

## The Structure of Language in Vernacular Architecture

Ahmad Mirza Kochak Khoshnevis<sup>1</sup>, Mehdi Nabati<sup>2</sup>

<sup>1</sup>Assistant Professor, Research Center of Cultural Heritage, Handicrafts, and Tourism, Iran;

<sup>2</sup>MSc in Architecture, Iran

### Abstract

The creation of a work in architecture can be compared with grammar considering the structure and constituent elements of the speech language including the phoneme, notion and its disciplinary principles. Syntagmatic and paradigmatic are considered as two fundamental principles of the speech by providing several signification messages to form daily conversation and to create a work or offer a message by various innovation. The creation of a work can be found in two different structure including form and pattern language. Form language includes visual elements which organize the form of a work while pattern language constitutes the signification to order visual elements toward designer's thought. The present study considers the natural structural language and its components and then compares the findings with pattern language according to various structures to form a vernacular architecture for a house including form language and pattern language. Form language considers how to make a work and its components due to differences in environmental conditions and pattern language represents the codes of message subject to values, goals, customs and tradition of society that are altered based on the presence of human beings in space and his thoughtful manipulation in nature.

**Keywords:** Syntactic and Semantic, Syntagmatic, Paradigmatic, Pattern language, Form language.

### Introduction

According to the necessity of social relationships, the discipline and principle in language are shaped and supplemented over the time. The type and the quality of statement and conversation are different based on the disciplinary character in various categories. Moreover, architecture with regard the language and conversation of space that is found objectivity in place, removed the need and stated transcendental quality of space in physical and conceptual structure such as disciplinary principles. The present article attempts to state the vernacular architecture on current discipline in language principles. The vernacular architecture as the discipline of language structure represent different statement of speech quality following the language discipline retrieved from similar elements of language developing over time.

### Language structure

Design is formulated a sketch and put together their elements to form a whole unit (J. Lung, 2004). Words have found conceptual implications like the visual elements in architecture. Forming a word is used to define a totality, not individuality rather in its background (Norberg-Schulz, 2008). A series of structure makes a word in all speech occurred in an ultra-language which shows a common syntagmatic and paradigmatic structure to all known languages (Salingaros and et.al, 2008). To explain a syntactic and semantic structure in linguistic from Stedman view, syntactic deals with the structure of sentence while semantic consider the conceptual structure (Memarian, 2004). According to Saussure, semantic deals with form whereas syntactic deals with pattern therefore, the complete separation of form from pattern is impossible (Dinesen, 2011). Saussure also states syntagmatic and paradigmatic relate to syntactic and semantic, consequently the relationships are formal principles created between two irregular mass and informing notion and phoneme (ibid,

2011). In Saussurian semiotic, there is a link between phoneme pattern and concept in human notion affecting by culture process. According to Saussure, language phenomenon considers a cultural aspect regarding the unity of signifier and signified with respect to a cultural contract grain in audience mind. In pivotal structure of these principles, the paradigmatic pivot includes elements that can substitute a message while the message remains conceptual. On the other hand, the syntagmatic pivot consists of elements coming in linear direction to produce a message (Ahmadi, 2012). The presence of a physical discipline between phoneme and notion forms the speech principle in daily conversation and creates a poem or mot that leads to forming a sentence structure in various aspects.

The speech in various aspects is considered as an instrument to represent thought and self-expression which plays a constant role to determine the nature of human cognitive process and the creativity power of thought and ideology (Chamsky, 1998). The thought make a relation in forming the discipline among concepts, thereby the thoughts and conceptual structure are made (Salingaros and et.al, 2008). The concepts are considered also as basic units of thought (Monshe'ei, 2011) which play an effective role to make a message with a qualitative value for audience. The value of every message's information directly relates to the innovation of message and foreseeing of its information (Gruter, 2004). The measure of information and offering a message differ in various speeches. The goal of daily speech seeks to remove the need of a social relation in various levels limited by innovation and offering message that can be compared with making a dwelling unit in order to accommodate, whereas poet that in accordance with conceptual content has various kind of message and information value is created when the effect of a word or matter be more prominent and deeper and helps human return to the higher level of awareness through the frequent reflects of subject's harmony (Nasr, 2010).

The base of harmony in phonemes and notions structures represents a transcendental message. There is a model in the process of creating an architecture and prodigious work. Architecture like a poem can be considered as a final aspect of codification abstract mot presenting the concepts, notions, cultures and values with in itself secretly (Falamaki, 2011). In other words, the present discipline for creating a transcendental poem can play the same creativity process for architecture. Accordingly, linguistic forms try to show and relate every reason about concepts and knowledge in form of component parts of the work (Kuhn, Herzog, 1993). It can be formulated a pattern language for an architecture by following natural language.

**Table 1. The process of sentence forming in natural language and buildings and places in pattern language (Alexander, 2011)**

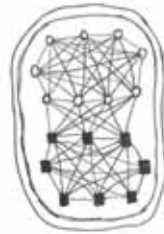
| Natural language                  | Pattern language                                  |
|-----------------------------------|---------------------------------------------------|
| Words                             | Patterns                                          |
| Syntactic determines the relation | Conceptual relation determines patterns relations |
| —                                 | Culture, values and goals                         |
| Sentences                         | Buildings and places                              |

#### **Forming architecture language**

With regards to the above table, a hierarchy of creation an architecture works as the visual elements and conceptual factors can be determined according to natural language. The local and identity and range space without any means by form, elements and visual signs are physical tools of real life and living inside and outside to understand geometry and geometric space is considered as a one of the chief topic of codification to some extent that 3D elements explain the concept (Falamaki, 2006).

These components in format of form is composed a part of the world which is provided by us, and another part which we want to form it subject to thought and implications” (Alexander, 2003). This model of language in architecture considers a treasury composing form and surface elements that can be merged to construct every structural called form language (Salingaros, 2008). The language includes some rules which indicate how to compose elements together and how to scale them in various levels through micro elements (ibid). The process of creation a work to organize the conceptual structure called pattern language. The pattern language takes place secretly through the interaction between mankind and his environment (Salingaros, 2008). The language consists of a set of correct and tested solutions to state environment quality to some extent that enhances life and feeling of comfort, also combines geometry and behavioral pattern in series of fruitful relationship. In summary, how human activities take place in artificial forms (Salingaros, 2008). Good fusion, compromise and relation of architecture language in two mentioned structures can represent suitable information to offering message and forming a work with implications on audiences.

Pattern language



Form language

The compromise method of drawing

**Figure 1. Fusion and compromise form language, fusion pattern language with form language (Salingaros and et.al, 2008).**

The flexibility of architectural language in various filed visually and conceptually depends on the condition of time. The understanding how to combine pattern languages is important for two reasons: firstly, most of the methods need to combine patterns from various areas for better performance; secondly, the nature of the pattern languages considers the approaches and methods used in the models with multiple languages. An approach can demand models from various areas for several reasons. One of them is the change in technology available over time (Porter and et.al, 2004). The plurality of new elements and the flexibility of the language result in forming a work with different values which offer the creator a choice and refinery of a work in order to achieve the value of quality. The architecture like a poet considers the creation of work by relying on this process and makes a common value from architecture language in two structures of form and pattern languages to deliver a transcendent message persistent such as vernacular architecture representing the continuity of culture, values and goals of a homogeneous community.

### **Vernacular architecture**

In fact, when we talk about vernacular architecture retrieving from principles and concepts of a community in a specific cultural range, the house is regarded as the most complete physical body and the most distinctive products of vernacular architecture which explain its features. According to various approaches, there are different definitions of the physical-conceptual product including many indicators in each defined section. Pirnia declares that the house is where the residents feel comfortable and also inside the house or where the wife and kids live should have a large variety to

feel serene. With the expression of le Corbusier, house is a cover in accordance with some conditions stabilizing an intimate relationship between outside world and biological phenomena. In the house, an individual or a family should live, sleep, walk, lie down, see and think. According to Rappaport the house in the first place is considered as an institution, not as a structure which has been created for very complex purposes. Since the construction of a house is considered as a cultural phenomenon, the shape and organization are strongly influenced by the relevant culture (Haeri Mazandarani, 2009). Since the house is raised as a shelter for primitive man, the concept of performance is summarized neither a benefit solely nor a functional space. The aspect of being a house as a shelter presents as an implicit necessary and passive task. Moreover, the positive aspect of the house concept is considered as creating a favorable environment for family as a social unit (Haeri Mazandarani, 2009). While Johan plasma thinks a house is a metaphysical and mythical tool for reflecting immortality, offering thought of temporary (Relativity, 2010).

The climate diversity in Iran has led to form a wide variety of vernacular architecture. Among them, residential units are influenced more by natural environment. In the simplest climate classification, different areas of the country are divided to warm and humid, warm and dry, cold, moderate, moderate and humid. In each of these areas according to local climate characteristics, over the long years of the development of vernacular architecture, special features of residential areas are emerged. Distinctive architecture elements such as yard, porch, rooms, steep and domed roof, etc. are evolved to control climate phenomena and provide the comfort for each studied species. Despite the long historical background of residential vernacular architecture design in Iran, there is no enough study on the structure and content of the period yet. Due to the extensive changes of some settlement areas in recent decades, it is possible that the mysterious design of these works to be eliminated. The present research tries to identify types of residential areas according to local climate characteristics in terms of structure and function. For this reason, the desired characteristics representing vernacular architecture are compared and evaluated. After wards, the structure and content are analyzed in terms of physical structure and type of plan, the relationship between open, semi-open and closed spaces, functional relations of spaces, their similarities and difference (Soltanzade & Ghasemi nia, 2011).

The similarities and differences of these houses that is the result of climate issues have a big impact on the culture of indigenous people (Kultur, 2012). Thus, types of vernacular architecture in terms of both urban form and content have a nature as well as getting together sentences. According to the mentioned definitions, two distinct structures in architecture language are determined as the hypothesis of the present study about building: form and pattern language. Form language as defined in the prior lines lead to structure and house components that differ due to physical condition of each environment, whereas pattern language states codes of message depending on the thoughts, values, ideals, customs and traditions of every society which are achieved due to the presence of humans in house and their thoughtful intervention in the natural environment. The general sense of place means when the real life in buildings begins. The influence of life on the body of house is a routine that according to the new social and cultural relation gradually leads to different transformation (Alpanov).

The fact of life brings human beings in defining the architectural concepts that are considered as the conciliators factor among various environmental relations. The expression in each community, region, culture and environment find the concept due to the compromise of physical and conceptual structures to have the utmost moderation and relation with human, the moderator. Now, it should be mentioned that the architecture is created by thoughts, it is like a tree which either the wind brings the seeds or a wan plants it in the ground, it does not exist without soil and water, without singing wind, touching breeze and heating sun (Falamaki, 2006).

### **Vernacular architecture language and the formation of place**

About language and its relation to the formation of place, Heidegger states that language makes thought and poetry necessary to the existence. Christopher Norberg-Schulz interprets Heidegger's being concept as remaining in a place (Relativity, 2010).

In a place, the nature is separated by the lines stretching native language and there is no forms and classes separated from word phenomena. On the contrary, the world presents the flow of various ideas organizing by mind and generally takes place in the minds of language system. Nature breaks and then organizes imagination and mental conception, the necessary concepts assigns mainly because human beings are parties to a contract that should organize it (Hall, 2011). Based on human beings thought, the organization mostly leads to physical and conceptual balancing with the environment. However, if these factors find unfamiliar and incompatible objectivity with the place, the result is like what Moratoris declared about themselves as the local language crisis, that Latin was entered to Italy from abroad at that time. For political and social reasons, Italy was dominated by foreign language, consequently was influenced by local language. The dominance draws local language on borrowing foreign language and gradually accepts foreign culture (Memarian, 2005). The logical evolution is affected over the time by architecture following the intellectual and cultural structures. Rem Koolhaas states that the architecture of each civilization should be rooted in the progressive civilization as the best and it can be expressed as the innermost structure of an age (M. Banni, 2007).

The expression of consistence forces including notions, thoughts, customs of nations in every society represent the compatibility between place and human considering the formed principles of architecture. Every nation finds its specific architecture representing arbitrary forms and lines like its language, habits and customs. Before collapsing cultural borders in 19th c., there were unique elements and forms of vernacular architecture in all over the world and the buildings of each area were considered as the wonderful fruitage of the blessed union of popular belief and environment (M. Banni, 2008). The modern construction systems especially industrialism with its unique properties such as modular building, integration and a series building and so on cannot define the nature of place as a biological environment for human. The expression not only does not deny technology but also states living in a place beyond the necessary space. Therefore, the structure considers a language of society by defining a series of homogeneous community. "Architecture looks like a poem that cannot be understood without the knowledge of cultural basics" (Falamaki, 2006). Also, the place relation does not appear as a concept of live. If the language to be considered as a social contract among residents in a country and the architecture to be regarded as a space agreement among society, the presence of the word house in different combinations and architectural examples of cities can realize the concordance in cities and interpret a familiar presence in city streets and various types of spaces (Haeri Mazandarani, 2009).

### **Conclusion**

Phoneme and thought consider constituent elements of a language forming together syntactically and semantically and expressing by syntagmatic and paradigmatic relations in a sentence in different areas. The current order in the process is gradually completed over the time and the inadequate and defective components are separated in order to achieve a proper quality. The discipline in architecture is remarked in format of form and pattern language by considering a component of architecture. The quality of the space is resulted from the relationship quality and compromise of form and pattern languages as well as the relationship in natural language in syntagmatic and paradigmatic relations and can be found simple or mot sentence according to compromise and change of a sentence. This format has more effects in the vernacular architecture.

Form language states the type of materials, climate factors, the physical components and pattern language defines traditions and customs. Compromise of these two categories provides a perfect expression to obviate needs and an artistic expression for audience in visual terms to separate each area with its high culture. New technology and modern systems has challenged vernacular architecture developing gradually. The mentioned discipline in vernacular architecture that is similar to the structure of natural language could also be in trouble. As if foreign words destroy the language and eliminate the quality, the existence of elements in contrast with climate, culture and traditions undermine the vernacular architecture space. Therefore, a measure should not only be adopted to the vernacular architecture that is cultural identity of a place in each region, but also the mission of the architecture is to emphasize on current cultural values.

### References

- Ahmadi, B. (2012). From Picture Signs to Text, Eleventh Edition, Nashre Markaz Publication, Tehran, 37.
- Alexander, C. (1980). Value, College of Environmental Design, University of California, Berkeley,1, USA.
- Alexander, C. (2005). Notes on the Combination of Form, Trans: Zarrinmehr, S, First Edition, Rozaneh Publication, Tehran, 27.
- Alexander, C. (2010). Architecture and the Secret of Immortality, Timeless Way, Trans: Ghaumi, M., First Edition, Rozaneh Publication, Tehran, 128.
- Alpanov, A., & et al. (2005). Vernacular Architecture, Second Edition, Faza Publication, 90.
- Banni, M. (2007). Architecture & Postmodernism. First Edition, Khak Publication, 122.
- Chamsky, N. (1998). Cartesian Linguistic, Chapter of Rational Intellectual History, Trans: Taherian, A., First Edition, Hermes Publication, Tehran, 26.
- Dinesen, A. (2011). Introduction to Semiotics, Trans: Ghahraman, M., Fourth Edition, Parastesh Publication, Abadan, 30, 31.
- Falamaki, M. (2006). The Experience of Architecture in Iran and the West, Second Edition, Faza Publication, Tehran, 19, 155.
- Falamaki, M. (2011). Theoretical Tendencies and Roots of Architecture, Fourth Edition, Faza Publication, Tehran, 110.
- Gruter, Y. (2004). Aesthetics in Architecture, Trans: Dr. Pakzad, J., and Homayun, A., Second Edition, Shahid Beheshti University Publication, Tehran, 27.
- Haeri Mazandarani, M. (2009). House, Culture & Nature, First Edition, Research & Studies Center of Urban Development, Ministry of Housing & Urban Development Publication, Tehran, 49,59.
- Hall, E. (2011). Hidden Dimension, Trans: Dr. Tabibiyani, M., Sixth Edition, Tehran University Publication, 113-4.
- Kuhn, C, Herzog, M. (1993). Modeling the Representation of Architectural Design Cases, Technical University of Vinna, Vinna, Austria.
- Kultur,S. (2012). Role of Culture in Sustainable Architecture, Second International Conference, Mukogawa Women's University, Nishinomiya, Japan, July 14-16, Proceedings, Archi-Cultural Translations through the Silk Road.
- Lung, J. (2004). The Creation of Architectural Theory, The Role of Behavioral Science in Environment Design, Trans: Dr. Aynifar, A., Second Edition, Tehran University Publication, Tehran, 54.
- Memarian, Gh. (2004). A Pass on Basic Theories of Architecture, Fourth Edition, Faza Publication, Tehran, 98, 181.

- Monshe'ei, Gh. (2011). *Thought and Language*, First Edition, Khorasgan Publication, Khorasgan Azad University, 161.
- Nasr, S, H. (2010). *Islamic Spirituality and Art*, Trans: Ghasemian, R., First Edition, Hekmat Publication, Tehran, 103.
- Norberg-Schulz, C. (2008). *Architecture: Presence, Language and Place*, Trans: Seyed Ahmadian, A., Second Edition, Niloofar Publication, Tehran, 187.
- Porter, R., Coplein, j., & Winn, T. (2004). *Sequences as a Basis for Pattern Language Composition*, USA.
- Rahimzadeh, F., Bagheri, S. (2003). *Review of Dynamic Behavior of Flexible Tanks on the Ground*, Fourth International Conference on Earthquake and Earthquake Engineering, Tehran.
- Relativity, K. (2010). *Postmodernism in Architecture*, Trans: Shirazi, M., Third Edition, Nei Publication, 41,152.
- Salingaros, N., & et.al. (2008). *A Theory of Architecture*, Trans: Zarrinmehr, S., and Mottaki, Z., First Edition, Research and Studies Center of Architecture and Urban Development Publication, Tehran, 389,391,404.
- Soltanzade, H., & Ghasemi nia, M. (2011). *Typology of Physical- Practical Structure of Residential Architecture in Golestan*, Arman Shahr, 7
- Taghizadeh, M. (2006). *Basic Theory of Islamic Urbanism and Architecture*, Ramian Publication