can be identified (Mirjani & et al, 2016). The bazaar is a symbol of traditional architecture and Islamic art is best reflected in its architecture (Karimi & et al, 2014). The Iranian Bazar, influenced by the characteristics of Iranian urban spaces, tends to move inwards rather than outwards. The boundary of the Bazar or the outside is the entrance to the Bazar that gradually and unconsciously pushes people inside (Seyedalmasi & et al, 2022). The urban environment as a place consists of three dimensions: form, function and meaning. To analyze the traditional Bazar of Tabriz, these dimensions are placed in three components according to the Eco theory. When these components are more harmonious in an urban environment, the success of that space is greater, and this is based on the eco theory and revealing its different layers of meaning. He considers what is known as "communication" in semiotic analysis, in architecture as the relationship between the form and function of the architectural work. These components and criteria are so intertwined that their separation in this section is only abstract and in order to organize the structure of the research.

Semiotics of Umberto Eco		Physical signs of the Bazar	
Indicator	component	subcomponents	appearance in the building
syntax	Functional components	Movement and access network pattern	Spatial hierarchy
		Activity pattern	Iranian plan
Semantic	Perceptual-semantic components	Identity	Showing religious and cultural beliefs
		The ability to make a place memorable	Continuous presence of citizens
		Legibility	The entrance to the building: the greatness of the building
behavioral	Form components	Physical-Visual	Use of tile, brick materials
		Spatial structure	The way of making the arch and dome of Caesarea

Table 3: Correspondence of Umberto Eco's semiotics and the physical signs of the Bazar

MATERIALS AND METHODS

Methodology

The method used in the current research is analytical-descriptive in accordance with the research hypotheses. Thus, in order to achieve the theoretical foundations of the research, which includes information related to the context and approaches such as physical contextualism and semiotics, library and descriptive methods have been used. Then, by using the analytical-comparative method of examining the obtained information, and with the help of tables that specify the type of contextualism and semiotics of the case examples, the hypotheses proved. The research is done in four stages. First stage: Examining the concepts of context, its criteria and components, that is, physical contexts. At this stage of the research, an attempt has been made to identify the criteria and main components and sub-components by emphasizing on the antecedents of these definitions. In the next stages, the Bazar building evaluation criteria will be defined based on this approach. The second stage: a) examination of semiotics from the point of view of semiotic theorist Umberto Eco b) description of the study sample. The selection of the traditional Bazar of Ardabil city was completely conscious and due to the existence of this building as one of the three main cores of Ardabil city and its construction in different dates. The third step: analyzing the data, they determine the degree of contextualism and the signs of the study sample based on the criteria. The fourth stage: conclusion and proof of the research hypotheses based on the information obtained from the previous stages. The investigations carried out in the field of research have been done with regard to the science of signs, and using analytical tables, this theory has been compared with Umberto Eco's theory of semiotics. Therefore, the innovation of this article is the simple analysis of the building of the Bazar through the principles of physical contextualism with an emphasis on the semiotic principles of Umberto Eco.

Theoretical framework and conceptual model of research

The theoretical framework of the research is based on the conceptual model presented in diagram number 2, relying on the theoretical foundations and the background of the research, the purpose of physical contextualism is to create a mutual relationship between the existing elements and the context, so that the form affects the adjacent and nearby forms. In corporeal contextualism, continuity, coherence, correlation and overlapping are based on the principle of visual perception. Considering that Eco sees the mutual relationship between the observer and the audience as the basis of semiotics in architecture, and also considering the syntactic, semantic, behavioral systems and the components assigned to these coherent systems and functional continuity, to examine the criteria, systems and signs in the traditional Bazar of Ardabil city. Paid.

Scope of research: Ardabil traditional Bazar

Due to its location on the Silk Road, the city of Ardabil has been the connecting point of east-west trade and one of the major trade centers in Iran. This has become the reason for the expansion of its Bazars in historical periods and the multiplicity of its classes. The role of Ardabil Bazar as a valuable historical heritage is always felt in the political and social changes of the city (Yadallah & Hanachi, 2012). The city of Ardabil has always continued its life with the two factors of commercial prosperity and military-political centrality, and throughout the history of the city, we have witnessed the effect of these two factors on each other. Especially the bazaar has been part of the historical evolution of the city, so that the bazaar and the small Bazars around it have been the most important pillar of the urban space of Ardabil. The most important components affecting the durability of Ardabil Bazar are its meaning, identity, function, performance and physical components. The traditional Bazar of Ardabil is one of the Bazars that have been disrupted due to contemporary street

constructions and commercial bodies have expanded on the edge of new roads. This bazaar was registered in the list of national monuments in 1364 and has witnessed various restoration periods. The theoretical bases of the research, anatomical background, theories and semiotics of Umberto Eco were examined. In the continu-

ation of the research, based on the components extracted from the theoretical foundations of the research, the criterion of physical-functional and semantic coherence is examined to measure the degree of compliance with the language of signs in the traditional Bazar of Ardabil.

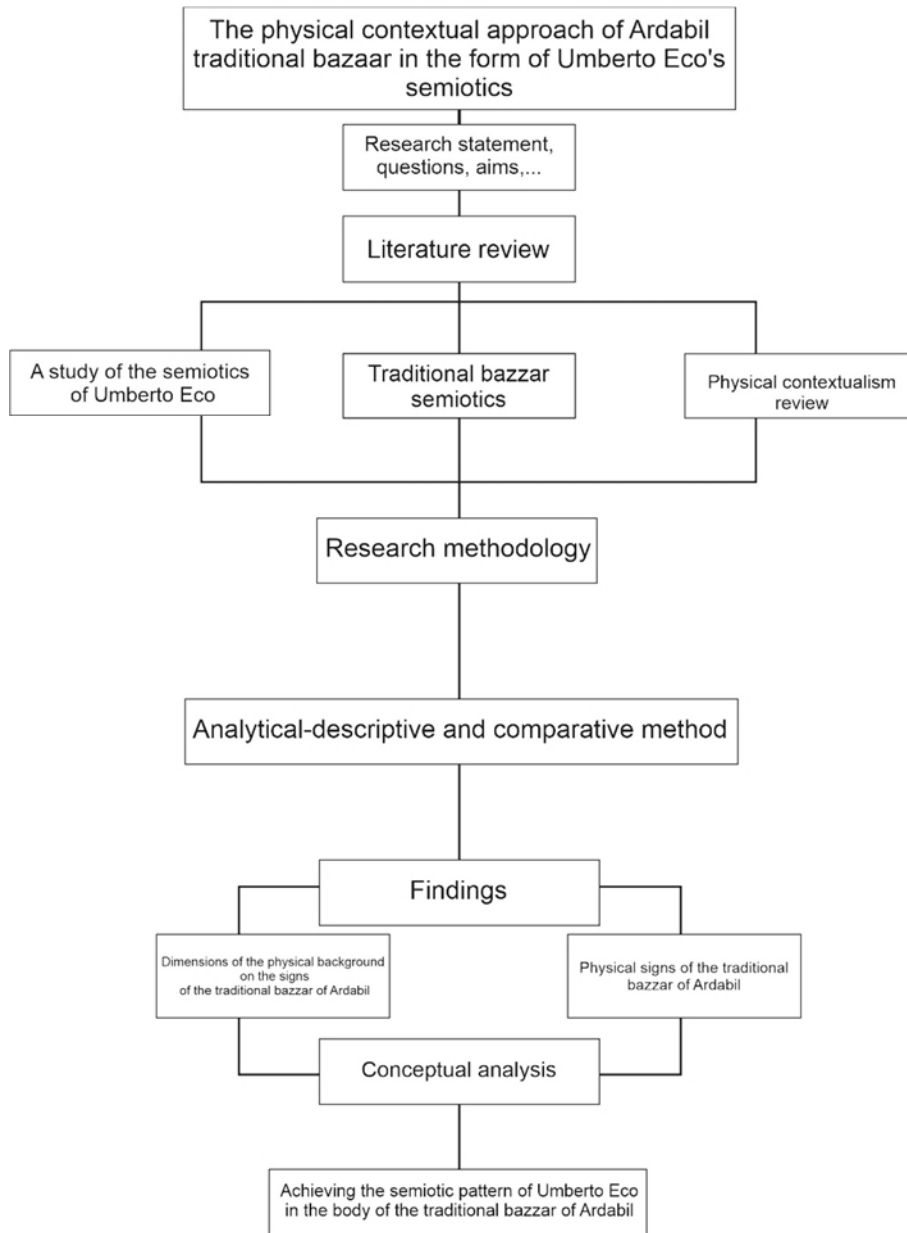


Diagram 1: conceptual model of the research

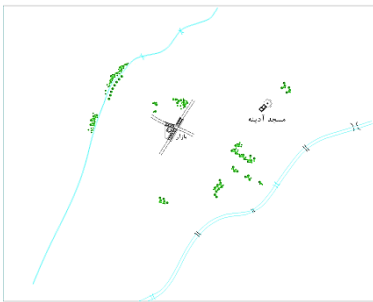

Following numerous street making during 1th Pahlavi period, the structure of the traditional Bazar of Ardabil was destroyed in several places; Including sequential and strong and connected domes, which are examples of this connection along the former Shah and along the former Pahlavi Street (Imam Khomeini) in the direction And the extension of Qaysarieh Bazar to the current Haj Yusuf Bazar, blacksmiths Bazar to knife makers Bazar, hat makers Bazar to Sarjan and cotton sellers' Bazar and open row to goldsmiths Bazar can be seen. After the Bolshevik revolution in Russia and the rule of the government of that country over trade and economy, it cut off the relations of the people of that land with the Ardabil Bazar, and many caravanse-rais fell from prosperity and gradually fell into ruin. Now, there are no traces left of Timchehs. The traditional Bazar of Ardabil was formed in a linear way and its direction was from east to west. During this movement, the Bazar has connected two important centers of the city, namely, Sheikh Safi Tomb complex and Friday Mosque. Ardabil has six main neighborhoods and the Bazar is located in the center of these neighborhoods (Abizadeh, 2018). Sarcheshmeh neighborhood is located partly in the north and partly in the south of the Bazar, Pir Abdul Malik and Ochdekan neighborhoods in the east, Tabar neighborhoods in the southeast and Gazaren and

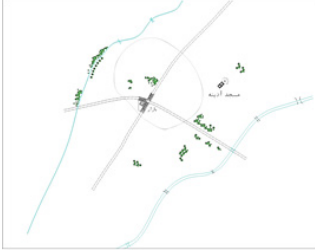
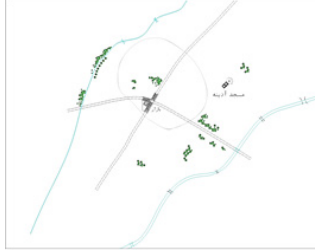
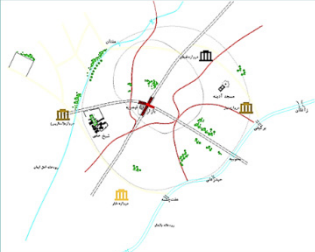







Aliqapo neighborhoods in the west, Shikhasfi complex and Aliqapo square in front of it (one of the important entrances cities) have played an important role in strengthening the Bazar. The two main streets of the Bazar have connected a large residential neighborhood on the east side and the west side.

DISSCOUSION AND FINDINGS

The body and the main physical elements of the Bazar

The fabric of the old city of Ardabil is formed by radial routes and main passages that connect their neighborhoods and centers to the central core of the city (Bazar). In fact, the main street in the center of the city, which has been transformed into a building and covered bazaar complex on the one hand, has acquired characteristics of activity and traffic, and on the other hand, it has connected every neighborhood and bazaar to the gates of the city (Yousefi, 1996: 44). The main spaces of the Bazar with commercial, production and warehousing activities have elements such as rows, sera, timcheh and corridors, each of which has a special function according to its shape, form, structural pattern and position in the movement hierarchy of the Bazar. Of course, some of these elements have multiple functions, but their commercial and production role has been significant (Irاندوست & Bahmani, 2011 : 7).

Dynasty	To develop	Orientation of the physical development of the Bazar	Physical development of the Bazar
The Seljuks Fourth century	The Bazar is in the shape of a cross in four rows and the mosque is in the middle of the Bazar		
Fifth century	The Bazar was destroyed in the second Mongol attack	The city had a strong tower and rampart during this period, but with the Mongol attack According to the travelogues, the only remaining building was the mosque	

Dynasty	To develop	Orientation of the physical development of the Bazar	Physical development of the Bazar
The period of patriarchs	Cross-shaped Bazar		
Safavid period	Big silk trade Safavid urban planning and architecture in Ardabil Renovation of the current Bazar building		
11th century A.H	Prosperous trade in precious stones and embroidered fabrics and tapestries		
1260 A.H	Reducing the importance of the Bazar Connecting the main sections, such as Qaysarieh Street, to the main square and the neighboring palaces		
Qajar's period	Construction of the first street in Ardabil in 1307 P.C and dividing the Bazar into two parts		





Dynasty	To develop	Orientation of the physical development of the Bazar	Physical development of the Bazar
1326 P.C	Logical connection of the bazaar to the center of Pir Abdul Malik neighborhood and residential areas		
1345 P.C	Construction of 3-meter street Connection of caravanserais connected to Zargaran Bazaar and Mirza Ali Akbar Mosque		

Table 4: Orientation and expansion of the market body of Ardabil city

Investigating traditional Bazar signs in physical context

The Bazar is the main place of trade and profession in the Islamic city, which has its own body and shape. The traditional Bazar is the most important experience in the field of spatial creation, considering physical, cultural, economic and social elements (Talaie & et al, 2018). Since ancient times, Ardabil Bazar has not only been a place for economic and commercial exchanges, but religious, cultural and political affairs have also been conducted there (Abizadeh, 2018: 135). The physical context of Ardabil Bazar consists of syntactic and building system and it passes around a row or arena space together and according to climatic and cultural conditions. As an urban space, this Bazar has been influenced by its surroundings. Influence of the structural type and the way of organizing the primary core of the Bazar and its internal elements is a suitable platform for the formation of physical signs. In table number 5, the relationship be-

tween symptoms and physical background is explained in detail.

The physical dimension of the concept of contextualization of the traditional Bazar of Ardabil consists of many criteria and components: Bazar location and orientation, percentage of mass and space, pattern of massing in addition to scale and size, aspect ratio, proportions of door and floor to ceiling height, dimensions of spaces, shape and form Arches, skyline, lighting, geometry, familiar cultural symbols, materials and details (type of materials, color of materials, composition of materials), motifs and arrays and the placement of arrays using these fixed criteria. Each of these components represents a meaningful sign, including the quality and spatial diversity of the Bazar. By knowing the effective and affected signs of the context of traditional Bazars during its transformation, it is possible to obtain components and solutions for planning, designing and building contemporary Bazars.

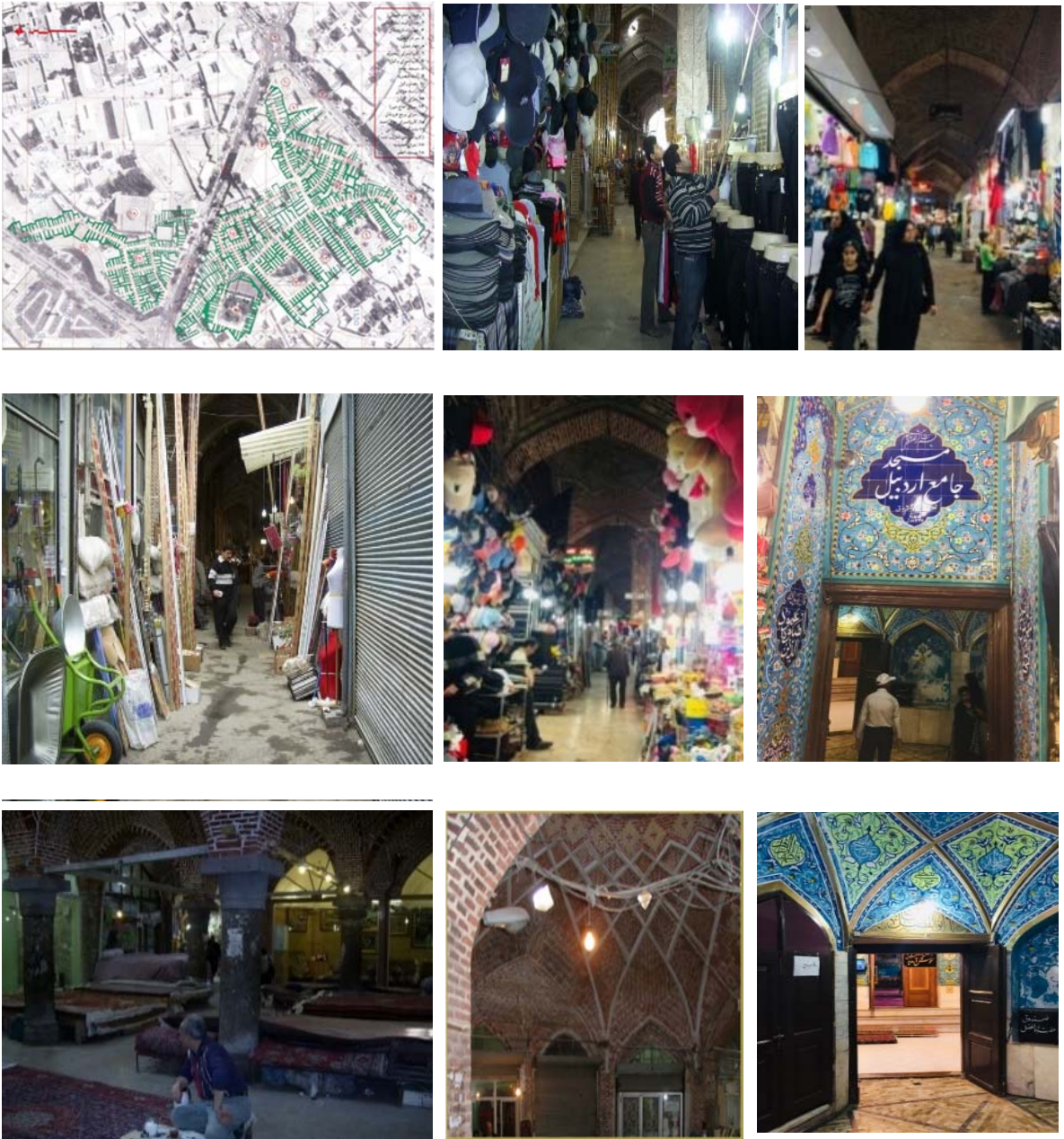


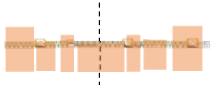


Figure 1 (Up-right) Ardabil bazaar fabric, Figure 2 to 4 (Up-middle, Up-right, Middle-left) Entrance and commercial space of the main bazaar row, Kolahdozan row, Kharatan row, Figure 5 to 9 (Middle-middle, Middle-right, Down-left, middle, right) Haj Ahmed Palace, Vakil Palace, Golshan Palace, Zangerilo Palace, The entrance of Friday Mosque from the main street of the Bazar

Criterion			Physical sign		
The location of the building	Orientation of the building	Entrance			Proper orientation of input - Clarity and readability of input - Functional hierarchy
		Rows	The main line: with a length of about 190 meters in the east-west direction		Pedestrian support
		Sera	North-South direction		User diversity A place to produce
		The cells	North-South direction		Environmental comfort
	Mass and space			The ratio between mass and space Quality of open and closed space Full space in the form of a building mass	Functional components
View divisions	Main view			Coordination in the wall and facade elements	
	Proportions	Proportions of Golshan House	Dimensions	8/13*94/9	
Area			770		
Proportions in arches	Proportions in arches	Main entrance door	1*2	After the path and movement	
		The door of the cells	1.1*1.4		
Floor to ceiling height	Proportions in arches	4.1 Meter		After the path and movement	
	Qeysariyeh Grand Square	Its approximate height from the bottom of the building to the end of the dome (from the inside) is 13 meters			
Space dimensions	The length of the facade of shops is three meters on average and the diameter of the base of the arches is 80 cm		Unity to infinity with spatial expansion		






Criterion			Physical sign			
Form and shape	The form and state of the arches		The domes are generally four-arched with stone columns Gable arch along the main row		A sign of spatial hierarchy	
	Skyline				Continuity	
	Rhythm				Understanding the concepts of movement direction	
	The geometry	View	Symmetrical			
Plan		Asymmetrical				
Materials and details	Materials type		Brick - colored glass - wood		Symbols and memorable signs	
	Material color		Blue-white-cream-brown-different colors of colored glass		Functional elements with implicit meaning	
	Location of arrays	Tiling of the entrance hall				Headers with different array and size indicate a specific place The dome is a metaphor for the sky The openings of the dome show the existence of the divine essence
		The entrance of the Friday Mosque and the vestibule of the Friday Mosque				
Domes						
				Semantic perceptual components		

Table 5: Physical background and physical signs of Ardabil traditional Bazar

CONCLUSION AND RESULTS

The Iranian Bazar is one of the important and influential elements in Iranian cities and has multiple functions, therefore; It is possible to examine the physical context of the Bazar in the form of meaning, function and semiotic form. The Bazar has always been an indicative space and the completeness of the structure of the Iranian Bazar in different periods and dates conveys its meaningful characteristic in the unity to the infinity that exists in its spaces. Therefore, the traditional Bazar of Ardabil, due to its symbolic features, has the ability to evoke meaning, and as a meaningful space, it has been able to create different economic, cultural, social, and religious functions together. The spatial building components of this Bazar refer to an immaterial concept by creating mental images and internal feelings towards the signs. The traditional Bazar of Ardabil with its labyrinthine structure has given a special dynamic to the space and this is exactly one of its physical spatial qualities and guarantees the meaningfulness of this Bazar. The semiotic analysis of the traditional Bazar of Ardabil based on the theory of Umberto Eco also reveals its various layers of meaning. Umberto Eco’s semiotic analysis is known as “communication” which is considered in the Bazar as the

relationship between the form and function of this architectural work. The well-known relationship between form and function basically means that the bearers of the signs related to those functions have been raised over time and proportionately, and various contexts such as cultural, social, historical, and physical, are perceived from the same created form and its implicit and symbolic meanings.

Table 6- Physical background dimensions on the signs of the traditional Bazar of Ardabil

The architecture of this building has been established to express power, systematicity and economic greatness, the harmony of old architectural principles with public opinion and proximity to the architecture and culture of the society, and this is done by using physical components in the Bazar building with the aim of creating order, continuity and spatial hierarchy. Greatness and power have been realized to some extent in the public mind. And this by itself confirms the connection between bodily contextualism and the concept of signs, because the body is a type of communication that first creates behavioral and functional patterns in order to achieve things with a profile expression and then leads to the realization of a cultural goal with a symbolic expression.

Context dimensions	Components	Signs	Sign dimension
Spatial	Movement and access network pattern	Functional	Functional
	Physical permeability	Functional-activity	
	Variety of uses	Functional-activity	
	How to be in space	Functional-activity	
	Active accountability	Activity	
Visual	Mass and space	Spatial structure	Formal
	Continuity	Spatial structure	
	Human Scale	Physical-visual	
	Discipline	Physical-visual	
	Variety	Physical-visual	
	The identity of the place	Semantic-perceptual	Semantic
	Ability to be memorable	Semantic-perceptual	
	Mass event	Aesthetics	
	Legibility	Semantic-perceptual	

Table 6: Physical background dimensions on the signs of the traditional Bazar of Ardabil

REFERENCES

- Abizadeh Saman. (2018). *The cultural model of the historical evolution of Islamic cities*. Doctoral thesis, Tabriz University of Islamic Arts.
- Ahmadi Fardin. (2017). *Explaining the role of physical contextualism in urban design*. *Elite Journal of Engineering Sciences*, Volume 2, Number 3.
- Bahryeh Pouroush; Toufan Sahar; Akbari Namdari Shabnam. (2020). *Rereading the evolution of architecture in the structure of Tabriz Bazar with an emphasis on contextualism*. *Iranian Islamic City*, year 10, number 39.
- Chandler Danyel. (2015). *Basics of semiotics*. Translated by Mehdi Parsa. Tehran: Research Institute of Islamic Culture and Art.
- Eco Umberto. (2022). *Semiotics*. Translated by Pirouz Yazidi. Tehran: Third.
- Eco Umberto. (2005). *Function and the sign the semiotics of architecture in Rethinking Architecture*. Taylor & Francis e-Library.
- Eco Umberto. (1987). *How an Exposition Exposes Itself? Travels in Hyperreality*. trans William Weaver. London: Pan Books, 296–9.
- Eco Umberto. (1979). *Function and Sign: The Semiotics of Architecture in Rethinking Architecture: A Reader in Cultural Theory*. Ed. By Neil Leach, Routledge, London.
- Falihat Mohammad Sadegh; Nouhi Samira. (2012). *The nature of signs and its role in improving the sense of place in the architectural space*. *Beautiful Arts*, Volume 17, number 1.
- Habib Farah. (2006). *Harmony of light and color in Iranian urban space*. *Fine Arts*, number 27, 3–27.
- Habib Farah. (2006). *Exploring the meaning of city form*. *Fine Arts*, number 25, 5–14.
- Hashempour Parisa; Neghadebrahimi Ahad; Yazdani Sana. (2018). *Application of contextual approach in recreating historical contexts*. *Journal of Architecture and Sustainable Urbanism*, Volume 6, Number 1.
- Hosseinzadeh Delir Karim; Ashna Laleh. (2011). *Visual order in Iran's traditional urbanization, case study: Tabriz Bazaar*. *Geography and Planning*, Volume 16, Number 37.
- Irandoost Kyoumars; Bahmani Ormani Arman. (2011). *Physical evolution of traditional Bazar in Iranian cities; Case study: Kermanshah city Bazar*. *Iranian Islamic city studies*, Number 5.
- Jamei Bouyouk. (1993). *Historical works and buildings of Ardabil*. *Scientific and cultural publications*.
- Karimi Nazanin; Dadvar Abolghasem. (2020). *Analysis of architectural elements of Imam Mosque in Isfahan based on the semiotic theory of Umberto Eco*. *Islamic art studies*, Volume 17, Number 37.
- Majedi Hamid; Zarabadi Saeideh. (2010). *Their city is like a context-oriented city*. *Iranian cultural research*, Volume 2, Number 3.
- Mohammadhasani Elina; Toghraei Abolfazl; Mirgholami Morteza. (2014). *Typological analysis of factors affecting the legibility of urban signs (case study: Valiasr St., Tehran, from Vanak Square to Tajrish Square)*. *City Identity*, Volume 10, Number 25.
- Naghvi Pouyan; Mazaheryan Hamed. (2019). *Analysis of contemporary theories in facing the context in architectural design*. *Bagh Nazar*, Volume 16, Number 74, 8–69.
- Nezam Doust Seyed Amir Reza; Kalantari Hossein; Abad Khalil; Yaran Ali. (2019). *Explaining the physical pattern of contemporary housing based on context-oriented architecture in Kashan city, a case study: Selected historical houses of the Qajar period*. *Iranian Islamic City Scientific Research Quarterly*, Volume 10, Number 38.
- Raeisi Dehkordi Afshin; Irvani Houtan; Yazdi Kazem. (2022). *Physical index components of native architecture of Isfahan city in the design of modern architecture based on naturalistic approach (case example of Naqsh Jahan square)*. *Islamic art studies*. Volume 19, Number 46.
- Safari Baba. (1992). *Ardabil in the passage of history*. *Islamic Azad University Publications, Ardabil branch*.
- Seyed almasi Homa; Talischi Gholam Reza; Souroush Mahammad Mehdi. (2022). *Sensual and perceptive investigation in the experience of architectural space in the traditional Bazar of Kermanshah*. *Islamic art studies*, Volume 19, Number 45.

Soltanzadeh Hossein. (2014). *Iranian Bazars*. Cultural Research Office.

Stokols D; Altman I. (1987). *Handbook of Environmental Psychology*. Wiley- Inter science publication, New York.

Talaei Avydeh; Habib Farah; Mokhtabad Amiri Seyed Mostafa. (2018). *Compilation of the conceptual model of the semiotics of the traditional Bazar of Iran*. Language essays, Number 3.

Tavllaei Novin. (2007). *Shape of a coherent city*. Tehran: Amirkabir Publications.

Torabi Bastani Seyed Jamal. (2008). *Antiquities of Ardabil Province*. Cultural Research Office.

Velayati Ali Akbar. (1996). *History of Iran's foreign relations during the era of Shah Ismail Safavi*. Ministry of Foreign Affairs publications.

Yousefi Tazakkor Masoud. (1996). *Master's thesis*, Tehran University of Science and Research