Type and typology in architectural discourse

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Abstract

Typology is the comparative study of physical or other characteristics of the built environment into distinct types. In this paper, the historical transformation of type and typology concepts since the Enlightenment has been examined in three developing stages based on methodological and historical interpretation: The first conceptualization developed out of the rationalist philosophy of the Enlightenment, the second relates to the modernist ideology and the last to Neo-Rationalism after the 1960s. The study aims to highlight the significance of the concepts of type and typology that are so rich in tradition and so important for intellectual history, and that could aid in enhancing our understanding of architecture within its historical and socio-cultural contexts. A discussion of type and typology can promote a way of looking at the built environment, that can not only help us recognize and discover basic types but also enhance our ability to see the differences as well as similarities among architectural artifacts by recognizing the invisible connections between them.

Keywords: Type, typology, architecture, architectural theory, architectural history.

Mimarlık kuramlarında tip ve tipoloji kavramları

Özet

Tipoloji, nesneleri fiziksel ya da diğer özelliklerine dayanarak tiplere ayırmak için yapılan çalışmalara verilen addır. Tarihte ilk kez Aydınlanma Çağı'nda önem kazanan tipolojik yaklaşım, günümüzde mantıksal-matematiksel bilimlerle sosyo-kültürel bilimler arasında, ortak amaçları çerçevesinde iletişimi sağlayabilen önemli bir bakış açısı konumundadır. Bu yazıda, mimarlık söyleminde yer alan tip ve tipoloji kuramları, ortaya çıktıkları üç ayrı tarihsel düzlemde incelenmiştir. Mimarlık alanında ilk tip kuramı yine Aydınlanma Çağı'nda ortaya atılırken, ikinci kuram Modernist ideolojiye, üçüncü kuram ise Neo-Rasyonel yaklaşıma dayanarak oluşturulmuştur. Bu çalışmanın amacı, entellektüel tarihte çok önemli bir yer tutan tip ve tipoloji kavramlarının, mimarlığı ve mimarlığın içinde bulunduğu tarihsel ve sosyo-kültürel etkenleri anlamamız için önemini vurgulamaktır. Yazıda ayrıca, mimarlık disiplininde tip ve tipoloji kavramlarının tartışılmaya devam edilmesinin gerekliliği de vurgulanmaktadır. Bu tartışmalar, sadece mimari nesneleri basit tiplere ayırmaktan öte, bunlar arasındaki görünmeyen bağların farkedilerek, aralarındaki ilişkilerin daha iyi kavramasına yardımcı olabilecek bir bakış açısı oluşumu için gerekli ve önemlidir.

Anahtar Kelimeler: Tip, tipoloji, mimarlık, mimarlık kuramları, mimarlık tarihi.

1. Introduction

Typological thought refers to the whole, to the manifold relationships among things, to the extreme and at the same time the harmonious. İt is a way of thinking that does not refer to the age but to the place. A place at which borders and opposites melt together into an intellectual universal [1].

When one thinks of how we make sense of our daily life, one can easily recognize the significance of the notion of type in understanding and clarifying the commonalities and differences between various phenomena within the immense world of existence. As Franck and Schneekloth say "types and ways of typing are used to produce and reproduce the material world and to give meaning to our place in it" [2]. The notion of type underlies all logical inferences that help one to classify the phenomena, to put them in groups based on their similarities, as well as to make distinctions between them. This act of classification enables multiplicity to turn into unity, which at the same time generates reasoning and knowledge.

The first period when the notion of type gains its significance was the eighteenth century also known as the Age of Enlightenment. During this period, the Enlightenment thinkers, inspired by Newton's revolution in physics, argued that systematic thinking could be applied to all forms of human activity. İt is in this period that the first encyclopedias in various disciplines were written with the aim of classifying rational information. Some of the most important and influential writings of the Enlightenment were published during this time. These include the following three main texts: *Encyclopedie* (1751) edited by Denis Diderot and Jean le Rond d'Alembert and compiled by the group called the *Encyclopédistes;* Baron de La Brede et de Montesquieu's *Esprit des lois* (The Outline of a Modern Political Science-1748); and Jean Jacques Rousseau's *the Discours sur des sciences et les arts* (Discourse on the Origin and Foundation of İnequality Among Mankind-1755).

Within architectural discourse, the first typological approach developed out of the rationalist philosophy of the Enlightenment as can be found with the French archeologist and art writer Quatremère de Quincy in his work *Encyclopédie* (1789). The result of this corpus of work has since been influential and it has become the subject of debate in architectural discourse of the twentieth century. But within the modernist architectural discourse, the concept of type suffered a loss of significance. For example, in modernism the notion of type was reduced to the notion of stereotype. However, we see a reemergence of the significance of type and typology during the 1950s as reflected in the writings of Aldo Rossi, mainly *The Architecture of the City* (1982).

This paper will review the understanding of type and typology as concepts within the architectural discourse from the time of the Enlightenment. The examination of type history is not a mere description of that history, but is intended to demonstrate that the theory of typology could aid our understanding of architecture within its historical and socio-cultural context. The paper also aims to highlight the significance of the concepts of type and typology, which is so rich in tradition and so important in intellectual history, for architectural discourse.

2. Type and typology in general

Before going into the discussion of type and typology in architecture it would be helpful to examine the etymological origin and meaning of the word 'type.' The root of the word can be traced back to a Greek verb *typto*, meaning "to beat, to hit, to mark" [3]. İn addition, when the word *typos* became established in Greek, during the seventh and sixth centuries BC, new meanings emerge such as relief, engraving, and seal. Pertaining to numismatics, *typos* also denote the distinguishing figures or marks engraved on the faces of a coin. After the development of printing in Europe in fourteenth century, the meaning of the word expands to include the characters of the alphabet engraved on a small rectangular metal or wood block used in printing. This enlargement of the meaning might be considered as being due to the beating movement of the printing machine that resembles the coin-minting process. One might consider these metal or wood blocks, types, as prisons containing the letters of the alphabet. Even more drastically, one might consider the feeling of imprisonment, containment, in a sense that there is nothing to expect more, by the fact that each type can only produce the predetermined end, the engraved letter of the alphabet.

When we look at the writings of philosophy and on psychology of perception, we see that *typos* acquires a meaning close to that of "model," describing a set of characteristics necessarily present on a group of concrete individuals answering, that is, to the type. One might infer that, here, the understanding of type suggests a pattern or a model after which something is made. From this basic meaning, says İtalian architectural historian Tullio De Mauro, originate the extremely particular Pauline and Christian meanings of exemplary figure-figuration [4]. İn the Pauline and Christian reading of the Old Testament, Adam is seen as the typos, exemplary figuration, of Jesus. Since the fifteenth century, the word has been used in theology to signify the symbolical representations of a person, an object, or an event of divine importance. The Oxford dictionary definition of type reflects this understanding: "by which something is symbolized or figured, anything having a symbolical signification, a symbol, or emblem." [3].

The term "typology" emerges around the mid-nineteenth century. According to De Mauro, the emergence of the term "typology" is influenced by the renewal of interest in abstract models during this time [4]. The term was used to refer to the study of types; the comparative analysis and classification of structural or other characteristics into types. İt was first encountered in the field of theology, referring to the study of symbolic representation of scripture types. İn paleoethnology, typology referred to the study of sets that are recognizable through the coherence determined by the repetition of a single cultural type. İn psychology and medicine, psychological and constitutional types are examined, while in sociology the ideal types are being studied and became the ordering principle of enquiries on multiform, concrete socio-cultural organizations. Towards the mid-twentieth century, typological study becomes a basic way of thinking, which enables a reciprocal communication between logical-mathematical sciences and social and cultural sciences.

3. Type and typology in architecture

The historical transformation of type and typology concepts since the Enlightenment has been examined in three developing stages based on methodological and historical

interpretation: The first conceptualization developed out of the rationalist philosophy of the Enlightenment, the second relates to the modernist ideology and the last to Neo-Rationalism after the 1960s. What follows is the examination of the theory of type and typology in these three developing stages.

3.1. Type theory in enlightenment philosophy

The first typology developed out of the rationalist philosophy of the Enlightenment. According to architectural historian Anthony Vidler, "like Newton in science, like Locke in philosophy, like Rousseau in anthropology," the architect of the Enlightenment looked at the beginnings of shelter as the first type of habitation. İnitially formulated by abbé-Marc-Antoine Laugier (1713-96) in his *Essai sur l'architecture*, this understanding of typology proposed a natural basis for architecture to be found in the model of the primitive hut. The primitive hut in Laugier's depiction has rationalized elements and standards. He depicts the four trees as types of the first columns, standing in a perfect square, the branches laid across in the form of beams, perfectly horizontal, and the boughs bent over to form the roof as a triangle, as a pediment (Figure 1). İn other words, the primitive hut has been posited as the origin of all possible forms of architecture, and thus the principle and measure of all architecture.

Taking the Rationalist stance from Laugier's work, Quatremére de Quincy (1755-1849) conceived his critical theories of type in architecture during the last decades of the eighteenth century. The notion of type shaped many of Quatremére de Quincy's views on fundamentals of architecture. Quatremére de Quincy symbolized architecture as an imitation of nature. His theory of type is metaphorical and is well- known by his entry "Type" in *Encyclopedie Methodique* of 1825. İn his entry, Quatremére de Quincy said type was a word with many nuances: it could be used to mean model, matrix, imprint, mould, and figure in relief. Quatremére suggested that one of the roles of science and philosophy is to examine the reasons for having so many different versions in each genre.

Quatremére de Quincy 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 copied or imitated: "all is precise and given in the model". Type, on the contrary, is something that can act as a basis for the conception of works, which bear no resemblance to one another: "all is more or less vague in the type" [5]. The architectural 'type' was at once 'pre-existent germ,' origin and primitive cause [6].

Quatremére de Quincy's metaphorical theory of type is the first theory introduced into modern architectural discourse. Quatremére de Quincy's conceptualization of type was based on three concepts: origin, transformation and invention. Origin here refers to the nature or essence of things. Unlike Laugier's primitive hut, which he posited as the origin of all architecture, Quatremére de Quincy's origin is related to the understanding of type as "the general form, structure, or character distinguishing a particular type, group, or class of beings or objects" [3]. His aim was to make type more practical by putting it into the context of use, need, and custom, among other factors, which directly refers to the Enlightenment idea of *charactere*. The notion that certain types of buildings become symbols of their functions by virtue of their *charactere* had been first introduced into architectural theory by Germain Boffrand (1667-1754).

According to Boffrand *charactere* is the expressive function of a building to communicate with people, and "different buildings should, by their arrangement, their construction and by the way in which they are decorated, proclaim their destination to the observer" [7]. İn Quatremére de Quincy's words, character is "that each of the principal buildings should find, in its fundamental purpose in the uses to which it is given over, a type which is suitable for it" [5]. Based on the typological identity, Quatremére de Quincy discussed distinct 'mother tongues' of architecture. İn other words, the architectural type in relation to the origin theory could be understood as architectural etymology.

Quatremére de Quincy suggested imitation as the common starting point for any process of artistic production. For him, imitation does not mean to 'copy' but rather to 'represent' the laws of nature. İmitation is the basis for invention described as new combinations of pre-existing elements through grasping the principles and spirit of nature. İn other words, imitation is the creative process that turns elements in nature into visible artifacts. For architecture, invention means synthesizing the constructive, formal, functional and ecological principles in nature through an original and imaginative synthesis that creates the houses, temples, monuments and cities.

With Quatremére de Quincy's work, the idea of type was explicitly and systematically theorized for the first time in the history of architecture. İt should also be noted that Quatremére de Quincy's analysis of architectural precedents was the first one that went beyond the limited scope of classical architecture; type became universal [8]. Nonetheless, Quatremére was not the only one to theorize about the idea of type around this time, the time of Enlightenment, the French Revolution (1789) as well as the İndustrial Revolution. J. N. L. Durand (1760-1834) was also developing Laugier's principles like Quatremére, just not on the same lines.

Figure 1- Laugier's primitive hut
(Source: March-Antoine Laugier (1977) *An Essay on Architecture*)

Durand, who was a professor of architecture at the *Ecole Polytechnique* [6], was greatly influenced by the contemporary advancements in natural sciences, particularly those of taxonomy and descriptive geometry. Durand employed the methods of comparative taxonomy for the study of building forms where he enumerated a limited number of inventories of building elements: pilasters, walls, and foundations. The result was his major work, *Recueil et parallele des edifices de tout genre* (1801), a kind of "typological atlas of architecture" [7]. Durand drew the plans, sections and façades of all buildings to the same scale, with the same technique [9]. He stated that the classification was both functional and morphological, "according to their kinds, arranged in order of degree of likeness" [6]. His aim was to rigorously describe and analyze form and geometry of architecture where the external attributes and outward looking was disregarded (Figure 2). This indeed was a distinct separation from the Enlightenment idea of *charactere*. Style was now seen as clothing for an otherwise naked object, as a system of decoration. By putting together all different historical styles next to each other, and so by eliminating the significance of any one of style, Durand unconsciously reduced the precedents to an eclecticism of styles [6].

For Durand, the first aim of architecture was composition related specifically to economic needs. İn his lecture notes, *Precis des Lecons* (1802), Durand reduced the form-making principles to its fundamental elements: the architectonic members, and the *disposition,* the rules of composition. His work was one of the first to attempt to disconnect the foundation of an architectural order from existing tradition towards an autonomous architecture. İn a table format, Durand presented the geometric combinations to be used as a basis for various types of building plans. This table is usually considered as representing geometric reduction. Wener Oechslin suggests that this table "in actual facts it is used to make legible the connection between existing and historically concrete typologies and the *general form* based on the laws of universal geometry" [10]. Considering the new objectives of economy and construction in addition to the idea of geometrical reduction, one might suggest that Durand's theory of type was the first move towards the Modernist idea of prototype.

3.2. *Type theory in modernist ideology*
The modernist type theory is based on the changing social structure and the need for mass production after the post-war era. This type theory focused on the production process itself to find the model for architectural design. The reconstruction of post-war Germany, where the modernist ideas emerged, was controlled by a radical avant-garde that based its architectural projects on standardization and typification. They considered architecture as a social duty that was to provide clean and healthy living spaces for citizens from all different socio-economic status groups. Furthermore, the maison-minimum, then a fundamental element of the international debate, eventually became a type derived from the 'scientific' needs of human life. This understanding of type was akin to Durand's types derived from history but it differed as it was directed by new concepts of clean spaces free from dust and filled with sunlight, the legacies of the nineteenth century.

İn this context, the form-making process became equivalent to the mass-production process. Type became standardized: "The pyramid of production from the smallest tool to the most complex machine was now seen as analogous to the link between the column, the house, and the city" [11]. Type in the processes of mass-production required repetition, type had become prototype. The discussion on types by the various

protagonists resulted in a conformation with the rules of industrial capitalism, and lead to the idea of prototypes mechanically and serially produced ad infinitum [8]. This understanding in fact reflects Quatremére de Quincy's model which is defined as a mechanical reproduction of an object [1, 12].

The main characteristics of the prototype can be summarized as rationality, functionalization and design control mechanism. İtalian architectural historian Gregotti emphasizes the notion of type turning into stereotype by explaining that "a production-oriented model becomes anti-specific and universally applicable and scientifically based" [13]. According to him, type acquired a symbolic quality that somehow tried to interpret the understanding such as expanding bureaucratic organizations and economical interests of the contracting and manufacturing firms. To summarize the characteristics of the notion of type during the beginning of the twentieth century, Moneo presented three major themes: functional determinism, the rejection of precedents in favor of pure forms, and the notion of prototype versus mass production. The premise for the first theme is provided by the notion of functionalism. The cause effect relation between form and function, epitomized by Durand, was taken to the extreme. Functionalism rejected the past as a source for knowledge believing that context was the most important factor in the form-making process. İndeed, there was no longer a need for the idea of type.

Architectural precedents were cautiously examined for formal study and pastiche application of these precedents were leading the way to eclecticism of styles (Figure 3).
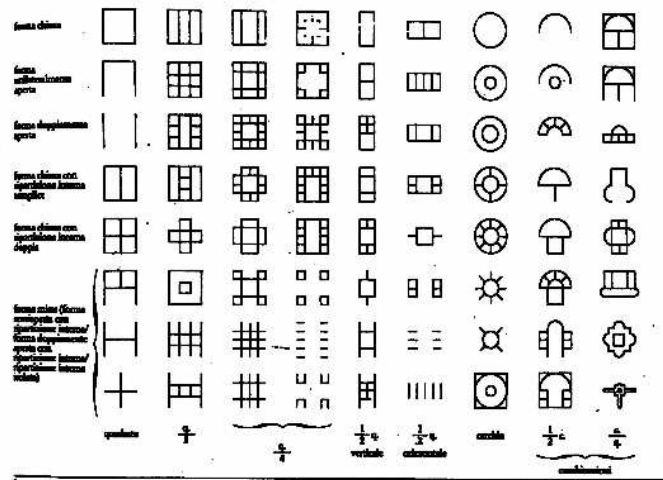

Figure 2- Durand's typology
(Source: J.N.L. Durand (1990) *Art and Science of Architecture,* Trans. Sergio Villari)
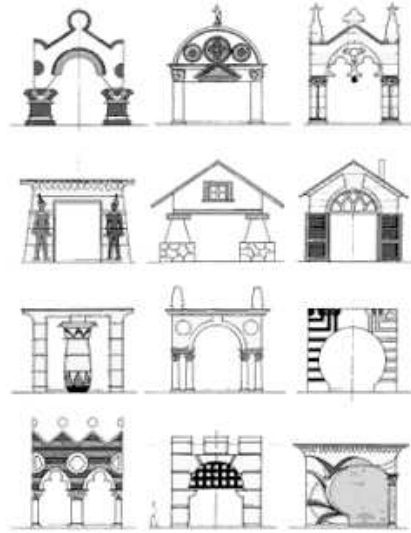
Figure 3- Venturi's eclectic house facades (Source: Internet)

Although the modernist understanding of the notion of type has usually been criticized as promoting the notion of type as stereotype or prototype, the contemporary architectural historian Reichlin directed our attention to the innovative contribution of Le Courbusier, one of the master builders of the period. According to Reichlin, Le Corbusier recognized that an architectural work is an accumulation of functions that could often be mutually contradictory and thus these functions first should be recognized by an analytical separation. The analysis is needed to reorganize these contradictory functions synergically in such as way that obstacles in between them are reduced or even eliminated. Reichlin suggested that this is a radical change in the approach of form-making process. He specifically tries to shed light on Le Corbusier's plan libre that represents a disruption and seems to negate the idea of type. However, Reichlin argued that what Le Corbusier deals with is not outside of the typological problem. İn fact, Le Corbusier himself used the term 'type Domino' to describe the structural correlates imposed by plan libre [14].

The types later proposed by the Neo-Rationalists are presented as an extension of the traditional ones that were not able to create a great upheaval. The significance of the plan libre, on the other hand, is that it "broke new conceptual ground and because of this fact, it interests us apart from the pragmatic evaluation given to it today" [14]. İn Reichlin's words, Le Corbusier's designs suggested for the idea of type to be split up to meet each mode of existence of the architectural work, including but not limited to structural, material technique, distributive, geometric, spatial, plastic, and stylistic-iconographic types. Moreover, it proposes that the designer must know the concomitant causes, the attritions and the conditioning synergies between the various types. Reichlin's presentation of the understanding of Le Courbusier's notion of type provides a different more positivist perspective on the modernist idea of type as it promotes a successful design solution that balances and satisfies the needs of different modes of architectural artifact.

3.3. Type theory in neo-rationalist perspective
The Neo-Rationalist theory of type emerged in the late sixties after the decline of modern architecture, with the aim to emphasize the continuity of form and history against the fragmentation produced by the mechanistic understanding of typology. At the center of this theory lies the traditional city and it emphasizes the natural process of

growth of cities, and the unbreakable chain of continuity from the houses, to streets, to districts, and to the city itself. Underlying the relationship between the elements and the whole, the Neo-Rationalist approach gave an impetus to morphological analysis to understand architecture and thus formed a basis for continued development of typological studies. According to Moneo, this is the time when typological studies find their most systematic and complex theoretical development [12].

The very first study based on the Neo-Rationalist theory of type is Muratori's examination of the urban texture of Venice in his work *Studies for an Operating Urban History of Venice* (1959), which included typological and morphological analysis. İn Muratori's work the idea of type as a formal structure became a central idea indicating the continuity among different scales of the city. Muratori explained the historical development of Venice as a concept that would link the individual elements with the overall form of the city. İn his study, types were explained as the generators of the city and they included in them all the elements that defined all other scales [12].

Muratori's research was also criticized because of its methodology. Tafuri, for example, refers to Muratori's study as analytic but less valid in research methodology: "They [Salverio Muratori and his school] have also the demerit of starting from a-historical methodological premises that often falsify the analytical process and the choice of samples" [15]. Scolari also reminds us that these studies had in time almost completely disappeared because of the length and difficulty of the kind of research, in addition to the lack of historical method or a sufficiently clear and autonomous 'surveying technique' [16].

Muratori's approach, no matter how much criticized, created what is known as the İtalian school for urban morphology. Stemming from this school is the work of Gianfranco Caniggia who conceptualized the city as a dynamic procedural typology, and recently the works of Giancarlo Cataldi, Luigi Maffei, Paolo Vaccaro, and Maria Grazia Corsini [25]. İn late 1960s, in France, Philippe Panerai and Jean Castex together with Jean-Charles DePaule, founded the School of Architecture in Versailles, as part of the dissolution of the Beaux-Arts. Also stemmed from Muratorian tradition, the work of the School of Versailles is usually referred to as the French school of urban morphology.

It should also be noted here that the British school of urban morphology is based on the work of M. R. G Conzen (1907-2000): 'town-plan analysis' that aims to examine the layering of the town plan, the building fabric and land use through history to understand the urban from. His most influential work *Alnwick, Northumberland* was published in 1960. Conzen's studies were furthered by JWR Whitehand who has examined the ways in which this understanding of the urban form could be put into use [28]. Conzen's son, Michael P Conzen, on the other hand, advances his father's work in his studies of American urban morphology [26]. Anne Vernez –Moudon's analysis of a neighborhood near the center of San Francisco, is an American example that examines the transformation of spaces over the years in terms of the buildings' morphological and functional characteristics, open spaces and land subdivision practices [27].

The Neo-Rationalist approach received much more influence with Aldo Rossi and Carlo Argan's interpretations of Quatremére de Quincy's type theory contained in the *Encylopedie Methodique.* Aldo Rossi's ideas about type were expressed via both his

writings and built projects. *Architecture of the City* (1982) was his major theoretical work, in which Rossi declares that his aim is to propose an "autonomous urban theory." According to Scolari, this work, with its clear and apodictic style, written in the first person, produced a real 'Mona Lisa effect' inside the professional world [16]. Criticizing the "artificial as well as useless" urban theories constructed without considering the individual, Rossi proposes an analytical method that lends itself to quantitative evaluation and that has a unified criteria directing the collection of material to be studied [17]. İnstead of focusing on momentary differences such as a 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, on the universal and enduring, i.e. permanent, character of cities through comparative study of urban form, using a typological-morphological approach. Typology then, Rossi suggests, becomes the "analytical moment of architecture" [17].

According to Rossi, from the contrast between particular and universal, between individual and collective, between public and private spheres, between public and private buildings, between rational design of urban design and the values of the locus or place emerges the form of the city and its architecture. Also influenced from Muratori's work, Rossi promoted traditional building types and emphasized the significance of examining historic cities for architecture [26, 27]. Considering "city itself as an artifact," i.e. as architecture, in a sense, will enable one to understand that the time factor is not an issue but city is one piece molded within time through dynamic forces acting on it. Thus, Rossi rejected to divide history in periods thinking that it leads to the loss of universal and permanent character. İnstead, his analytical approach prioritizes universal over particular and suggests that this permanent, universal, collective character is the type, "the logical principle that's prior to form and that constitutes it" [17]. Rossi defined typology as the study of elements of a city and of architecture that cannot be further reduced (Figure 4). The process of reduction is a necessary, logical operation that enables the examination of urban and architectural form.

The occasion of the fifteenth Milan Triennial in 1973 gave an opportunity for Rossi to produce the manifesto *Architettura Razionale*, which gave birth to the movement Neo-Rationalism. Numerous architects from all over Europe quickly joined the movement, including Vittorio Gregotti, Giorgio Grassi, Carlo Aymonino, Leon and Rob Krier, James Stirling, Oswald Matthias Ungers, and Josef Paul Kleihues. Rob Krier, for example, after working on a design for a complex project in downtown Stuttgart, starts in 1970 to work out his urban ideas, which were later incorporated in *Urban Space,* as a mix of text, photographs, and drawings, in addition to matrices [18]. İn his text, one of the matrixes defines the alterations of a given spatial type. Another matrix summarizes the morphological classification of urban spaces as the three basic shapes of square, circle, triangle, and the modulating factors that affect them, such as angling, segmentation, addition, merging, overlapping or amalgamation of elements, and distortion (Figure 5). İn 1988, Krier published *Architectural Composition,* in which he applied the classificatory procedure with the subject of architectural forms, with even more elaborately detailed rules of combinations. After mentioning the death of the form follows function dictum, Krier suggests that spatial types are definite and in the end relatively independent from the immediate primary function [18]. Rossi also rejects functionalism as a primary determinant of form because of its inability to explain the persistence of certain forms despite functional changes. Citing the Palazzo della Ragione in Padua, Rossi states: "one is struck by the multiplicity of functions that a

building of this type can contain over time and how these functions are entirely independent of the form" [17]. Therefore, the source of forms for architecture is the accumulated forms that make up the city. The city becomes a quarry of formal types, the generator of the typologies whose referents and elements are to be abstracted from the vernacular. Rossi prioritizes universal over particular, collective over individual. However, the individual and the particular are the keys to reach to the collective and the universal and thus are also significant in his thinking.

It has been suggested that, Rossi's typological concepts favor the local and autobiographic elements that were neglected by Modernism. On the other hand, they have also been criticized as becoming highly idiosyncratic, relying on autobiography, memory, and fleeting impressions [19]. Moneo defines Rossi's understanding of type as juxtaposition of memory and reason. Memory is the idiosyncratic, personal, qualitative aspect of type, while reason is the universal, fundamental, internal logic of form. He further criticizes Rossi's types as "communicating only with themselves and their ideal context. They become only mute reminders of a more or less perfect past, a past that may not even have existed" [12]. Rossi's position has also been criticized for devaluating the architectural discipline as a building profession, specifically by Scolari. While on the one hand Scolari accepts that Rossi's position favored the recovery of elements neglected by the International Style, at the same time, he criticizes the emphasis on urban analysis and on the theory of architecture which favors the composition rather than the project [16].
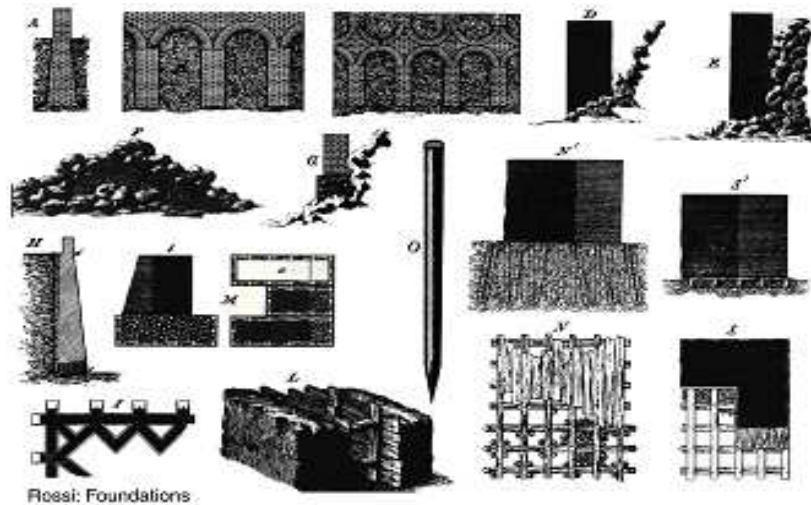

Figure 4- Foundations (Source: Aldo Rossi (1985) *The Architecture of the City*)
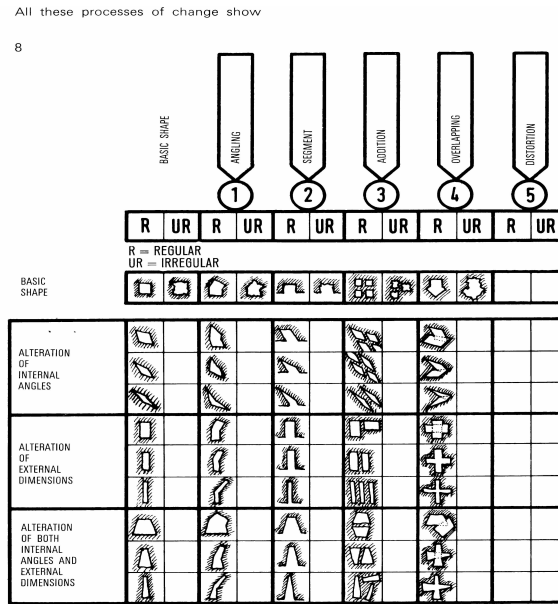
Figure 5- Krier's typology (Source: Rob Krier (1979) *Urban Space*)

The latest development that shares the significance of the Neo-Rationalist emphasis on the relationship between the elements and the whole is the space syntax approach. Developed during the late twentieth century, space syntax methodology borrows the concepts of 'genotype' and 'phenotype' from the discipline of biology and applies it to social sciences in general and architecture in particular [29]. Genotypes are abstract relational models governing the arrangement of spaces, the underlying organizing principle of phenotypes; and phenotypes are actual realization of genotypes in different physical milieu, i.e. architectural artifacts. By examining the syntactical aspects of phenotypes, it is expected to reveal the underlying genotype that is shared by the phenotypes examined. Space syntax theory proposes that genotypes are reflections not only of spatial organization but also the nature of social and cultural patterns. Hiller considers the spatial configuration, i.e. complex relational schemes, non-discursive aspects of design that are difficult to talk about. The reason why architects cannot talk about them is because they are architects' unconscious social knowledge. The aim of space syntax, then, is described as inquiry into this "unconscious configurational basis of social knowledge" [30].

A number of studies examined domestic architecture of various cultures, such as Luiz Amorim's examination of Brazilian residential architecture, Frank Brown & Bellal Tahar's study of Berber housing in Algeria, Deniz Orhun's study of traditional Turkish houses, Guney's study of twentieth century Ankara apartments [31], and examination of historic Anatolian towns by Kubat [32].

4. Discussion and conclusion

Classifications are human constructs necessary to understand and clarify the commonalities and differences between various phenomena. Although one cannot disagree about the extent they are helpful for us, sometimes proposed categories could become strict boundaries which could limit our understanding. Similarly, examining

the notion of type indicates that there are both constructive aspects as well as limitations that can surface when one is dealing with the theory of type. The Table 1 summarizes the different the historical transformation of type and typology concepts since the Enlightenment, which has been examined in three developing stages based on methodological and historical interpretation.

Table 1.Summary table for the theories of type

Type Theory in Enlightenment Philosophy	Type Theory in Modernist İdeology	Type Theory in Neo-Rationalist Perspective
The architect of the Enlightenment looked at the beginnings of shelter as the first type of habitation	The modernist type theory is based on the changing social structure and the need for mass production after the post-war era	Emphasizes the continuity of form and history against the fragmentation produced by the mechanistic understanding of typology.
abbé-Marc-Antoine Laugier (1713-96) in *Essai sur l'architecture* proposed a natural basis for architecture to be found in the model of the primitive hut	İn this context, the form-making process became equivalent to the mass-production process. Type became standardized	At the center of this theory lies the traditional city and it emphasizes the natural process of growth of cities, and the unbreakable chain of continuity from the houses, to streets, to districts, and to the city itself.
Quatremére de Quincy (1755-1849) the understanding of type as "the general form, structure, or character distinguishing a particular type, group, or class of beings or objects" de Quincy discussed distinct 'mother tongues' of architecture.	the maison-minimum, then a fundamental element of the international debate, eventually became a type derived from the 'scientific' needs of human life. Le Courbusier 'type Domino' to describe the structural correlates imposed by plan libre	İtalian School: Muratori – operational history Caniggia Cataldi, Maffei, Corsini French School Panerai and Castex British School MRG Conzen JWR Whitehand MP Conzen Space Syntax
J. N. L. Durand (1760-1834) *Recueil et parallele des edifices de tout genre* (1801), a kind of "typological atlas of architecture"	Buckminster Fuller 'Dymaxion House' a prototype of a house to be mass-produced, easily shipped, hygienic, and able to stand up to a Kansas tornado	Rossi and Argan The fifteenth Milan Triennial in 1973 - Architettura Raziona Gregotti, Grassi, Aymonino, Leon and Rob Krier, Stirling, Ungers, and Kleihues

One of the main criticisms of the notion of type and typology is related to the danger of type turning into stereotype. According to Ungers, for example, form follows function slogan led, at the cost of architecture, to an all discriminating pragmatism as the oppressing phenomenon of empirical optimism [1]. De Carlo also based his criticism against the notion of type on the description of stereotype as the rigid type that is repeated or reproduced without any variations and according to a pre-established conception, and bearing no distinctive signs or individual qualities [20]. Furthermore, De Carlo also suggested that types have stiffened to the point of giving the impression that the invention of alternatives is useless as types do not accept variations, additions, or alterations. Typology as such does not and cannot incorporate user participation, and therefore it is antithetic to participation.

There are critics who recognize the contributions of typological approach, and believe in continuous debate so that the understanding of the notion of type can flourish. Gregotti and Reichlin, for example, accept and support the recent use of the notion of type as well as the focused attention on typology, but criticize their refusal of the significance of function all together. Gregotti defines the understanding of type as becoming "stone-hard value of laws independent from any heteronymous situation"

[13]. He suggests that this separation from the particular and the individual reduced the architectural designs' capacity to find in reality the necessary confrontation and ideas. İnstead, Gregotti directs attention to the organic relation between the functions, the necessity of the project, the reason for an idea, and the construction process [13].

Reichlin, furthermore, emphasizes the fact that architectural work is a structurally complex material and at the same time a tool which is subject to factual and cultural use and a plastic and spatial artifact that is the object of a symbolic and aesthetic fruition. He questions how may of these dimensions have been considered in typological approaches and if they are considered as a system or not. Reichlin criticizes the application of typological approach in design schools having similar problems as the inductive method. He also cautions us against loosing structural and functional attention to architectural object, and architecture becoming repetition of models.

Oriol Bohigas is another contemporary theoretician who, on the one hand, recognizes type as "one of enlivening elements" of recent architectural debate, and on the other hand, criticizes the instrumentalization of type, type as being conceived as a means of supplying certain final-model forms [21]. According to Bohigas, the instrumentalization of type has caused a crisis in the historical process of modern architecture. The use of 'type' as a tool in the design process, similar to what Gregotti says, has led to 'typification of the type' that is the tendency to discourage the emergence of new formal structures because of the belief that historically formulated types could provide the answers to new functions and production systems. Moreover, according to Bohigas, this attitude created the appearance of a "formal frozen repertory" that is very easy to repeat exactly as it is without any new cultural value. İnstead, he offers the idea of type as the first hypothesis in the design process. Then we need to recognize the real structure of the historical experience not just its stylistic appearance. This historical experience needs to be examined and this can only be valuable through typology. His approach is based on having a hypothesis and testing the fitness of this hypothesis to the concrete facts of the scheme and continuously re-proposing a new hypothesis until that propriety is obtained. The constructive aspects of type as well as the vitality of typological thinking for creative thought in general is well recognized within the architectural community. As Reichlin summarizes; "the idea of type promotes a census of knowledge, a re-ordering of experience around the discipline of architecture, and, consequently, a reconquest of intelligibility" [14]. However, typological thinking should not be condemned only to be a practical tool used for the development of types, basic patterns or concepts. The typological thinking "defines a way of thinking in basic all-encompassing contingencies, of having a universal view of the world of ideas, as well as that of reality" [1]. İn other words, typological thinking might facilitate a way of looking at life that promotes thinking in transformations, a way of thinking that combines the opposites in a morphological continuum.

To conclude, typological thoughts and actions presuppose two things: first, to recognize and discover basic types; secondly the ability to see things in complementary relationships. As Unger suggests, "thinking of manifold possibilities corresponds to thinking in morphological transformations of things and states, be they the material of nature or culture" [1]. This way of looking might in fact be instrumental in the creation of more appreciative, grateful and sensible way of seeing differences by putting them in a continuum and recognizing the invisible connections between them, not only within the architectural discourse but also in all aspects of life in general.

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