

Rereading the meaning in urbanism of Safavid era and achieving its criteria for designing Imam Reza Blvd in Rafsanjan city of Iran

Soudeh Rezayi Homadin*, Golnaz Tavassolian**

*Department of Urban design and planning, Kerman branch, Islamic Azad University, Kerman, Iran

**Department of Urban design and planning, Mashhad branch, Islamic Azad University, Mashhad, Iran

Abstract- City is a language that reflects opinions of its people. Today, the growth in cities has led into extensive physical and functional changes. The result of these changes is making cities and public areas into meaningless places which once had been the stamping ground and the venue for memories of people. The aim of this research is to study the position of meaning in the Safavid urbanism era and to achieve its criteria for designing Imam Reza Blvd in Rafsanjan as a meaningful urban space. Therefore, the research method with respect to the purpose is an applied research and regarding the procedure of performance is combinational. The information gathering methods are field and library research. Analysis of findings was made by using the SPSS software. The result of this research was a design that has created a meaningful space in Rafsanjan city by using Safavid urbanism.

Index Terms- Reread, meaning, Safavid urbanism, semantics.

I. INTRODUCTION

In fact, city is a speech or better say, a language. City reflects the thoughts, behaviors, and beliefs of the people who have built them. The inhabitants of cities are the language of their city. City is known by the life, work, and recreation in it or in a word the feeling you get and the meaning you perceive. On the other hand, city is a live and dynamic body that is constantly changing. The origin of these changes is latent in alteration of human life that every day makes small and large changes in this collection (Sholeh, 2011). Today one of the great developments is the rapid growth of cities, especially in big cities has led to an extensive physical activity and functional changes. Eventually these

III. THEORETICAL LITERATURE

A. Urban Space

Urban space is not only a physical concept, but also includes the interactions of citizenship and urban activities. This means that it represents body of the city, where is the place of urban activity or the place of social interactions (Rastbin et al, 2012). According to studies, urban space components are: form,

changes have made the cities and public areas once the center of people's memories into unfamiliar pathways (Azad, 2013).

According to that, urban design knowledge has changed its approach from attending only to the physical and visual organization of the city to organizing the quality of urban environment in order to convert cities into meaningful and familiar environmental areas for citizens, who are the most remarkable wealth for a city. To accomplish this, urban planners play an important role. Their most important goal with this approach is not only to settle human and build a three-dimensional space for them, but they know the city, with this view, as a masterpiece of art which must be made for man and by himself. So, when the city is made for man, it must have meaning for him or her. The purpose of this research is to answer this question "what is the significance of meaning within the principles and rules of urbanism?" and in particular, it examines the place of meaning in the Safavid urbanism era (Isfahan school: as one of Iran's persistence patterns) to achieve the indicators of the meaning of cities and urban spaces. Finally, this indicators and criteria are used in designing Imam Reza Blvd in Rafsanjan city.

II. METHODOLOGY

Research method with respect to the purpose is an applied research and regarding the procedure of performance is combinational. Historical research methodology is used to study the meaning of the principles of Safavid urbanism era (Isfahan school) and according to the indicators and the extracted criteria, in designing of meaningful urban space (Imam Reza Blvd) a descriptive-research method is applied.

function and meaning. The present research, studies the "Meaning" that is one of the components of urban space.

B. Meaning

Sense of meaning is one of the brain characteristics and the human thought that seeks meaning in every phenomenon.

Human, as searches a meaning for words, objects, and activities, he is also looking for a meaning for the environment (Ghayyoomi Bidhendi, 2007). Without reaching the sense of meaning in the environment and space, man feels anonymous, strange, and meaningless. Therefore, he or she cannot achieve the feeling of pleasure, passion and peace (Norouz-Borazjani, 2003). Different approaches about the meaning are shown in Figures 1, 2, and 3.

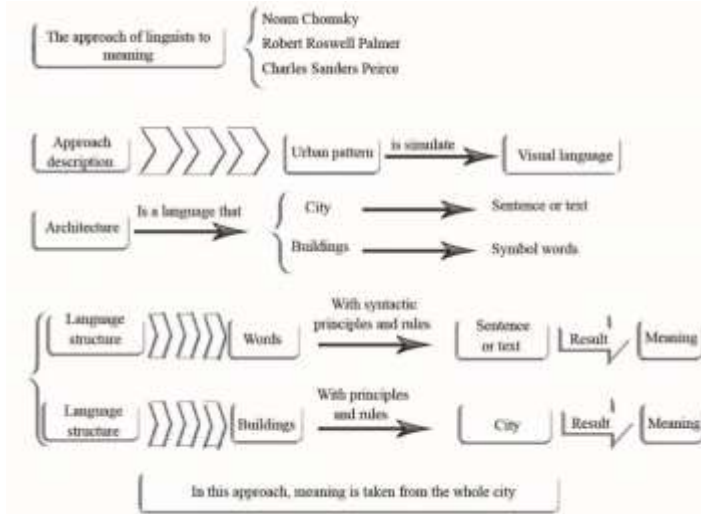


Fig. 1. Linguists approach to meaning

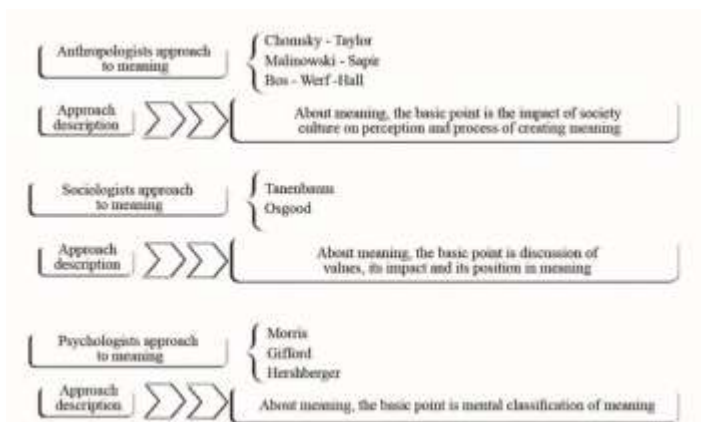


Fig. 2. Anthropologists approach to meaning

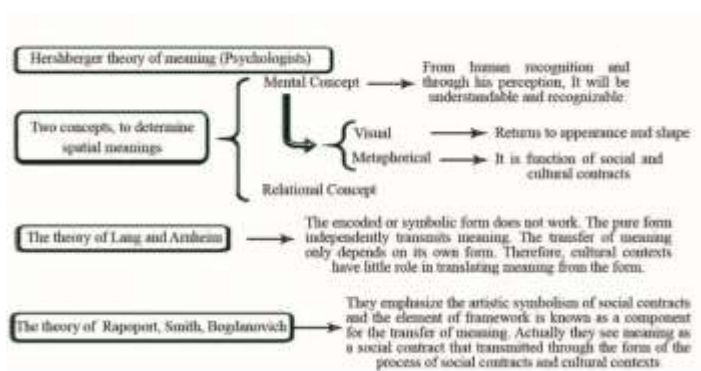


Fig. 3. Psychologists approach to meaning

Meaning is all the mentality that creates a stimulus for the observer, when he or she compares it with his or her own experiences, goals, and intentions (Sepehri Moghaddam and Zekri, 2011). It should be considered that creation of meaning is not a passive process that takes the mind of sensory information and connects it according to the connotative rules of meaning, but that is an active and creative process. In this process, objectivity and mentality make one unit and creates the universal mind that feels in the process of perception. Therefore, the meaning of place is the outcome of a variety of factors that is created as a result of human interaction with place; and human interaction with place is also made through the messages of the various elements in place. Actually, discovering the meaning of these messages establishes human communication with place (Habib, 2012). The process of forming meaningful perceptions is shown in the figure below (Fig 4).

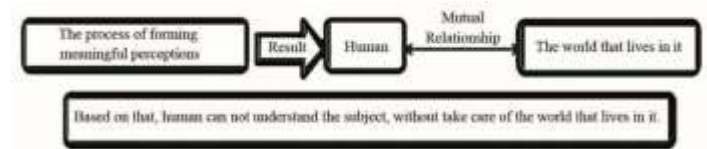


Fig. 4. The process of forming meaningful perceptions

Effective components in aspects of meaning in linguistics are shown in Figure 5.

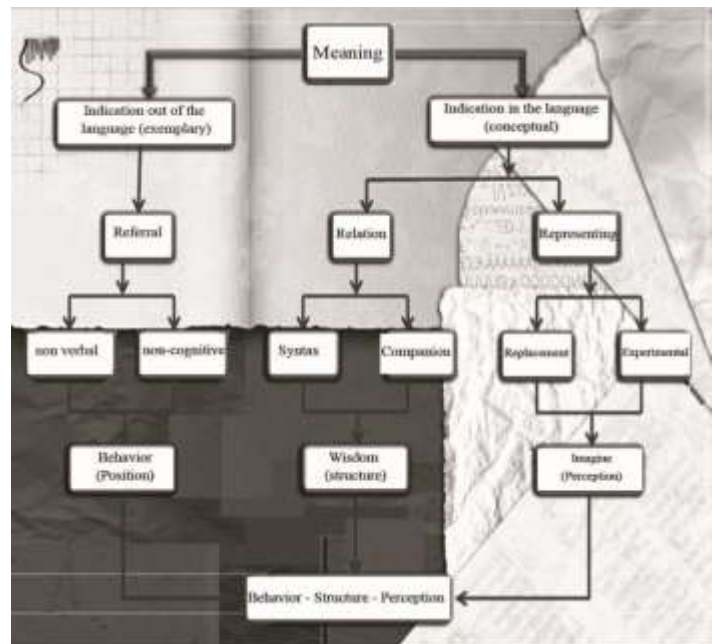


Fig. 5. Effective components in aspects of meaning in linguistics Effective Components of Meaning in Urban Space

Regarding the relationship between linguistics and urban design language, generalization of meaning implications in urban space can be expressed as Figure 6.

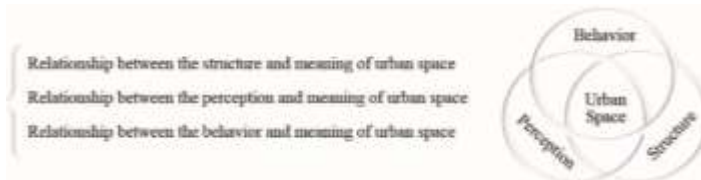


Fig. 6. Generalization of meanings in urban space

In a theoretical category, the meaning of the environment can be studied at least in three main ways:

1. Using the linguistic models (semantics), especially which are based on the meanings of expression, that nowadays is more common.
2. Based on the study of symbols, which are more traditional.
3. Using the models based on non-verbal communication that are taken from anthropology, psychology, and morality which is less used in the study of the meaning of the environment (Habib, 2012).

The main ways of studying the meaning of the environment is shown in Figure 7.

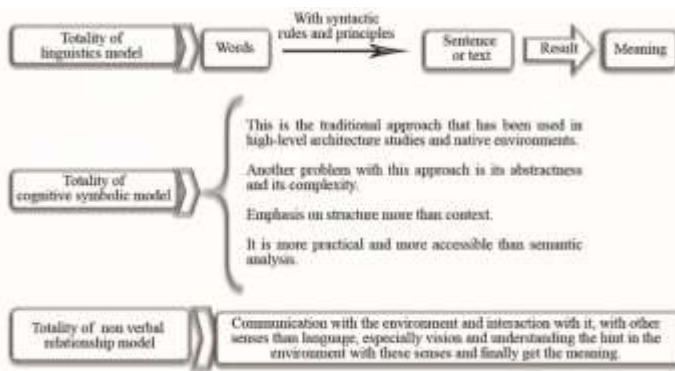


Fig. 7. The main ways of studying the meaning of the environment

Effective components in aspects of meaning in urban space are shown in Figure 8.

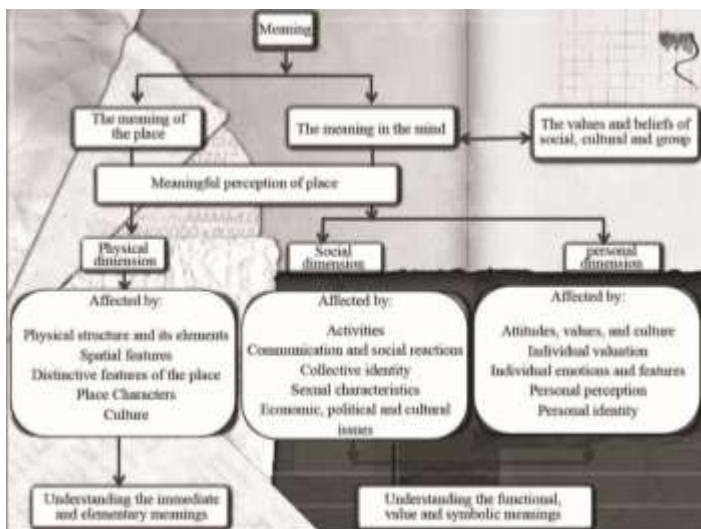


Fig. 8. Effective components in aspects of meaning in urban space

C. Safavid Urbanism (Isfahan school)

The tenth and eleventh SH century is the most significant artistic periods in Iran that the "utopia" appeared to the fullest extent in art and architecture and urbanism. In this period, the opinions and thoughts of artists and scholars classified in the philosophical divine school of Isfahan. In the Safavid era, the creation of new cities as well as the development of old cities has been based on the following principles:

- Special attention to the environment and the creation of green spaces and gardens
- Development and construction of cities based on a comprehensive plan
- Development of old cities by preserving the background of those cities
- Creation of vast field in the city center, including the most important urban spaces and buildings
- Construction and development of urban roads
- Introspection (Habibi, 2005).

D. History of Using the Word of Isfahan School

The Safavid governments made a dream come true; the dream that Iran wanted to achieve since surrendering to Islamism when national identity was in a different ideological and religious framework with that was in the Islamic government (Foroutan, 2009). This favorable background caused the progress of a kind of wisdom persistent since the time of Khaje Nasir al-Din al-Tusi and due to the efforts of the wise men. This was spread not only in Iran, but also in Iraq and India, that had very close relationships with Iran. Mirdamad established this kind of wisdom and Mulla Sadra culminated it in the transcendental wisdom; and later it was called as "Isfahan School" (Ahari, 2006).

E. Principle of School of Isfahan Urbanism

Many scholars and researchers believe that, to identify features of the Isfahan Urbanism School, it is necessary to determine the principles and rules based on elements of the city.

Principles: Hierarchy, Plurality, Unity, Focus, Decentralization, Aggregation, Contrast, Connectivity, Balance, Fitness, Territory, Continuity, Complexity, Composition, and Establishment (Habibi, 2005).

Concepts of Isfahan School in Urbanism:

1. Due to the social unity of labor, direct presence of the state, sharing of socio-economic features in cities and villages, and finally the definition of the city in the region, it has made the city in full agreement with the nature of its surroundings and in a cooperative agreement and multilateral unity with the surrounding villages.

2. City progress is being created not only through the reconstruction of the old city, but also through the creation of new urban complexes along the old city by creating harmonious urban spaces (Ahari, 2006).

3. The school of Isfahan, as a result of the worldview of that period, reaches the unity of expression in the planning and design of urban spaces. The whole, is understandable at a glance, and finds a distinct concept of its components, and the component is complete on its own scale and represents unity. In addition, in combination with similar components, it causes a larger and

more complex set. The component, in its plurality, expresses unity and the whole, in its unity, indicates the plurality.

4. A worldview relying on the mystical concepts in Safavid in the Isfahan urbanism school creates a utopia that is used in the space hierarchy, from the largest scale to the smallest scale and each scale reflects the unity of the world.

5. The Isfahan urbanism school wants to reach the principle of the world: principle of balance, spatial balance and physical balance and all elements are an artistic and verbal combination to express this principle, Such as song, repetition, discontinuity, continuity, equal, contradiction, and the like (Ahari, 2006).

6. The human scale in its material concept came from the ascension to descent. What is important is the space that can make this happen. Therefore, in the school of Isfahan, human space is important. Scales, sizes, volumes, openings, closures, etc. all reflect this space.

7. The Isfahan urbanism school avoids creating a vanishing point of view, and avoids all attention to a point. Against any point of deployment, a view opens and according to the scale and the hierarchy of space, different elements in the spatial composition are placed together. Fluidity and spatial continuity are other concepts in this method.

8. Isfahan school without looking for building memorial buildings turns itself into memorial. By avoiding creation of dominant spaces, this school has succeeded in creating magnificent buildings that are very popular and in dialogue with people, and in identifying with them as well as giving them identity (Ahari, 2006).

Effective Components on the Formation of Isfahan Urbanism: In the construction of Isfahan city other than the physical components shaping the artifact, there are also material and spiritual components which affect the formation of Isfahan city's meaning in two general and minor scales. The material components make a relation between the artifact phenomenon and the elements of the universe. Artifact space and natural space reach unity by using quadratic systems and heavenly discipline, and then, the coherence of the natural environment and the human-made environment are achieved (Ahari and Habibi, 2009).

F. Architecture Language and Urban Design

Different sources of writing about the language of art show what the concept of art language pursues are the communication and the transfer of meaning. That means the language of art transmits hidden meanings and concepts in an artwork by connecting with its audience. This approach is signology, or in other words, study of sign systems. Consider the architecture and urban design discussed by many theorists as a system that is composed of signs, communicating with its audience and conveying concepts and meanings to them. And finally, all of them believe that we have to analyze the architectural and urban design signs in a context, and identify the semantic unit based on the background of the case. They provide a table to clarify their discussion. As shown in Table 1, two levels of sign and signifier, are the symbols that made by the table (Ahari and Habibi, 2009).

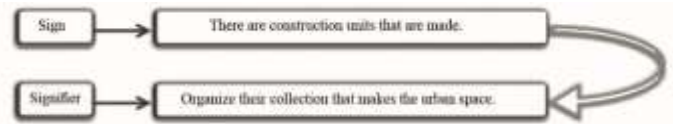


Fig. 9. Relation between sign and signifier

Table 1. Sign and Signifier From the viewpoint of the theorists

Signifier (Content)	Sign (Expression)	Thinker
Content	Form	Charles Jencks
meaning	Building	David Morton
Function	space	Roland Barthes
Its function and meaning	urban space	Isfahan School of Urbanism

In general, we must define urban design grammar for describing its language. By explaining the grammar, we determine which combinations of urban space can be located within the framework of the urban design language of Isfahan school. And which combinations are not in the form of this language. For this purpose, grammar is studied in three distinct sections: syntax, semantics, and phonetics. These three sections make the language rules or urban design grammar.

We have adopted the Chomsky's approach, American linguist, to study grammar:

- His views on linguistics are highly valued.
- Chomsky's approach to grammar has a framework with three types of structures (syntactic structure, semantic structure, and phonetic structure). (Figure 10)
- This theory is the most complete theory in the field of linguistics, and the other theorists refer to this theory (Ahari and Habibi, 2009).

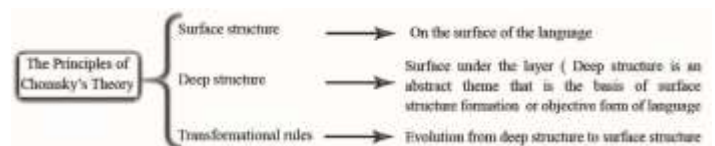


Fig. 10. The principles of Chomsky's Theory

Deep structures of Isfahan School:

Urban space that is the language unit of the urban foundation of Isfahan Urbanism School, finds the foundations and roots of its formation or its deep structure, in the following issues:

1. Urban space in the land of dreams (Utopia)

The principles of urban space in the land of dreams are visualizing all imaginings that makes imaginable heavenly teachings.

2. Urban space in the land of belief (Ideotopia)

In this case, the city and urban space reflect the ideologies and affective ideas on its formation. In other words, in the conditions of the Safavid state, the Safavid Sultan is the shadow of God, as the perfect master, and the urban space represents such relationships (Ahari, 2009).

3. Urban space in the land of geometry (Geotopia)

In this case, human thought coordinates urban space with the Euclidean geometry.

The result of this thinking is the combination of urban space in two forms;

- Full geometric shapes with a clear discipline in their depths represent perfect discipline.
- Natural geometric shapes that have hidden discipline and show harmony with nature.

4. Urban space in the land of ecosystem (Ecotopia)

In this case, urban space is a reflection of how to coordinate with natural disciplines and unify the artifact space with it.

5. Urban space in the land of native knowledge and reactions (Biotopia)

In this case, urban space is a manifestation of a long-standing insight that architecture and urbanism should be formed by using the technology, materials, and native knowledge; and in this process, use maximum resources and abilities.

6. Urban space in the land of property (Reatopia)

In the land of property, urban space is the manifestation of ideas that discipline people relationships and their interactions with physical-spatial environment. This space is a reflection of the dominant culture of social relations between people and the dominant beliefs of society.

7. Urban space in the land of economics (Econotopia)

In this case, urban space provides a framework for economic activities, or the economic interaction of people and with the surrounding environment in order to create essential things for living and livelihood. Therefore, formation of urban spaces is based on specific types of economic activity that emerge in them (Ahari, 2009).

G. Transformations

In Chomsky's theory, there is a process for conversion of deep structure to surface structure with title of generative-transformational grammar. These transformational rules are principles of the Isfahan urbanism school (Table 2) (Ahari, 2006).

Table 2. Principles of Safavid urbanization

The results of using them	Classification the principles of Safavid urbanization
Explain how different types of urban spaces are located in the city	Hierarchy, Focus, Decentralization, Aggregation, Territory, Establishment, Continuity
Determine how the spatial species interact, Determine the types of relationship in comparison with each other	Unity, connection, combination
Determines the placement features and the spatial characteristics of urban space, and describes it over time	Unity, plurality, hierarchy, territory, simplicity, complexity, balance and proportion

Adaptation of the Chomsky urban design grammar to Safavid urbanism is shown in Figure 11.

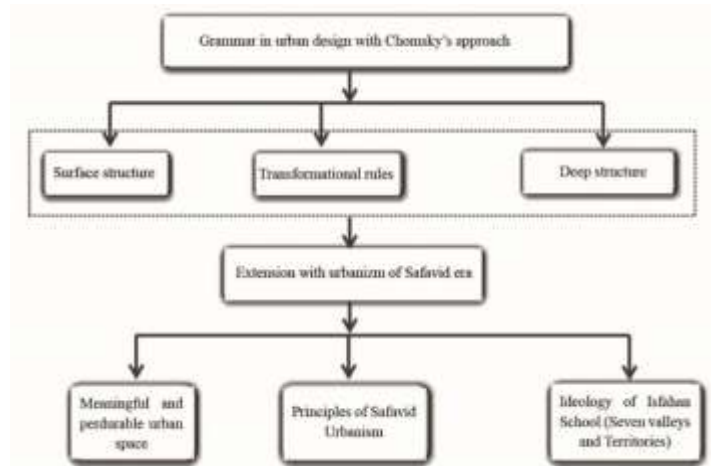


Fig. 11. Adaptation of the Chomsky urban design grammar to Safavid urbanism

Concluding Theoretical literature is shown in Figure 12.

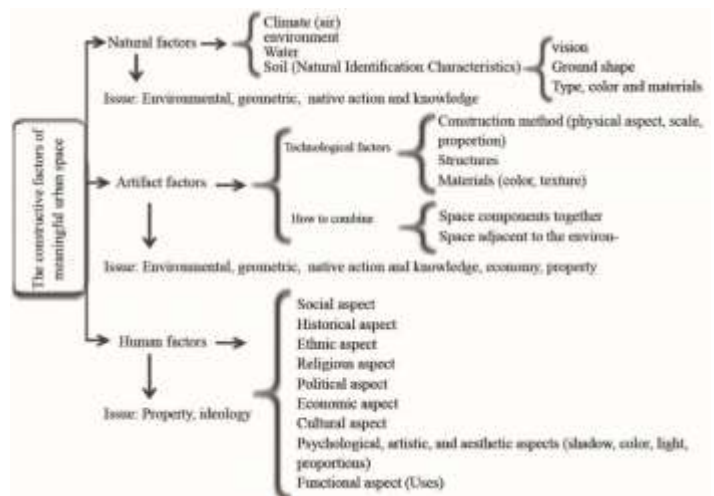


Fig. 12. Conclusion Theoretical literature

H. Geographic and Demographic Characteristics of Rafsanjan City

Rafsanjan city with an area of 10687 square kilometers is on the northwest of Kerman province. The population of Rafsanjan city is 139219 people. The position of Rafsanjan city is shown in the following figure (Fig. 13).

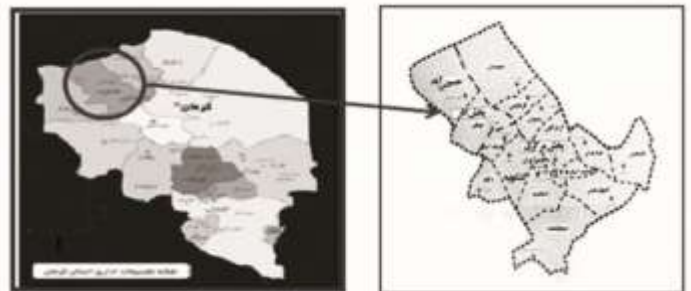


Fig. 13. Location of Rafsanjan city

Table 3. Kolmogorov-Smirnov Test

		Question 1	Question 2	Question 3	Question 4	Question 5
N		50	50	50	50	50
Normal Parameters ^{a,b}	Mean	2.56	3.02	2.38	2.76	3.22
	Std. Deviation	1.280	.999	1.193	1.204	3.157
Most Extreme Differences	Absolute	.230	.257	.216	.248	.382
	Positive	.208	.166	.216	.156	.382
	Negative	-.230	-.257	-.178	-.248	-.250
Kolmogorov-Smirnov Z		1.624	1.814	1.529	1.756	2.704
Asymp. Sig. (2-tailed)		.010	.003	.019	.004	.000

According to the obtained numbers, it is determined that the test is meaningful and nonparametric data should be used in the next analysis.

Spearman rank correlation is a correlation coefficient based on the rank that measures the correlation between two variables at the sequential level and the range of this factor changes from -1 to +1. But if there is no relation between rankings, the Spearman correlation coefficient will be zero. The result of this test is shown in Table 4.

Table 4. Spearman correlation test

		Question 1	Question 2	Question 3	Question 4	Question 5
Question 1	Pearson Correlation	1	.374*	-.022	.208	-.029
	Sig. (2-tailed)		.008	.880	.047	.839
	N	50	50	50	50	50
Question 2	Pearson Correlation	.374*	1	-.143	.326	-.060
	Sig. (2-tailed)	.008		.021	.021	.681
	N	50	50	50	50	50
Question 3	Pearson Correlation	-.022	-.143	1	-.035	-.201
	Sig. (2-tailed)	.880	.021		.811	.161
	N	50	50	50	50	50
Question 4	Pearson Correlation	.208	.326	-.035	1	-.029
	Sig. (2-tailed)	.047	.021	.811		.043
	N	50	50	50	50	50
Question 5	Pearson Correlation	-.029	-.060	-.201	-.029	1
	Sig. (2-tailed)	.839	.681	.161	.043	
	N	50	50	50	50	50

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

If sig is less than 0.05, there is a relationship between questions and if it is more than 0.05, then there is no meaningful relationship. According to the above table, there is a meaningful relationship between questions one and two, one and four, two and three, two and four, and four and five. Therefore, the research hypothesis is proved. As a result, **Imam Reza Boulevard has a meaning in the local community.**

The final chart of policy making based on theoretical literature is shown in Figure 17.

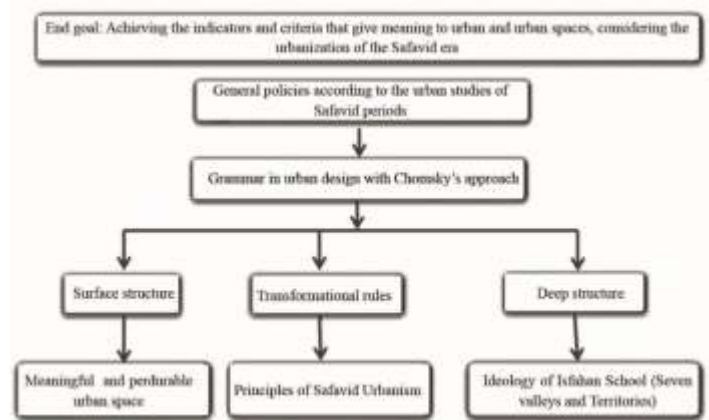


Fig. 17. Policy making based on theoretical literature

The final conclusion for designing Imam Reza Boulevard as a meaningful urban space is shown in Table 5.

Table 5. The final conclusion for designing Imam Reza Boulevard as a meaningful urban space

Urban system	goal	objective	Strategy	Policy
Social	Improving social structure	-The presence of different age and sex groups in space	Taken from issue 6: Reatopia (Expresses the relationship between residents and their social interactions)	- Provide the equipment needed for all age and sex groups, even physical disabilities
		-Possibility the presence of the citizens in space		-Establishing the necessary security in space
Economic	Organizing and improving the economic	-Possibility of creating social relations of citizens together	Taken from issue 7: Econotopia (Expresses the human activities in each period and culture)	-Equip space for public transport for easy access to space
		-Attention to citizen safety		-Creating the possibility of activity for vendors
				-Deploying diverse uses that have active and clear points
				-Establishing leisure activities in space such as a restaurant and children's playground
				-Removing incompatible uses with space such as industrial uses
				-Assigning the first layer of the boulevard to public activities, such as business and leisure activities
				-Improvement of the economy on the Boulevard, by attention to vendors and retailers

Physical	Improving the Physical quality of Imam Reza Boulevard	<p>-Organizing the Physical System at the Boulevard</p> <p>-Providing equipment and facilities for the disabled and the elderly</p> <p>-Arranging the sky line</p> <p>-Organizing the walls of Imam Reza Blvd</p> <p>-Organizing the flooring</p> <p>-Modify the cars network</p> <p>-Creating diversity in space</p>	<p>Taken from issue 1: Utopia (Expresses a picture of heaven on earth)</p> <p>Taken from issue 3: Geotopia (Expresses Hidden or coordinated discipline in nature)</p> <p>Taken from issue 5: Biotopia (Expresses use of daytime and native materials)</p>	<p>-Create contrasts in space with vaults and porches</p> <p>-Create rhythms with Iranian architectural elements along the way</p> <p>-Design of intersections that they can be seen earlier</p> <p>-Equip space for appropriate climate furniture</p> <p>-Appropriate lighting at night</p> <p>-Remove abandoned spaces</p> <p>-Avoiding obstacles to seeing</p> <p>-Establishment of height rules for buildings</p> <p>-Use proper flooring for pedestrian movement</p>
Activity	Improving the Activity quality of Imam Reza Boulevard	<p>-Organizing the Space and Activity System on Blvd</p> <p>-Equipping public spaces and turning them into prominent spaces</p> <p>-Create a variety of activities</p>	<p>Taken from issue 2: Ideotopia (Expresses relations between urban elements to convey concepts)</p>	<p>-Design spaces with different functions over the day</p> <p>-Embedding the front activities in middle refuge</p> <p>-Identify ways and sitting places with height difference, flooring and lighting</p> <p>-Eliminating incompatible activities</p> <p>-Holding temporary outdoor exhibitions, music performances, holding religious and national gatherings</p> <p>-Equip space to encourage outdoor activities such as vending, and etc.</p>
environmentally	Improving the environmentally quality of Imam Reza Boulevard	<p>-Reducing environmental pollution</p> <p>-Establishment of security in the case study (Imam Reza Blvd)</p>	<p>Taken from issue 4: Ecotopia (Expresses combine artifact and natural discipline)</p>	<p>-Defining the separate space of riding, pedestrian and bicycles, and separating them with the plant for beauty and control of the weather</p> <p>-Use of native materials on the floor and the façade</p> <p>-Creating indoor spaces along the way to create climate comfort</p> <p>-Use proper lighting at night for beauty and safety</p> <p>-Emphasis on the active presence of natural elements of the environment and ecological elements such as water and plants</p>

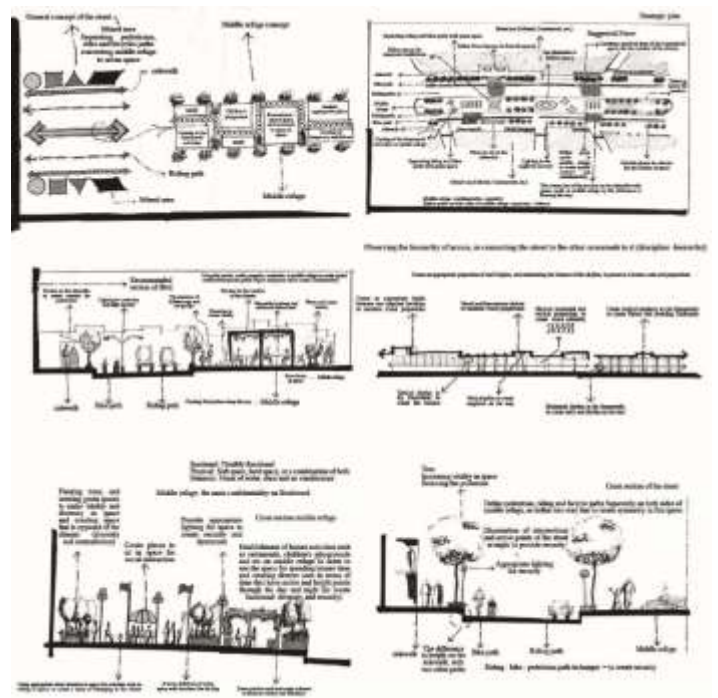


Fig. 18. Final sketches

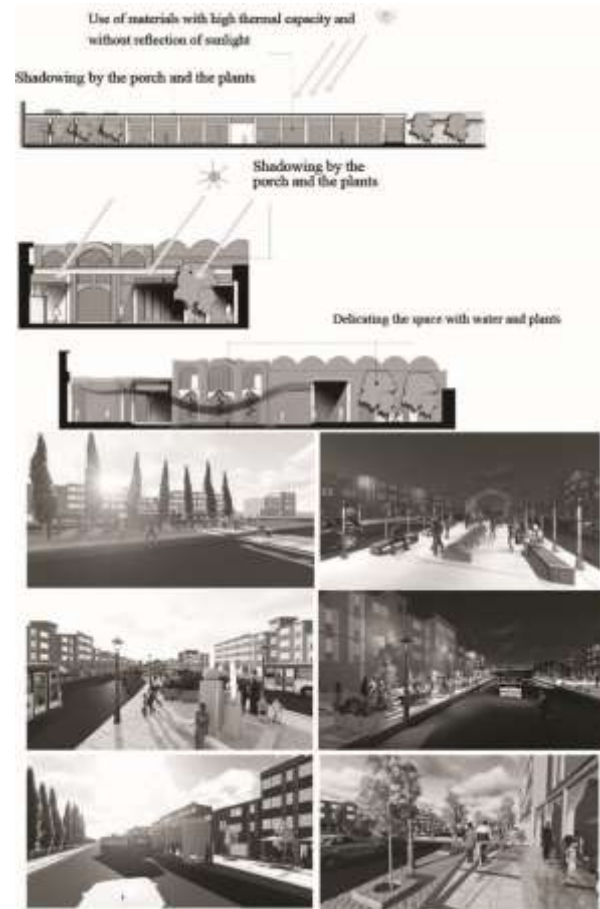


Fig. 19. Final 3D designs

The sketches and final designs are shown in Figures 18 and 19.

V. CONCLUSION

In this research, after reviewing theoretical literature and Safavid urbanism studies, indicators and criteria giving meaning to urban spaces were achieved. In the next step, we delved into studying the status of Imam Reza Blvd in Rafsanjan city (as a case study). Then, a community of 50 citizens who use this space and knew it was selected to answer the questionnaire. The responses to the questionnaire were analyzed by SPSS software. Then solutions were extracted for the implementation plan. And ultimately it led to a plan for Imam Reza Boulevard that has meaning for the citizens.

The implementation of Imam Reza Boulevard, as a meaningful urban space, began in mid-2016 and now 85% of it has been completed and the space is usable. All actions on this boulevard are in accordance with the guidelines. The operational steps in this boulevard are presented in Figure 20.

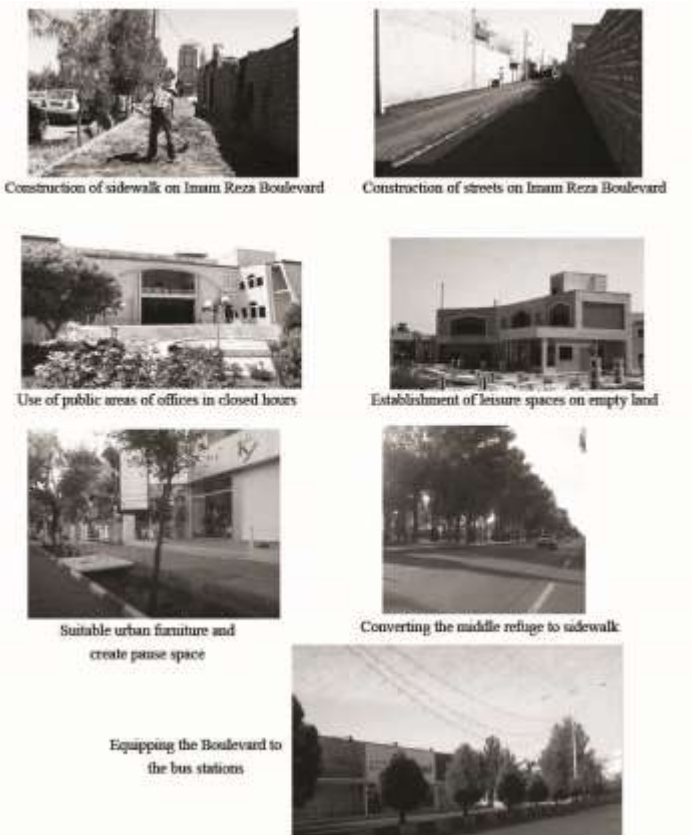


Fig. 20. Operational steps in this boulevard

After one year, a questionnaire was again adjusted to survey satisfaction from this space before and after the implementation of the plan and the results is presented in Figure 21.

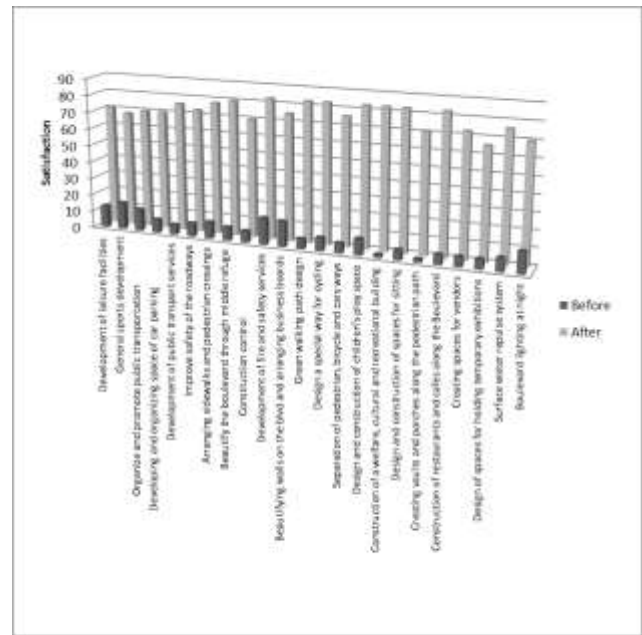


Fig. 21. Questionnaire on citizens' satisfaction from Imam Reza Blvd before and after the project

In this study we finally conclude that Safavid urbanism as one of the eternal patterns of urbanism in Iran has indicators and criteria for meaning as one of the three components of urban space quality. These indicators and criteria can be used to design a meaningful urban space at any time and place. And finally, if any urban space that is designed, has all three components of the quality of urban space (physical, functional, meaning), and pay attention to these three components, certainly the resulting urban space will be an eternal space and it will be a remarkable space for the citizens who are the largest social wealth of every city in that will encourage them to use that space.

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AUTHORS

First Author – Soudeh Rezayi Homadin, Soudeh Rezayi Homadin, Department of Urban design and planning, Kerman branch, Islamic Azad University, Kerman, Iran
(Soudi946@yahoo.com)

Second Author – Golnaz Tavassolian, Golnaz Tavassolian, Department of Urban design and planning, Mashhad branch, Islamic Azad University, Mashhad, Iran
(Golnaz.tavassolian@gmail.com)