



TYPE & TYPOLOGY IN ARCHITECTURE: REVIEW OF MURATORI TYPOLOGY

METHOD

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ABSTRACT

Typology is an important subject in architecture and has a special position in theoretical discussions. It has been used in different science many years ago and due to identity, culture and architectural gap attracts attention of researchers in recent decades.

This article is a library research with descriptive analytical approach. It aims at describing various aspects of type and typology as one of contemporary architecture components. To reach such goal, subject of study will defined and some definition will be presented, then it deals with history and background of the subject. After that theories and comments will be discussed and finally methods and goals of Muratori School regarding typology will be reviewed.

Keywords: Type, typology, Muratori, historical-evolutionary

INTRODUCTION

Typology has been used in various sciences since 18th century with the purpose of taxonomic classification of objects according to their common features. It has been applied in architecture as well. Type refers to something which is marked or recognized or something which owns symbolic criteria. In architecture, buildings were classified based on criteria which researchers were seeking by

using special methods, such methods have individual concept and theoretical basis.

In this regard questions like what would be the role of typology in architecture or how typology can be useful in solving contemporary cultural crisis will be discussed.

1. Type and typology

Typology is derived from the word type. Transferring dispersed information from

architecture world to unconscious mind and its product which is type. (2)

Type has equivalents like model, sample, form and symbol.

In general terms, it refers to a group with common features which they are classified. Such common aspect is in position that is something to be obeyed and to be repeated.

2. Typology in architecture

Typology has been expended 2000 years ago by publishing "the ten books on Architecture" by Greek architect "Vitruvius". In this book Vitruvius classified Greek buildings according to their applications such as houses, temples, etc... which they are divided to subsets and branches. In Iran, Ghiasodin Jamshid Kashani in his famous work "Miftah Alhesab" deals with classification and typology of vault, arch, dome and muqarnas. In this regard, he presented special calculating tables.

Typology could be reviewed in two areas. First in south of Europe and in countries like Italy and France which were active Mostly in theoretical aspects and discussions. Muratori School which deals with historical-evolutionary issues is a good example. Second area is North of Europe which draws more attention to typological discussion of form and classifies buildings according to their form. (2)

Modern architects reject type and model and their application in architecture. They believe it prevents creativity of students and architects. Such types as stereo type. (9)

Using type is used in mass production by modern architect and no prevention occurred. In contemporary architecture of Iran, typology of architect Tavasoli. Pirnia has done architectural typology according to common features and styles in his book "stylistics of architecture". (10)

Memarian in his book "Iranian architecture" classified buildings based on their application and function. It applied muratori method of typology (11)

He divided residential buildings to types of extrovert and introvert. It reviews introvert building according to two criteria's of having central courtyard and lack of central courtyard. Then it discusses about form of building s-one sides, two sides and their placement and deployment. (12). Extrovert residential buildings is classified like introvert one. Then they are reviewed with respect to the number of floor and courtyard (13)

3. Theories about type and typology

Theories and concepts on type and typology and its historical and evolutionary trend are reviewed by architect vidler and are classified into three periods.

1.3 rationalism and enlightenment period

Englishmen thinkers, inspired by Newton's revolution in physics argued that systematic thinking could be applied to all forms of human activity. It is this period that the first encyclopedias in various disciplines were written with the aim of classifying rational information.

The architect of the enlightenment looked at shelter as the first type of habitation. Initially formulated by Mark-Antoine L'Anier in his *Essai sur architecture*, he proposed primitive **but** as the origin of all possible forms of architecture in past and present.

Quatremere de Quincy believes that type has several meaning and concepts such as model, stamp, etc... he symbolized architecture as an imitation of nature. His theory of type is metaphorical and, meaningful. He tried to define the concept of type by comparing model and type. He defined model as a mechanical reproduction of an object and type as a metaphorical entity. The model is a form to be imitated. Type on the contrary, can act as a basis for the conception of works which bear no resemblance to one another.

For him, imitation is starting point for any process of artistic production. In other words, imitation represent the laws of nature. GNL Durand was a professor of architecture who employed the methods of comparative

taxonomy for the study of building forms where he enumerated a limited number of inventories of building elements. According to his first aim of architecture which was composition related specifically to economic needs he reduced the form-making principles to its fundamental elements and presented the geometric tables to be used as a basis for type variety.

2.2 Modernism period

The reconstruction of post-war Germany, where the modernist idea emerged needs fast construction which was accompanied by mass production. In such process, type changes to prototype which owns characteristics like rationality, fictionalization and design control mechanism. Architectural historian Gregotti emphasizes that "a production-oriented model becomes ante-specific and universally applicable and scientifically based "(15). Characteristics of the notion of type in modernism period can be summarized in functional determinism, the rejection of precedents in favor of pure forms and use of prototype in mass production.

3.3 neo-rationalist period

This is one of the most complex and systematic period with the aim to emphasize the continuity of form and history against the fragmentation produced by mechanistic

understanding of typology. At the center of this theory lies the traditional city and the natural process of growth of cities and the unbreakable chain of continuity.

Murati is a pioneer in this period who points to continuity of different scale in city level. He considered type as a formal structure. In examination of the urban texture of Venice as the first study based on the neo-rationalist theory of type, he explained the historical development of Venice as a concept that would link urban elements with the form of the city. Rossi is another theorist who considers type as the study of urban and architectural elements which cannot be simplified any more. He argued that instead of focusing on momentary differences such as specific historical period, the economic forces of the time, the scale of the artifact or the original function of the artifact, Rossi suggests focusing on the similarities and permanent characteristics through comparative study. So typology becomes the analytical moment of architecture (16) Rob Krier another follower of this school suggests that spatial types are definite and in the end, relatively independent from the immediate primary function. Therefore, the source of form for architecture would be accumulated forms which construct whole city. City is

considered as formal types whose elements are to be abstracted from the vernacular.

4. Types and typology

Typology is classification of buildings based on common features like locational, climate and evolutionary perspective. Aim of typology in architecture is reaching to proper model for designing buildings. There are 2 view points for typology of architecture: one is form analysis and the other is cultural and conceptual look like report viewpoint.

Some researchers and theorist, who was the follower of space syntax school, divide type into two categories: "genotype" and "phenotype" Genotypes or biological patterns are abstract relational models in form of spaces, total information in a type governing the whole form. (18)

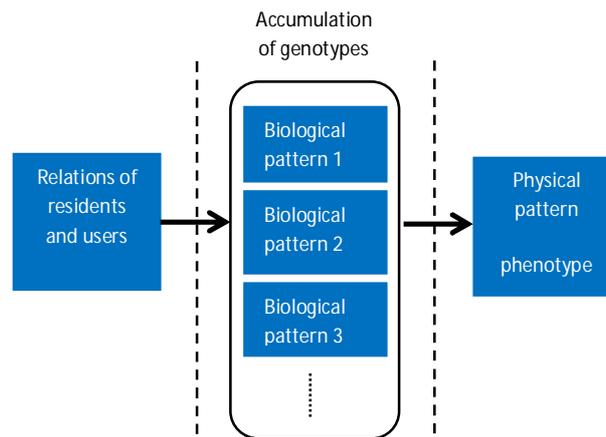
In other words spatial relations in a building phenotype focuses on physical framework or building framework and draw attention to form of a building which can be repeated and is applicable. Physical pattern is created by putting together biological patterns in a building and considering limitations and freedom of such patterns or genotypes. Due to such reason phenotypes are always affected by biological patterns. (Picture 1)

It is to be mentioned that one genotype or biological pattern can simultaneously own different phenotypes or form pattern in

different building. Difference in phenotypes with similar biological pattern depends on cultural, economic conditions.

Genotypes in architecture are those information and codes which are latent in

space. A remarkable feature would be not being limited to place and time. It means that biological patterns can be available in every time and place and is not dependent to a specific period or place.



Picture No.1: Relationship between users, genotypes

Typology depends on viewpoint and purpose of the researcher and on features which he is trying to review buildings. So typologies like historical, climate, cultural, constructional typology can be mentioned. So in order to achieve purpose of the research in evolutionary- historical typology, we can move forward and explain such typology.

5. Muratori typology

Architecture is mostly affected by culture. Since culture itself is the product of history and geography, the best interpretation of architectural typology is based on history and historical trend. If we suppose buildings and types as a living entity which owns genealogy with upward trend to accomplish

or downward trend to decline, using word such as evolutionary in historical typology of buildings, would validate to this to this subject.

1.4 typology foundation of Muratori architecture

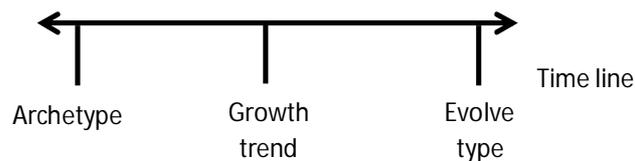
Muratori's Italian school of architecture which was established by saverio Muratori is one of important school of architecture which works in designing buildings, research and training. Muratori school's concepts are based on theories of big philosopher such as Heidegger, Hegel, Kant or Gurche. In their opinion in these schools like Saverio Muratori, Kanija and Mato human is regarded as constructing entity, nature is

location and history would be time of construction and growth of phenomenon. Nature is the instructor and human is student who is trained by the nature. They believe that transfer of information from architecture world to unconscious mind is done gradually and its product would be type.

In Muratori School, two consciences are mentioned: conscious mind and unconscious mind. Unconscious mind shapes basic and primary types and local architecture is formed based on this mind. Unconscious mind is the base of modern architecture is

always affected by external factors. This mind is trainable and is subject to change under specific rules.

Followers of Muratori School searched the stem of architecture in basic or archetypes and review it evolutionary trend in history. Basic types or archetypes are the base for evolved types. The type which is shaped based on unconscious mind, organic architecture that human acquired by nature and construct a building according to such r=trainings. Evolutionary trend of type in time can be presented in this way:

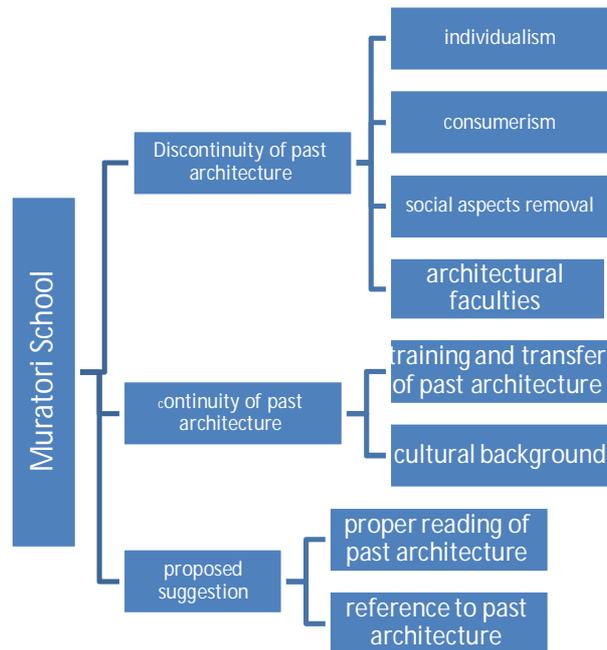


Probably, we can explicitly state that Muratori School of architecture is the only architecture school that deals with past architecture and its continuity feature discontinuity of traditional architecture and beginning of modern architecture. This school ascribes the discontinuity in architecture to individualism and consumerism of societies and destruction of social aspects. To solve such cultural problem, that all parts of the world including Iran are faced, appropriate solution is connection to past architecture.

In Muratoris' opinions, the most important principle of architecture is reading the past correctly. Through such correct reading and proper Classification of previous and subsequent information, we can reach to a proper design that can be an appropriate substitution for past and unconscious architecture (picture 2)

From this perspective, past architect is holder of past heritage which is shaped in his unconscious mind. Cultural heritage of past architecture is valuable from typological view. Such value is the product of mass culture and not individualism and personal

tastes picture 2: reasons of continuity and discontinuity of past architecture.



Picture No.2 : reasons of continuity and discontinuity of past architecture

2-4 Muratori 's typology processes

The main purpose of Muratoris is accomplishing the values of typology in this regard, we can present process of typology in 3 steps

- selection
- typology scale selection
- typology trend

1-2-4

Natural site is the main instructor of human. Each site is the representative of its architecture of that place, during history and different periods of time. Various information about natural and artificial environment is shaped in unconscious mind of architect in that place before construction of that building.

2.2.4 Scale selection

Scale here means human's activity in changing environment which includes a wide range of area, city, context and architecture. As stated before, theoretical foundation of Muratori School is based on philosopher's ideas. Scale division into 4 parts seen in Muratoris' ideas steam in kruche's beliefs. In this scaling, the biggest scale is natural environment and limiting elements which includes artificial elements that can divide natural and artificial environment. The smallest scale is building which is divided into 4 components "construction source, structure, space and form"(2). They are shown in table 1.

Table 1: Muratoris subdivisions

	Area scale	city	texture	Architecture
Area element	towns	City units	Construction types	materials
System of element	Land texture	City texture	Component texture	structure
Organism of system	Direction model	Area model	Neighborhood unit	Space distribution model
Definite organism	Area type	City type	Texture type	Architectural type

3-4 typology trend of Muratori

It is reproduction of historical chain of specified building which is in unconscious mind of architect in the past recognizing lost chains which are formed during history is upon architect's responsibility. If such recognition is done in the best way, necessary condition will be provided for design. This implies continuity between present and past time, as well as solving identity and cultural crisis of the present.

1.3.4 Buildings classification

The first step in Muratori's typology is classification of buildings based on subject and purpose. Such movement is a kind of screening according to standard and purpose of researcher. In fact, classification is determining application and kind of buildings such as house church, temple, etc.

2-3-4 site of building formation

Site would be area, city, district which is analyzed after the selection of type and application of buildings. In this step buildings are classified according to place of formation and location. This step can be considered as screening based on location.

3.3.4 Common type-archetype definition

Archetypes or common types act as the basis for more evolved types. Type which is shaped based on unconscious mind of human like a small room. Recognition of such common type is done through experimental observation and archaeological discoveries by unconscious mind of architect archetypes are affected by factors like culture, economy, security, etc during history till they create evolved spaces of present time.

4.3.4 Documentation of present condition

It is done from physical perspective physical features of buildings such as application type, dimension, spatial form, height, width, etc. are recorded precisely.

Through such documentation of building, common features of reviewed type with other types, type connections, changes and interference imposed on types and level of effectiveness from material and nonmaterial factors will be identified

5.3.4 Reconstruction of the past

Reconstruction of the past is in archetype, their application, building form and growth trend, their change that include evolution or decline of a type against external factors during time such reconstruction is done in order to understand more and recognize

better past architecture and its features as well as reasons of growth and evolution or decline of a type over time such findings and reasons can be useful in reaching to final types.

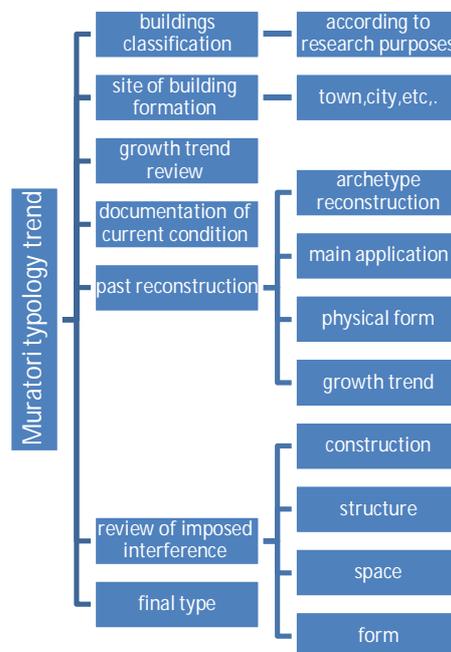
6.3.4 Review of interferences imposed on types

Interferences and changes imposed on types are affected by physical and non physical factors which appeared in materials and technology of building, structure, relations and spatial circulation, form and placement of building. So interferences are analyzed in a type from structure, space distribution and general form perspectives. Such analysis can be generalized to transforming main types into different branches of construction types.

7.3.4 Final type

After passing the above steps, its proper time to deal with evolved type which is in accordance with past & present architectural features and conditions and is an appropriate solution to current needs. Final type is regarded as an evolved type which is coproduction of conscious and unconscious mind of human

In Muratori's typology, recognition and conformation of archetype is the most important matter. The archetype which is the product of unconscious mind and base of this methodology. The archetype is affected by different factors over time and proceed in evolutionary or decline trend to be in present position. So, Muratori typology trend can be summarized in pictureNo.3.



Picture No. 3: Muratori typology trend

CONCLUSION:

Type is common aspect of a group of objects that is different from viewpoint and purpose of evidence and researcher and has various interpretations. Type had growing trend over time. It evolved regards to human needs. According to studies and reviews, type and typology had a significant position in architecture, specifically contemporary architecture. They are important as principles like space and form. From Muratori's perspective, type is like genealogy of buildings which is initiated from archetypes and evolved over time. Recognition and reconstruction of evolutionary chain is necessary. Muratoris' consider proper reading and connection with past architecture as appropriate solution for solving cultural and identity crisis of contemporary architecture.

REFERENCES:

Arianpour, Abbas, Arianpour Manouchehr (2007) Dictionary English to Persian, Amir Kabir Publications, published forty-third, Tehran

Me'marian Qolamhosein (2013) theoretical foundations of architecture, Soroush Publications knowledge, Eighth Edition, Tehran, (a)

Nordberg Shultz, Kristian(2012) Presence, language and place, translator Alireza Ahmadi, Lotus Press, third edition, Tehran

De Mauro, Tullio (1985) Tipologia, casabella, pp509-510:880-910

Karaman, Aykut (2001) "Defining the regional Identity: Conceptual Parameters of urban morphology" Pakistan, NEDArchitecture and Planning journal (2001)

Strappa, Giuseppe (1998) "The notion of enclosure in the formation of special building type" In : Attilio petruccioli (ed.), "Typological process and design theory", Agha Khan program for Islamic architecture, Conference proceedings

Moudon, Anne Vernez (1994) "Getting to know the built landscape

Guney, yasemin I (2007) Type and Typologyin Architectural discourse, BAU FBE Dergisi, pp 3-18

Decarlo, Giancarlo: (1985), 'Note sulla Incontinente Ascesa della Tipologia', Casabella, 510-509, pp.52-46

Pirnia, Mohammad Karim(2003) Style of Iranian architecture, inquiring Press, second edition, Tehran

Me'marian Qolamhosein (2013) Iranian Architecture, Soroush Publication. Fifth Edition, Tehran,(b)

Me'marian Qolamhosein (2012) Understanding the residential architecture of Iran - Typology introverted, Soroush

Publications knowledge, Sixth Edition, Tehran, (a)

Me'marian Qolamhosein (2012) Familiarity with the residential architecture of Iran - Typology eccentric, Soroush Publications knowledge, Sixth Edition, Tehran,

Kruft, H.A. (1994) "A history of Architectural theory: from Vitruvius to the present" , New York, Princeton Architectural press.

Gregotti,V (1985) The grounds of typology, Casabella, pp 509-510:4-8

Rossi, Aldo (1984) the architecture of the city", Cambridge: Massachusetts and London, MIT Press

Krier, R (1988) Architectural Composition, New York. Rizzoli

Me'marian,Qolamhosein,Tabarsa Mohamad Ali(2013) Journal of Architecture and Urban Planning Society of Iran, Issue 6, Pages 103 - 114.

Me'marian Qolamhosein, Hashemi Seyed Majid ,Hamzenejad ,Mahdi(2002) Recognition of historical education - school development workshop designed Mvratvry in housing complexes, Journal - Technology of Education, Issue 3, Pages 243-255.