CHANGES IN THE MEANING OF TYPE IN ARCHITECTURE SINCE EIGHTEENTH CENTURY

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ABSTRACT

CHANGES IN THE MEANING OF TYPE IN ARCHITECTURE SINCE EIGHTEENTH CENTURY

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The need to define notions in one and a concrete way is actually a tendency to remove the contradictions that could blur their meanings. However, in the architectural discourse the different definitions and interpretations of a notion lead sometimes to an interesting and productive paradox through which a dual situation can emerge.

The notion of "type" as one of these instances gained such a duality in time throughout the accumulated thoughts that were studied in different times and conditions since the eighteenth century by scholars like Marc-Antoine Laugier, Quatremére de Quincy, Jean-Nicolas-Louis Durand, Le Courbusier, Giulio Carlo Argan, Aldo Rossi, and Peter Eisenman.

These conditions which occurred between the relations "type-nature", "type-machine" and "type-city" have a common point in that "type" was seen as a principle, to explain the architectural attitude in a particular period. And in these

periodical conditions it can be said that “type” has, actually, a visual (in Leandro Madrazo’s terms) and non-visual (in Leandro Madrazo’s terms) aspect which leads to a discrepant problem in that it is sometimes defined as “sensible” in the sense of a “physical construction” and sometimes defined as “conceptual” in the sense of a conceptual construct”.

Therefore, in using the outline of Anthony Vidler’s essay “the third typology” as a loose framework in the context of a historical point of view from the eighteenth century to the twentieth century, the main problem of this thesis will be to expose this dual situation between the visual (sensible) and non-visual (conceptual) aspects of “type”. In addition, it is actually said that the visual aspect of “type” appeared in the sense how its non-visual aspect is re-constructed.

Moreover, within its “double-nature” (in Leandro Madrazo’s terms) “type” seems to have a potential and power for its transformation towards a key for reading the architectural process in a re-constructed continuity. And because of this re-construction it is possible to follow the continuity of architectural knowledge, which designates the changing boundaries of the architectural discipline and gives the means for a tendency to define it as autonomous.

Keywords: type, visual, non-visual, re-construction, architectural discipline, architectural knowledge, autonomy.

ÖZ

MİMARLIKTA ON SEKİZİNCİ YÜZYILDAN BU YANA TİPİN ANLAMINDA MEYDANA GELEN DEĞİŞİMLER

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Tek ve somut bir biçimde fikir ve kanıları tanımlama gereksinimi gerçekte anlamlarını karışık hale getirebilecek çelişkileri ortadan kaldırma eğilimidir. Bunun yanı sıra mimari tanımlamalarda bir fikre ait birçok farklı tanım ve yorum bazen ilginç ve yaratıcı bir paradoks oluşturup bu sayede ikili bir durumu ortaya çıkarabilir.

Bu duruma örnek olan "tip" fikri on sekizinci yüzyıldan beri farklı zamanlar ve durumlar içerisinde Marc-Antoine Laugier, Quatremére de Quincy, Jean-Nicolas-Louis Durand, Le Courbusier, Giulio Carlo Argan, Aldo Rossi, and Peter Eisenman gibi araştırmacılar ve mimarlar tarafından ele alınmış ve zaman içerisinde çoğalmış düşünceler sayesinde bu türden ikili bir durum kazanmıştır.

Farklı zamanlarda "tip-doğa", "tip-makine" ve "tip-kent" arasında meydana gelen ilişkilenmeler sonucunda oluşan bu durumlarda "tip"in mimarlıkta bir prensip oluşturduğu konusunda ortak bir görüş bulunmaktadır. Ayrıca bu dönemsel

durumlarda “tip”in Leandro Madrazo’nun tanımladığı biçimde görsel ve görsel olmayan yönlerinin olduğu söylenebilir. “Tip”in bazen duyularla algılanabilir bir biçimde veya kavramsal anlamda tanımlanmasına neden olan bu yaklaşım beraberinde ikili durumunun da oluşmasına yol açar.

Bu tez “tip”in görsel yani duyu yoluyla algılanabilirliğini ve görsel olmayan yani kavramsal yönlerinin oluşturduğu ikili durumu meydana çıkarmayı amaçlamıştır. Ayrıca “tip”in görsel olan yönünün aslında görsel olmayan yönünün yeniden yapılandırılmasıyla meydana geldiğini savunur. Bunla birlikte tez oluşturulurken on sekizinci yüzyıldan yirminci yüzyıla kadar ortaya koyduğu tarihsel sıralaması nedeniyle Antony Vidler’in “The Third Typology” makalesi serbest bir çerçeve olarak kullanılmıştır.

Sonuç olarak Leandro Madrazo’nun “ikili-doğa” olarak tanımladığı bu durum içerisinde “tip” mimari süreci yeniden yapılandırılmış bir süreklilikte okuyabilecek potansiyele ve güce sahip bir anahtara dönüşebilmektedir. Bu yeniden yapılandırma sayesinde de mimari bilgi takip edilebilmektedir. Bu da mimari disiplinin değişen sınırlarını işaretlemekte ve mimarlığı özerk olarak tanımlayabilme eğilimini mümkün kılmaktadır.

Anahtar kelimeler: tip, görsel, görsel olmayan, yeniden yapılandırma, mimari disiplin, mimari bilgi, özerklik

To my parents, Gül and Kadir Aydoğdu

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TABLE OF CONTENTS

LIST OF FIGURES

FIGURE

CHAPTER 1

INTRODUCTION

The search for this thesis actually began under a general title that was concentrated on the concept of autonomy in architecture and the cause of its re-emergence in the 1960s and 1970s. But regarding the fact that this concept coincides with the subject matter of some other thesis in METU, the inquiry shifts on the notion of *type* which is at the same time a subtitle under the subject of autonomy and a possibility to define the thesis in a more distinct and coherent way.

Type that was and is a subject often discussed in architecture had transformed in time through paradigmatic shifts which at last caused the difficulty to define the notion concretely. The thesis, therefore, is in general based on the attempt to clarify the notion of *type* in architecture and has the intention to show the paradoxical condition of *type* that became a fact through its different interpretations. However to convey the whole process of this situation is a challenge in itself because of its large spectrum.

Throughout this process the notion of *type* in architecture has been considered in various forms since the eighteenth century, but its source actually could be traced back to *Plato's Theory of Idea.* However, the use of *type* as a term related to architectural theories started with Quatremére de Quincy's definition in 1825. And from this point on, it has been a reference for studies related to this subject. In the 1960s this definition was renewed by Giulio Carlo Argan in his essay *On the Typology of Architecture* and contemporaneously by scholars like Aldo Rossi, Carlo

Aymonino, Giorgio Grassi and others who were also related to typological studies during these years.

Type was originally named as *typos* by the Greeks who inherited it from a verb named *tỳpto* that belongs to prehistoric times and meant: "to beat, to hit, to mark." Afterwards, also mentioned in Plato's, Aristotle's, and Epicurus' writings it was transformed and acquired significations such as *relief*, *engraving*, and *seal* in the areas of writing, of engraving and of sculpture. But within these writings that were related to *philosophy* and *psychology on perception,* the meaning of *typos* became closer to the meaning of the *model*, which was used to explain a set of characteristics present on a group of concrete individuals.[1]

The term *type,* as mentioned above, was first defined in architectural terms by Quatremére de Quincy in his historical dictionary the *Enciclopédie metodique* in 1825. Before this it was mostly used to explain symbolic acts and emblems of Christianity. In Able Boyer's *Dictionnaire Royal Anglois-françois,* 1727, it was stated as "figure," "shadow," or "representation."[2] They were used to describe and read facts and figures related with the bible that were seen "as anticipations and exemplary signals of Christ, with Adam seen as the *typos*, exemplary figuration of Jesus."[3]

The meaning of the notion *type*, however, was not restricted such a frame. It became an abstract and general theory in the late 19th and early 20th centuries within different disciplinary fields such as palaetnology, psychology, medicine, linguistics, and sociology. In the course of time it became a shared theme, a basic way of thinking in mathematical sciences, social and cultural sciences, natural sciences, technical sciences…etc. Thus it gained meanings in a scope that differs from medicine to architecture.[4]

[1] Tullio De Mauro, "Tipologia", in Casabella, 509/510 (jan-feb), 1985, p.89
[2] Quoted in Anthony Vidler, "The Idea of Type: The Transformation of The Academic Ideal, 1750-1830", in OppositionsReader, New York: Princeton Architectural Press, 1998, p. 439
[3] Op.cit., Tullio De Mauro, "Tipologia", p.89. and Leandro Madrazo, The Concept of Type in Architecture, Dissertations ETH No.11115, 1995, p.30
[4] Ibid., p.89

In architecture *type* was sometimes replaced with other terms such as *style*, *character*, *model*, *structure*, *genre* (*species)*. Although, they have some common connotations and have generally a similar intention to describe and explain architecture systematically they have small but basic differences. These differences were explained in general through comparisons, titled as pairs like *type and model*, *type and character*, type *and style* etc…[5] However, this condition of type is not directly related with the scope of this thesis. Therefore, I will give just two examples of these comparisons shortly one of which will be thoroughly discussed in the second chapter.

The most discussed juxtaposition actually is between the terms *model* and *type*, with reference to Quatremére de Quincy and his seminal differentiation between these terms. For Quatremére de Quincy "the idea of the 'model' is *the complete thing*, which is bound to a formal resemblance."[6] "*Model* refers to conscious choice of characteristics contained by the model itself and of an equally conscious and intentional conformation of a practice to the model itself."[7] The model defines an object that, once determined, will be no more something other than what it is and will repeat itself in the field of practice without transformation. On the contrary, a *type* can produce an object that is not expected to resemble itself.

Anthony Vidler by comparing *type and character* mentioned that the concern of the architectural theorists was to differentiate the produced objects, strictly speaking buildings, from each other through their kinds. In this sense they saw the buildings not only in reference to known valid origins as the hut or temple, but also declared that they should have specific aspects through which their purpose could be read.[8] And this condition was stressed by Jacques François Blondel who said that: "all the different kinds of production which belong to architecture should carry the *imprint* of the particular intention of each building, each should possess a character which

[5] We can see them in different essays, for instance, Anthony Vidler, "The Idea of Type: The Transformation of The Academic Ideal,1750-1830", Oppositions Reader, New York: Princeton Architectural Press, 1998.
[6] Quatremére de Quincy, "Type", Encyclopédie Méthodique, Architecture, vol.3, pt. II Paris, 1825. Introduction and English trans.: Anthony Vidler, Oppositions Reader, New York: Princeton Architectural Press, 1998, p. 619
[7] Op.cit. , Tullio De Mauro, "Tipologia", p.89
[8] Op.cit. , Anthony Vidler, "The Idea of Type: The Transformation of the Academic Ideal, 1750-1830, p. 443

determines the general form which declares the building for what it is."[9] Moreover, he "used the word *genre (species)* rather than *type* to clarify that any specific kind of building should be formed and thereby express itself, according to the laws of architectural sensation."[10] In this sense Jacques François Blondel qualified general characters of various kinds of buildings like theatre, colleges, hospitals, factories,..etc.[11] And to support his view he benefited from research in the natural sciences. He thought that classification which was made in regard to species and varieties in the zoological field as *Classes, Orders and Genera* could be applicable for the architect searching for a natural order for his practice.[12] Therefore, in Jacques François Blondel's view the words "*genre* and *species* recall a sytematicity and a conceptual and ontological coherence of genres and species respectively."[13]

Moreover, "the notion of *type* is far less loaded with responsibilities and options; it can play the conceptual role played by the *model*, the *structure*, the *genre*, and the *species*, but with far less constrains. It is compared to other notions, a kind of recognition degree zero."[14] As a result, *type* includes parts of these similar notions that at the end constitute a part of its architectural meaning. The architectural meaning of *type,* also, was transformed in time through different contexts in different periods.

In this sense, the method to discuss the notion of *type* in architecture is a challenge in itself, because of its large spectrum which spanned from *Plato's Theory of Ideas* to the present condition of the *computer aided design* methodology. Therefore, with the intention to explore and clarify the notion of *type* in architecture, the outline of Anthony Vidler's essay *The Third Typology* is used as a loose framework in the context of a historical point of view from the eighteenth century to the twentieth century in reference to three main conditions.

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[9] Jacques François Blondel, (1705-1777), Cours d'architecture, (Paris, 1771-1777), vol.2, p.229 citied in Anthony Vidler, "The Idea of Type: The Transformation of the Academic Ideal, 1750-1830", in Oppositions Reader, New York: Princeton Architectural Press, 1998, p. 443
[10] Ibid. , p.443
[11] Ibid. , p.443
[12] Ibid. , p.443
[13] Op.cit. , Tullio De Mauro, "Tipologia", p.89
[14] Ibid. , p. 89,

The first typology is based on the relation between *type-nature*. Marc-Antoine Laugier, without using the word *type* explains this notion through the *primitive hut.* For him the *primitive hut* "is the model from which all the splendor of architecture has derived."[15] He based all his ideas about architectural reform on this hut, which in his sense indicates the close relation between architecture and nature and he says that "it is with architecture as with all other arts: its principles are founded on simple nature"[16], "based on the fundamental principle of the imitation of nature."[17] The architectural knowledge in this sense is gathered from nature; the *primitive hut* was a transformation, which the human being had to make with the instinct to dwell.

Although, not mentioned in Anthony Vidler's essay, Quatremére de Quincy was another scholar who contributed to the relation between *type-nature.* Actually, the introduction of *type* into architectural theory became a fact through Quatremére de Quincy whose "aim was to transform theoretical speculations about systems inherent in architecture into operative means for making architecture in the modern world."[18] In addition, *type* for Quatremére de Quincy "was not only a static architectural element, it was also an operative principle of creation."[19] He stressed this process of transformation through the transformative power of men that at the end leads to a systematic thought which refers in his notion to the hut, the tent and the cave. And the word *type* was actually used to describe this process.[20] Quatremére de Quincy gives the definition of *type* more clearly, in his historical dictionary, in explaining the difference between *type* and *model*.

Through his definition, which would be stressed in the second chapter, it can be understood that *type*, as a principle leads to a process of creation and transformation within which Quatremére de Quincy "posited the notion of the *ideal* type, never

[15] Wolfgang Herrmann, Laugier And Eighteenth Century French Theory, London, Hertford and Harlow: The Shenval Press, 1962, p.43
[16] Ibid. , p.43
[17] On the subject of imitation of nature see R.W. Lee, 'Ut pictura poesis', The Art Bulletin, XXII, 1940, pp. 203 ff. citied in Wolfgang Herrmann, Laugier And Eighteenth Century French Theory, London, Hertford and Harlow: The Shenval Press, 1962, p.43
[18] Sylvia Lavin, Quatremere de Quincy and the Invention of a Modern Language of Architecture, Cambridge, Massachusetts and London: The MIT Press, 1992. p.86
[19] Ibid. , p.88
[20] Ibid. , p.89

realized, never tangible and visible, and never to be slavishly copied, but nevertheless the representative form of the principle or idea of building."[21] *Type* in this sense is something like an inference of an overlapping knowledge that established through common "particular characteristics", which are observed in each individual building. It is a shared essence that leads the object and shows us a kind of historical condition within which we situate architectural knowledge.

The notion of *type* in eighteenth century architectural theory, was in general affected by the analogy of *nature,* but within the modern architecture *type* shifts into a condition where it was affected by the "*new nature of mass-production*", which was an inevitable influence of the second industrial Revolution.[22] This period named by Anthony Vidler as the second typology, therefore, showed a transformation in the sense of *mass-production* in that "the model of architectural design should be founded in the production process itself."[23] The effect of this transformation in production, as stated by Le Corbusier, was to give the illusion of another nature, the nature of the machine and its artificially reproduced world."[24] As a result, this transformation of *type* which was supported by facts such as economy, modernity, technology, purity…etc. lead to an understanding in that, as Anthony Vidler said, the "Buildings were to be no more and no less than machines themselves, serving and modeling the needs of man according to economic criteria."[25]

And because of this understanding of architecture based on an interpretation of the machine, it was no more possible for the observer or the interpreter to see the object without the technological knowledge of the machine.

[21] Op.cit. , Anthony Vidler, "The Idea of Type: The Transformation of the Academic Ideal, 1750-1830", p. 449
[22] Anthony Vidler, "The Third Typology", Architecture Theory Since 1968, K. Michael Hays Ed., Cambridge, Massachusetts and London: The MIT Press, 1998, p.291
[23] Anthony Vidler, "The Third Typology", Kate, Nesbitt Ed., Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995, New York : Princeton Architectural Press, 1996, p. 260
[24] Op.cit. , Anthony Vidler, "The Third Typology", Architecture Theory Since 1968, p.291
[25] Ibid. , p.291

Anthony Vidler sees the two typologies that are mentioned above as "compared and legitimized by another 'nature' outside architecture itself."[26] The first was legitimised by *nature* and the second by the *new nature of mass-production*, the third typology, however, that is defined by Vidler in the work of the Neo-Rationalists, refers to architecture itself.

However, the reason for the outcome of the new typology was because of the concern for the continuity of form and history in the city which was, as the New-Rationalists believed, threaten by the former elemental, institutional and mechanistic typologies.[27] Furthermore, New-Rationalists seek for the principles of architecture in the "city" as a whole, which they claim is formed by the concept of *type*; "type as a component of research, which allows for transformations in itself."[28]

Therefore, *type* in Rossi's sense as an *apparatus* with the potential of self-transformation leads to the continuity of architecture's history and practice in the city. In such a constructed continuity of transformation, type becomes a kind of code or schema to systemize architectural work as a visualized artifact in the city. In addition, it becomes a part of memory in collecting and replacing the former codes.

Peter Eisenman exposes this relation between type and memory in the introduction of *The Architecture of The City* as:

> "…With the introduction of the memory into the object, the object comes to embody both an idea of itself and a memory of a former self. Type is no longer a neutral structure found in history but rather an analytical and experimental structure which now can be used to operate on the skeleton of history; it becomes an apparatus, an instrument for analysis and measure."[29]

[26] Ibid. , p.291
[27] Ibid. , p.292
[28] Aldo Rossi, The Architecture of the City, 3rd ed. Cambridge, Massachusetts and London: The MIT Press, 1986, p.5
[29] Ibid. , p.7

Within such a relation type is embedded in memory as an overlapping of visual images and meanings through which architecture could be materialized and formally recognized. It is at last an inherent part of architectural knowledge that was used to explain and understand architecture in its own terms, in a coherent way. Moreover, it was an attempt to expose the autonomy of architecture as a discipline.

These changes, which had occurred in different periods, have a common point in that *type* was seen as a visual reference that supplies a memory of architectural knowledge. In the first period through the *primitive hut* it was actually the intention of Marc-Antoine Laugier to show the resemblance of the *hut's* four treeposts to the columns and the four crossbars to the beams. Furthermore, "the hut, as conceived by Laugier, marks column, entablature and pediment as the essential members of any building."[30] Although, not in the same way, Quatremére de Quincy, indicates that *type* refers to the hut, the tent, and the cave. The second period however becomes more complex because of the nature of the machine. The visual references were no more simply observed from the nature itself, they were created and transformed through the abstraction of the nature of the machine that was also related to other disciplines such as technology and economy. In the last condition however, *type* shifts into the autonomous field of architecture where it was considered as a basic *idea* that emphasizes the process of architectural continuity, which was recognized through the visualized *type*, observed over the artefacts within the city.

In all these parts *type* directly or indirectly has a *visual* conception. However, the answer of the question how *type* becomes *visual* in these different processes of architectural periods alters according to the point of view from which one looks at *form* and its combinations in a certain context through memory.

Moreover, *type* in addition to its *visual* conception has, actually, a *non-visual* conception too, which leads to a discrepant problem in that the former indicates a concrete and physical construction and the other an abstract and vague concept. It has a *double nature* that seems to give the concept a potential and power for its

[30] Op.cit. , Wolfgang Herrmann, p.50

transformation towards a key for reading architectural process in a re-constructed continuity.

Therefore, the aim of the thesis will be to explore and clarify the notion of *type* in the context of architecture in which it is actually said that the *visual* condition of *type* appeared in the sense how its *non-visual* condition is re-constructed. And because of this re-construction it is possible to follow the continuity of architectural knowledge, which designates the changing boundaries of the architectural discipline and gives the means for defining it as autonomous.

While speaking about *type* with *visual* and *non-visual* aspects I will introduce Leandro Madrazo, whose dissertation *The Concept of Type in Architecture* is one of the main sources of this thesis. The scope of this dissertation is structured by Leandro Madrazo in a spectrum that begins from *Plato's Theory of Idea* and ends in the field of *computer aided design methodology* in eleven chapters. The dissertation is concentrated on 'the concept of type', which is, in his view, at the same time an investigation into the nature of architectural form.

In chapter six *The Emergence of the Notion of Type: Laugier and Quatremére de Quincy* of his dissertation, Leandro Madrazo mentioned the position of the *double nature* of *type*, which was described, one as *sensible* in the sense of a *physical construction* and second as *conceptual* in the sense of a *conceptual construct* or idea.[31] Moreover, he defines these two conditions as *visual* and *non-visual* in a diagram.

However, the exposition of this condition by Leandro Madrazo will be stressed later in the second chapter of this thesis in more detail. But the terms *visual* and *non-visual* will be used in reference to Leandro Madrazo through the process of this thesis.

[31] Leandro Madrazo, The Concept of Type in Architecture, Dissertations ETH No.11115, 1995, p.171

The content of this thesis which is structured in reference to Anthony Vidler's essay "The Third Typology" includes three main chapters except the introduction and the conclusion part.

The second chapter, the meaning of 'type' in the eighteenth century within reference to 'nature' is about Marc-Antoine Laugier and Quatremére de Quincy notions. It will stress the outcome of the notion of *type* in architecture and its relation with *nature*. The key words that are related to this chapter are *primitive hut, type, imitation,* and *nature.*

The third chapter, the meaning of 'type' in the nineteenth and early twentieth century within reference to the 'machine' is about the period in which *type* shifts into a condition where it was affected by the "*new* nature of mass-production"[32] The key words related to this chapter will be the *modern movement, Le Corbusier, machine, type, standard, and autonomy.*

The fourth chapter, the meaning of 'type' in the late twentieth century within reference to the 'city' is about the intention of the Neo-Rationalist doctrine in which *type* was mentioned as part of the solution to the problem of the discontinuity between history and the city in architecture. The key words related to this chapter are *Neo-Rationalism, Aldo Rossi, city, type, collective memory, and autonomy.*

The conclusion part, however, will discuss the notion that *type* was re-constructed under the specific characteristics of these periods in different ways, which at the end stress its dual situation, in a summarized way.

[32] Op.cit. , Anthony Vidler, "The Third Typology", Architecture Theory Since 1968, p.291.

CHAPTER 2

THE MEANING OF 'TYPE' IN THE EIGHTENNTH CENTURY WITHIN REFERENCE TO 'NATURE'

The cause of the attempt to define the principles of architecture in the eighteenth century by Marc-Antoine Laugier[33] and Quatremére de Quincy[34] was born from a shared anxiety against the formal excesses of their time, seen in the Baroque and Rococo architecture, which occurred after the abandonment of the classical model.[35] It was actually a general resistance in the mid 18th century by the Enlightenment attitude[36] against the anti-classical tendencies which threatened to remove the

[33] Marc-Antoine Laugier (1713-1769) ; Jesuit, Architectural Theorist, Historian, Diplomat. "Laugier entered the Jesuit order at fourteen and succeeded through his talent as an orator in becoming by 1949 the King's preacher. He left the order in 1756 and made a career as an *'home de letters'*, becoming editor of the *'Gazette de France'*, one of the most prominent journals of the time. Besides writing commercially successful books on art criticism, music and history, he published two works on architecture and town planning (1753, 1765). They contain his eloquent plea,…, for the abandonment of heavy construction and over-ornamentation of baroque architecture. In the first book *Essai Sur l'Architecture* Laugier, calls for a functionalist aesthetic in architecture and town planning based on simplicity and essentialism found in nature. The second is more daring in its espousal of innovation in the form of a radical stripping away of ornamentation." citied in Liane Lefaivre and Alexander Tzonis, The Emergence of Modern Architecture: A documentary history from 1000 to 1810, London and New York: Routledge, Taylor and Francis Group, 2004, p.333

[34] Antoine-Chrysostôme Quatremére de Quincy (1755-1849) ; "The arcaeologist, sculptor and antiquarian Quatremére played an important role in forming the cultural policies of France under Napoleon… Quatremére preferred the grandeur and ornamatation of Egyptian architecture to the simplicity of Greek architecture advocated by Laugier and Winckelmann. This orientalist position is expressed in the text *On Egyptian Architecture (1785 composed; 1803 published)* which won the prize of the académie des Inscriptions et Belles-Letters in 1785." citied in Liane Lefaivre and Alexander Tzonis, The Emergence of Modern Architecture: A documentary history from 1000 to 1810, London and New York: Routledge, Taylor and Francis Group, 2004, p.436 And Quatremére de Quincy exposed his architectural argumentations in his historical dictionary the *Enciclopédie metodique* between 1788-125. see Sylvia Lavin, Quatremere de Quincy and the Invention of a Modern Language of Architecture, Cambridge, Massachusetts and London: The MIT Press, 1992.

[35] Op.cit. , Leandro Madrazo, p.172,178

[36] It is explained in Ahmet Çiğdem's book Aydınlamnma Düşüncesi, İstanbul: İletişim Yayınları, 1993 that "the aim of the Enlightenment was to escape from the former dogmas, which were accepted as superstitious and displaced them with the [aklın düzeni] "the idea of order" which they believed were good and right", p.14.

regularity of the classical model through, for example, the *'improper ornaments'* of Rococo.[37]

These principles that should change the situation and restore the notion of classicism lay for both of them in the origins of architecture, which were to be found in *nature*[38]; for Laugier, who does not use the word *type* the principles which respond to this condition were contained in the *primitive hut.* [39]

2.1 Marc-Antoine Laugier

Marc-Antoine Laugier's expectations from these principles was in the broadest sense, a common knowledge of the foundation of architecture which at the end should not only give a social reception but a realization for the public through which it could communicate.[40] In other words, his intention was founded on the concern of the process that should clarify the relationship to *nature* and made it understandable for the public. And to constitute such a general knowledge he searched for *origins,* for a guiding principle.

And in this sense the search for the *origins* by Marc-Antoine Laugier, as Anthony Vidler argues in his book *The Writing Of The Walls*, was related to Jean le Rond d'Alembert philosophical view in that *origins* "referred… to a logical analysis of the principles and development of knowledge."[41] Within this view it is actually stressed that "a return to origins would serve to define the specificity and limits of an area of knowledge, a social institution, or an art."[42]

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[37] This attitude against the Rococo is explained in reference to François Blondel and Claude Perrault theories. citied Hanno-Walter Kruft, (1985) "Relativist architectural aesthetics, the Enlightenment and Revolutionary Architecture", A History of Architectural Theory: From Vitruvius To The Present, Trans. Ronal Taylor, Elise Callander and Anthony Wood. New York: Princeton Architectural Press, 1994, p. 142,145
[38] Ibid. , p.152
[39] Op.cit. , Leandro Madrazo, p.172,178
[40] Anthony Vidler, The Writing of the Wall: Architectural Theory in the late Enlightenment, Princeton, 1987. p.3
[41] Ibid. , p.17
[42] Ibid. , p.17

Jean le Rond d'Alembert clarifies this notion in the *Discours Préliminaire de l' Encyclopédie* in his words:

> "The first step we have to make is to examine, if we are allowed the term, the genealogy and filiation of our ideas, the cause that have given rise to them, and the characteristics that distinguish them; in a word, to return to the origin and generation of our knowledge."[43]

Another study which is mentioned by Anthony Vidler related to the origins is E. B. de Condillac's notion about language. He stresses that the *origin of human knowledge* lies in the beginning that is to say in the primitive languages that include and indicate the experience and the development of knowledge.[44]

Along these lines, Marc-Antoine Laugier has a similar attitude for clarifying his notion of the principles of architecture. Its context is "simple nature" in that the primitive man had to live "in his first origin, with no other assistance or guide than the natural instincts of his needs."[45] This process that should show us the experience and the knowledge of architecture, he believed was found at the beginning; that is, in his view of the *primitive hut*.[46]

Therefore, for Laugier the *primitive hut* evolves through the process of the experience, which came out through the relationship between man and *nature*. He begins to describe this process in the context of the primitive man and his living conditions that occur first in the *forest,* then in the *cave* and completed at the end in the *little rustic hut*. The transition from the forest to the rustic hut was a collision between human being and *nature* in that man had to protect himself firstly from the rain in the forest and then from the cold, darkness and foul of the cave, as a result man decided to build a new dwelling that will cover him, the *little rustic hut.* He uses branches to build the hut, four of the strongest for cornerposts that stand in a square

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[43] Jean le Rond d'Alembert. Discours Préliminaire de l' 'Encyclopédie' (1750). (Paris : Editions Gonthier, 1965), p.19 citied in Anthony Vidler, The Writing of the Wall: Architectural Theory in the late Enlightenment, P.17

[44] E. B. de Condillac. La langue des calculus (1798). citied in Anthony Vidler, The Writing of the Wall: Architectural Theory in the late Enlightenment, P.17

[45] M. A. Laugier, Essai sur l'architecture, 2d ed. (Paris 1755) , p.8 citied in Anthony Vidler, The Writing of the Wall: Architectural Theory in the late Enlightenment, P.18

[46] M. A. Laugier, Essai sur l'architecture, 1755 (I), p.III. citied in Wolfgang Herrmann, Laugier And Eighteenth Century French Theory, London, Hertford and Harlow: The Shenval Press, 1962, p.42-43

another four for the tops across them and some others for forming a kind of roof.[47] The architectural knowledge in this sense is gathered from the *nature*, it was a kind of transformation, which the man had to make as a result of the instinct to dwell.

Moreover, for Marc-Antoine Laugier "this *little rustic hut* is the model from which all the splendour of architecture has been derived."[48] He based all his ideas about architectural reform on this hut, which for him indicates the close relation between architecture and nature and he says that "it is with architecture as with all other arts: its principles are founded on simple nature."[49] The principles of architecture, which are found in nature however, are based on the concept of imitation.[50]

2.1.1 Imitation and Nature

The notion that *architecture took nature as model* in an imitative way was actually not a new one. Before Marc-Antoine Laugier other scholars mentioned that imitation could serve for explanations of how some processes in architecture really occur. Vitruvius, even though his main concern was the human body, saw the proportions of it as a pattern for the building and introduced architecture in this way to a natural order. Hugh of St Victor in the twelfth century, for example, in the attempt to stress that *nature imitates God while man imitates nature* said that, "The first architect watched a mountain and saw how the waters run down; he thus conceived the roof."[51] And Alberti mentioned that architecture should imitate nature in the manner of construction that forms the bone structure of animals.[52]

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[47] Ibid. , p.43
[48] Ibid. , p.43
[49] Laugier, Essai sur l'architecture, 1755 (I), pp II f. citied in Wolfgang Herrmann, Laugier And Eighteenth Century French Theory, p.43
[50] On the subject of imitation of nature see R.W. Lee, 'Ut pictura poesis', The Art Bulletin, XXII, 1940, pp. 203 ff. citied in Wolfgang Herrmann, Laugier And Eighteenth Century French Theory, London, Hertford and Harlow: The Shenval Press, 1962, p.44
[51] See E. de Bruyne, Etudes d'esthétique médiévale, Burges, 1946, II, p.382 citied in Wolfgang Herrmann, Laugier And Eighteenth Century French Theory, London, Hertford and Harlow: The Shenval Press, 1962, p.44
[52] Alberti, Ten Books on Architecture, trans. James Leoni, London, 1755, III, 12 citied in Wolfgang Herrmann, Laugier And Eighteenth Century French Theory, London, Hertford and Harlow: The Shenval Press, 1962, p.44

In addition, Marc-Antoine Laugier's imitation of nature is related to the idea that the column is formed after the image of the tree, which could be perceived in his sketch of the hut. In his *Essai sur l'architecture (Essai on Architecture) 1753* is an article about the column that stresses this relation in 5 points.

Laugier writes:

> "1. The column must be strictly perpendicular, because, being intended to support the whole load, perfect verticality gives it its greatest strength. 2. The column must be freestanding so that its origin and purpose are expressed in a natural way. 3. The column must be round because nature makes nothing square. 4. The column must be tapered from bottom to top in imitation of nature where this diminution is found in al plants. 5. The column must rest directly on the floor as the post of the rustic hut rest directly on the ground. All these rules find their justification in our model…"[53]

Fig 2.1 Charles Eisen, "Allegory of Architecture Returning to Its Natural Model." Frontispiece to M. A. Laugier, Essai sur l'architecture, 2d ed. 1755.

[53] Liane Lefaivre and Alexander Tzonis, The Emergence of Modern Architecture: A documentary history from 1000 to 1810, London and New York: Routledge, Taylor and Francis Group, 2004, p.334,335

Moreover, he said that:

> "…It is by keeping close to the simplicity of this first model that all faults are avoided, and true perfection attained. The upright pieces of wood give us the idea of columns. The horizontal pieces above them give the idea of the entablature. Finally, the inclined pieces which form the roof give us the pediment. This is recognized by all the maters of art. But take note: never has there been a principle more fertile in its consequences. It is easy henceforth to distinguish the parts fundamental to an architectural order from those introduced only as a result of need, or those added by caprice."[54]

From this point of view, Marc-Antoine Laugier sees in the hut the "column, entablature and pediment as the essential members of any building."[55] Therefore, for him the work is perfect when these parts are composed suitably together.

M. A. Laugier states with this interpretation of the *primitive hut* its difference from another notion presumed since Vitruvius. In this notion the primitive hut was in general seen just as the beginning of architecture.[56]

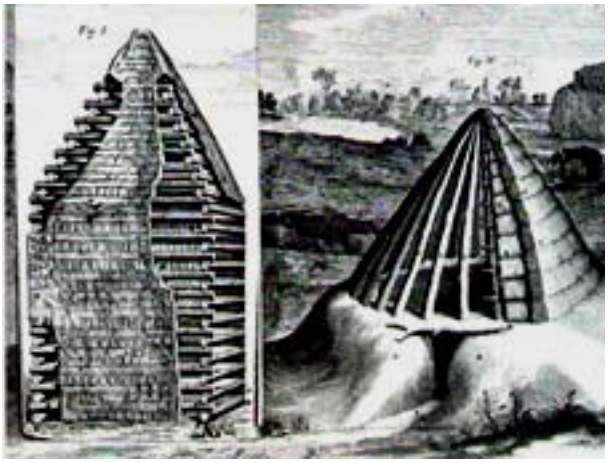

Fig 2.2 Claude Perrault, huts of the Colchians (left) and the Phrygians (right). Illustrations to his translation of Vitruvius, 1684.

Fig 2.3 Charles Delagardette "The origin of Architecture," 1786.

[54] M. A. Laugier, Essai sur l'architecture, 1755 (I), p.8-10. citied in Adrian Forty, Words and Buildings: A Vocabulary of Modern Architecture, London: Themes& Hudson, 2000, p. 222

[55] Op.cit. , Laugier, Essai sur l'architecture, 1755 (I), pp. 14 f. citied in Wolfgang Herrmann, Laugier And Eighteenth Century French Theory, p.50

[56] Hanno-Walter Kruft, (1985) "Relativist architectural aesthetics, the Enlightenment and Revolutionary Architecture", A History of Architectural Theory: From Vitruvius To The Present, Trans. Ronal Taylor, Elise Callander and Anthony Wood, New York: Princeton Architectural Press, 1994, p. 152

However, with Marc-Antoine Laugier the *primitive hut* "becomes the measure of all architecture."[57] Within its described essential parts, the column, entablature and pediment the natural, rational and functional foundation of architecture was completed. It was clarified from this point of view, through the *primitive hut,* which parts were not essential. Such as the wall that was named just as a *'license'* or the pilaster, the arcades which were not part of the structural constitution of the *hut*. (i.e.building.)

Wolfgang Hermann argues that "Marc-Antoine Laugier's hut is not a curious illustration of a distant past or a factor of an evolutionary theory of architecture but the great principle from which it now becomes possible to deduce immutable laws."[58]

In his whole concept about the *primitive hut* Marc-Antoine Laugier explains his idea by step-by-step constituting it and indicating that the transformation process that begins within the origins in nature and ends in the manner of form in architecture.

Nevertheless, this process leads to different interpretations about the *primitive hut* in that it could be seen as two sided; one as *sensible* in the sense of a *physical construction* and second as *conceptual* in the sense of *a conceptual construct or idea*.[59] This condition is named as a *double nature* by Leandro Madrazo in his dissertation *The Concept of Type in Architecture*. He claims that when Marc-Antoine Laugier's notion about the primitive hut is seen through the notions of 'form perception'[60] that began to be discussed in the epistemological field in the second half of the seventieth century, the primitive hut became a condition in which it could

[57] Ibid. , p.152
[58] Op.cit. ,Wolfgang Herrmann, p.48
[59] Op.cit. , Leandro Madrazo, p.171
[60] 'Form perception' is explained under chapter 5 "The Rise of Perception: Epistemological versus Aesthetic Meaning of Form" in Leandro Madrazo dissertion. It is mentioned that the discussion on 'perception' raised with Claude Perrault's "Ordonnance des Cinq Espéces de Colonnes" and continued with other French theorist and architects of that period.

"be understood as the idea that the architect abstracts from the realm of sensible forms. In this regard, a conceptual construct rather than a sensible one."[61]

Therefore, the notion of Marc-Antoine Laugier's *primitive hut* is related with the subject 'perception' in the manner of a metaphor that at the end should give rise for an "idea as a percept created in the mind by impressions received from the world of experience."[62] Leandro Madrazo argued through this attitude that the primitive hut is *a perceptual construct*. Also the side seen as conceptual and the side seen as sensible have followers, who interpreted the notion of the *primitive hut*.

Mentioned by Leandro Madrazo the notions which claim for the *sensible* side as a *physical construction*, for instance, Tom Heath who 'identifies construction with rationalism' said that: "Laugier is the father of structural rationalism: the notion that architecture is 'nothing but' structure"[63] or Wolfgang Hermann interpreted Laugier's theory in saying that: "differing from all previous writers he interpreted the classical principle of the balanced interplay of the whole and its parts in a concrete sense by demanding that the actual construction of a building should be formed by the members hitherto regarded as decoration."[64]

Furthermore, other scholars, who see the *primitive hut* different from the *sensible* side as a *conceptual construct*, as an *idea* include for example, John Summerson. He wrote that the *hut* is a "symbolic diagram [...] that expresses the essence of architecture,"[65] and Joseph Rykwert states that: "the primitive hut is *notionally* primitive. It is a demonstration of a priori reasoning, put forward as a criticism and a percept."[66]

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[61] Ibid. , p.171
[62] Ibid. , p.173
[63] T. Heath, Method in Architecture, 1984, pp.32-33 citied in Leonardo Madrazo The Concept of Type in Architecture, p.175.
[64] Op.cit. ,Wolfgang Herrmann, p.21
[65] Op.cit. , Leandro Madrazo, p.175
[66] Rykwert, On Adam's House in Paradise, 1981, p.48 citied in Leonardo Madrazo, The Concept of Type in Architecture, p.175,176

Leandro Madrazo interprets the condition of this *double-nature* by pointing to Marc-Antoine Laugier's seemingly contradicted own theory, which could be exposed in his use of the word *crouler,* to collapse.[67] He says "the collapse that Laugier is talking about does not refer to the physical stability of the building, but to the inability of a viewer to reconstruct in the mind the different parts of the building to make a coherent whole."[68]

And Leandro Madrazo mentioned two other aspects about the dual condition that he seen in Laugier's theory. One of them is the matter that the hut has no windows, doors and walls. He says that the fact that the hut has no windows, doors and walls points to "an idea or abstract form, the primitive hut would not need doors or walls to protect against the weather. It is a construct of the mind, and as such, it should not be affected by the elements of the natural world. Considered as a physical structure, however, the absence of those elements is hardly justifiable."[69]

The other aspect is related to the sketch of the primitive hut (fig 2.1). It is mentioned by John Summerson that the allegory of the primitive hut in the sketch stands for the visualised structure that "consists of upright posts, cross beams and a pitched roof...This he declared, was the ultimate image of architectural truth."[70] John Summerson in this view actually takes the *primitive hut* "quite literally and have seen it as a physical construction made out of trunks, branches and logs." Although, such a literal reading it is still not constituted just in such a view, as Leandro Madrazo mentioned, it is also seen as "a mental construct- Idea, Form or Type- and, as such, it cannot be, properly speaking, visualized."[71]

The *primitive hut* named as model by Marc-Antoine Laugier therefore has two sites, as mentioned by Leonardo Madrazo, the first notion that the hut is a *conceptual construct* that derives actually from the observation of nature in which it is inherently

[67] Op.cit. , Leandro Madrazo, p.176
[68] Ibid. , p.176
[69] Ibid. , p.177
[70] John Summerson, (1963) The Classical Language of Architecture, London: Thames and Hudson, 1980, p. 91 citied in Leandro Madrazo. The Concept of Type in Architecture. . p.177.
[71] Ibid. , p. 177

embedded. It is not defined as a physical or literal entity; on the contrary, it is the acquired knowledge that man gets from nature as much as he understands and interprets or imitates it. However, in the second step with the transformation of acquired knowledge into a physical construction, the *model* becomes also *sensible* for us. In this sense the transition from the *conceptual* to the *sensible* construction is actually a continuous reaction that materializes through the re-construction of the *conceptual* aspect of the *primitive hut.*

In addition this re-construction put forward in the middle of the eighteenth century, a description of the boundaries of the architectural discipline in that the Greek Temple was interpreted as the sensible perfection of the re-constructed *conceptual* notion of the *primitive hut*. And the essential goal in establishing and clarifying such a process in this period was actually for Marc-Antoine Laugier a method to legitimize the "Greek Temple as the origin of architecture through the simpler model after which it might had been shaped."[72]

2.2 Quatremére de Quincy

Quatremére de Quincy, in contradistinction to Marc-Antoine Laugier, was more strict and clear in clarifying his theory about the principles of architecture. He benefits from the notion of the *primitive hut* that Marc-Antoine Laugier put forward but he was actually the leading figure, "who introduced *type* into architectural theory and his aim in doing so was to transform theoretical speculations about systems inherent in architecture into operative means for making architecture in the modern world."[73]

The common essence that related Marc-Antoine Laugier's *primitive hut* with Quatremére de Quincy's notion of type was the "thought that the *cabane* (primitive hut) is a creation of man's eye, that is to say, an abstract form derived from sensible

[72] Ibid. , p. 179
[73] Op.cit. , Sylvia Lavin, p.86

ones."[74] And to explain his notion about *type* in regard to the *hut* Quatremére de Quincy said that:

> "It is always, and in every age, that one should turn one's eyes to the type of the hut in order to learn the reason for everything that may be permitted in architecture, to learn the use, intention, verisimilitude, suitability, and the utility of each thing. This type, which should never be lost from view, will be the inflexible rule that redresses all depraved customs, all vicious errors that are the inevitable result of blind routine and successive imitation of works of art. In the hand of the artist, it will always have the powerful virtue of regenerating architecture and provoking those sudden changes and revolutions of taste to enchanted mirror, in which corrupted and perverted art cannot bear to look and which, by recalling it to its origin, can always restore it to its original virtue."[75]

Type, therefore, was the notion in which he traces for the first principles that at the end should "define the original reason of a building."[76] But to attend such a standing, the notion of *type* was constituted by Quatremére de Quincy in a context that was based on *imitation* and *nature*.

However, in Quatremére de Quincy's theory the principles of architecture were not limited to the notion of the *primitive hut*. Although, seeing the *hut* as "the type of Greek architecture"[77] he indicated other two types which he claimed were also valid for architecture. Thus, he stressed the problem of the principles in three main issues; that are the *hut,* the *tent* and the *cave*. He explains the evolution of these three types through the relation between human being and *nature* differently according to their particular condition of environment, climate and the way of life. 'The cave was for him the dwelling dug out of the earth, which the hunters and fishermen need for their short habitations. The tents were mobile dwellings, which the gatherers used in their

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[74] op.cit. , Leandro Madrazo, p. 180

[75] Quatremere de Quincy, "Cabane", Encyclopédie méthodique.(Paris,1788), vol.1 citied in Anthony Vidler, The Writing of the Wall: Architectural Theory in the late Enlightenment, p.151

[75] E. B. de Condillac. La langue des calculus (1798). citied in Anthony Vidler, The Writing of the Wall: Architectural Theory in the late Enlightenment, p.17

[76] Robert Jan Van Pelt, Caroll William Westfall, (1991) "Building Types", Architectural Principles in the Age of Historicism, New Haven and London: Yale University press, 1993, p.149

[77] Quatremere de Quincy, *De l'Architecture égyptienne, considérée dans son origine, ses principes et son gôt, et comparée sous lesméme raports à l'architecture grecque* (Paris,1803) citied in Anthony Vidler, The Writing of the Wall: Architectural Theory in the late Enlightenment, p.151

movements. The hut, however, is a more solid and fixed shelter build by the farmer who needs a sure, commodious, healthy and extensive dwelling.'[78] And Sylvia Lavin mentioned that "according to Quatremére de Quincy every architecture could be traced to one of the three typological conditions."[79] Therefore, "the cave was the model for Egyptian architecture, the tent for Chinese and Scyntians; and the hut for the Greeks."[80]

In spite of the differences in the structural and constructional logic underlying these types, the hut, the tent and the cave, their connection with the notion of *type* becomes apparent especially in two points. The first is history, seen as "the plural origins of architecture crystallized in paradigmatic forms of shelter" and the other is the society seen as "each type reflecting a way of life."[81] *Type* in this sense was formed mainly around the questions where we live and how we live.

As Anthony Vidler mentioned:

> "The three principal ways of life offered by nature to men…necessarily modified the first experiments in the art of building in very different ways."[82]

However, from inside of the three kinds of origins the *hut* was the only one whose development could be accepted as a general norm for architecture, because, *as the type of classical architecture* it lasted from the Greeks to the present.[83] And in this context *type* for Anthony Vidler "acted to explain regional and cultural differences while at the same time asserting a fixed and preferential standard, a kind of frozen classification of an otherwise endlessly relativized history."[84]

In addition, in Quatremére de Quincy's notion another characteristic that distinguishes the *hut* from the others was its material. Wood was seen by him as its

[78] Op.cit. , Sylvia Lavin, p.87,88
[79] Ibid. , p.88
[80] Op.cit. , Leandro Madrazo, p.181
[81] Op.cit. , Anthony Vidler, The Writing of the Wall: Architectural Theory in the late Enlightenment, p.151
[82] Ibid. , p.151
[83] Ibid. , p.151
[84] Ibid. , p.151

natural material because of its availability in the areas where the first buildings were formed. Therefore, stone in his sense could not be the material of the first buildings except in Egypt and India.[85] Moreover, the *primitive hut* besides its material was seen as a wood construction which was then actually carpentry. For instance, he described the tree as "the primitive type of the column, not the tree as it exists in nature, but the tree already cut and fashioned by carpentry."[86] Despite the convincing condition of the wood construction Quatremére de Quincy mentioned that the *primitive hut* "necessitated the transposition of wooden forms into stone."[87]

In this sense Quatremére de Quincy said that:

> "Thus, that kind of combination to which the use of wood is susceptible, once adopted in each country, becomes a type, which, perpetuated by custom, perfected by taste, and accredited by immemorial usage, must inevitably pass into undertakings of stone."[88]

In this condition *type* for Quatremére de Quincy "was not only a static architectural element, it was also an operative principle of creation."[89] As Quatremére de Quincy pointed out, creation in the means that materializes through the transformative power of men, at the end, leads to a systematic thought which refers in his notion to the hut, the tent and the cave. And the word *type* was actually used to describe this process.[90]

Like Quatremére de Quincy, although, not similarly other eighteenth-century scholars also dwelled upon the subject of *type*. For example Marc-Antoine Laugier, mentioned before, described the *hut* not as a *type* but as a *model* that derived from the relation between man and nature and said that the primitive hut is the origin whence the classical architecture has developed.[91] Rondelet, however, argued that "the different forms of construction were architecture's first types."… which means that

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[85] Quatremére de Quincy, "Type", Encyclopédie Méthodique, Architecture, vol.3, pt. II Paris, 1825. Introduction and English trans.: Anthony Vidler, Oppositions Reader, New York: Princeton Architectural Press, 1998, p. 619
[86] Quatremére de Quincy, Encyclopédie méthodique, vol. 1 :83 citied in Sylvia Lavin, Quatremere de Quincy and the Invention of a Modern Language of Architecture, Cambridge, Massachusetts and London: The MIT Press, 1992, p.89
[87] Ibid. , p.111
[88] Op.cit. , Quatremére de Quincy, "Type", p. 619
[89] Op.cit. , Sylvia Lavin, p.88
[90] Ibid. , p.89
[91] Ibid. , p.90

"type was a purely structural and material phenomenon." [92] Viel de Saint-Maux was concerned with the way in which architecture embodied the mysterious types and symbols of divine attributes.[93] And Francesco Algarotti an author well known in Europe asked, "Finally where in the world can one find houses made by hand of nature that architects should use as archetypes?"[94]

In all these definitions Sylvia Lavin said that Francesco Algarotti's question came closest to Quatremére's de Quincy notion of type.[95] Although, showing, some similarities with notions developed by others Quatremére' de Quincy's notion of *type* became different within his doctrine of *imitation*. He could at the same time explain the position of *architecture as an art of imitation* and clarify how it imitated nature in a more plausible way than, for instance, Marc-Antoine Laugier did.[96]

2.2.1 Imitation and Nature

The concept of *imitation* in Quatremére de Quincy is the most important part through which type was formed in its actual condition. He explains his ideas of this concept in his essay *L'Imitation* (On Imitation). He distinguishes imitation in two different kinds, real and illusory but his general comprehension of the notion of *type* becomes clarified in the difference between copying and imitating.[97] Leonardo Madrazo stated that for Quatremére de Quincy "imitation conveys the repetition of the idea of an object into another object which in turn becomes an image. A copy, on the other hand, is the repetition of a particular object without necessarily grasping its idea.

[92] J. B. Rondelet wrote all of the articles on construction in the first two volumes of the Encyclopédie méthodique citied in Sylvia Lavin, Quatremere de Quincy and the Invention of a Modern Language of Architecture, Cambridge, Massachusetts and London: The MIT Press, 1992, p.242
[93] Jean-Louis Viel de Saint-Maux was an architect painter and lawyer. In his letter sur l'architecture 1787 he disccused the origins of art in language. citied in Sylvia Lavin, Quatremere de Quincy and the Invention of a Modern Language of Architecture, Cambridge, Massachusetts and London: The MIT Press, 1992, p.242
[94] Francesco Algarotti. Saggio sopra l'architettura.(1784) p.20 citied in Sylvia Lavin, Quatremere de Quincy and the Invention of a Modern Language of Architecture, Cambridge, Massachusetts and London: The MIT Press, 1992, p.243
[95] Ibid. , p.90
[96] Op.cit. , Adrian Forty, p.224
[97] Op.cit. , Leandro Madrazo, p.185

Copying has always a pejorative meaning for Quatremére de Quincy."[98] And this is the point in that he is explaining his notion more clearly than Marc-Antoine Laugier. For instance, the ambiguity between the *physical construct* (a reality of nature) and the *conceptual construct* (an idea in the mind of the beholder) of the primitive hut left the question whether the hut is to be *copied* or *imitated*.[99]

The difference of Quatremére de Quincy is, however, in asking the question: "whether the *nature* that architecture was supposed to imitate referred to the world of physical matter, or to the ideas people held of that world," He answered it by saying that "*nature was both.*"[100]

He stressed this condition in his words:

> "It is necessary to take the word *nature* here in its widest sense, that is, the one which includes the domain of physical beings, and the realm of moral or intellectual thing. … It is not necessary for an art to be called an art of *imitation* that its model be based in an evident and obvious manner on physical and material nature. This sort of model is only accorded to the two arts [painting and sculpture] which address themselves to the eye by the imitation of bodies and colors. … therefore when it is understood that nature is the model for the fine arts, it is necessary to guard against circumscribing the idea of nature within what belongs to her of the evident, the material, in short, within the realm of what falls under the senses. Nature exists as much in what strikes the eye. … To imitate does not necessarily mean to make a resemblance of a thing, for one could, without imitating the work, imitate nature thus, in making not what she makes, but as she makes it, that is, one can imitate nature in her action…"[101]

In this sense, *imitation* which should construct architecture within relation to *nature* became actually fact as much as it grasps the process of *nature*. And it is understand throughout these words that the process of *nature* is not just a physical matter but also an abstraction of her actions. Therefore, in Quatremére de Quincy's view "the model

[98] Ibid. , p.185
[99] Ibid. , p.186
[100] Op.cit. , Adrian Forty, p.224
[101] Quatremére de Quincy, "L'Imitation." in Encyclopédie méthodique, citied in Adrian Forty, Words and Buildings: A Vocabulary of Modern Architecture, London: Themes& Hudson, 2000, p.224

that he proposes as the object of imitation for architecture is clearly an abstract one, the *type*."[102]

Moreover, for Quatremére de Quincy imitation should response *nature's* principles of order and harmony. Thus, he believed that the study of *nature* will show for the architect the way, how he could imitate it in following "the system which nature has developed in all her work."[103]

He wrote that:

> "The general imitation of Nature in her principles of order, of harmony relative to the inclinations of our senses, and to the perceptions of understanding, have given [architecture] a soul, and have made an art no longer copyist, no longer imitator, but a revival of Nature itself…We have seen that Nature offers analogies [to architecture] on all sides. It imitates its model less than it compares itself to her;…it does not make what it see, but as it see it being made; it is not the effect but the cause that it studies: and from the one it is original even its imitation. …Its model being order of Nature, that exists everywhere, without being visible anywhere."[104]

What Quatremére de Quincy, actually, wants to express in his words *"its model being order of Nature, that exists everywhere, without being visible anywhere"* was explained by Leandro Madrazo as an attempt to clarify the process of *imitation* "by transforming the object of imitation from something concrete and visible (the primitive hut, visible forms of nature), into something abstract and invisible, that is, the *type*."[105] And looking relative in this regard, Marc-Antoine Laugier's *primitive hut*, despite it's before mentioned *double-nature,* turns into a visual conception towards the *invisible* condition of *type*. (fig 2.4)

[102] Op.cit. , Leandro Madrazo, p.186
[103] Quatremére de Quincy, "L'Imitation", in Encyclopédie méthodique, vol.2 citied in "On Imitation." in AD : Imitation&Innovation, Vol.58 9/10, 1988.
[104] Quatremére de Quincy, "L'Imitation", in Encyclopédie méthodique, citied in Adrian Forty, Words and Buildings: A Vocabulary of Modern Architecture, London: Themes& Hudson, 2000, p.226
[105] Op.cit. , Leandro Madrazo, p.190

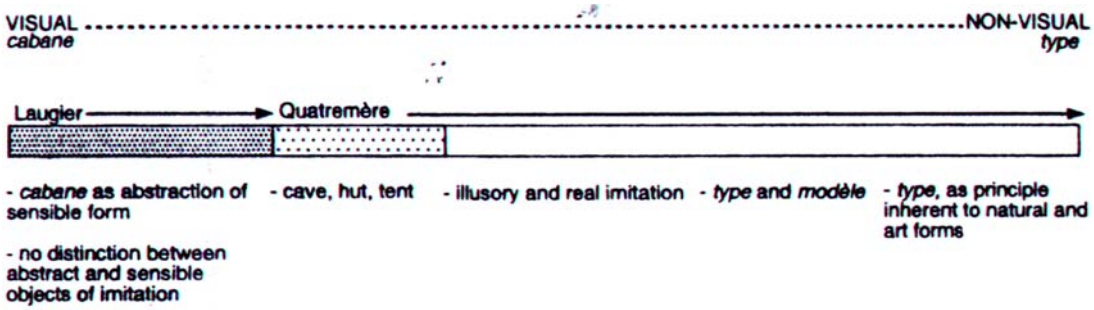

Fig 2.4 Leandro Madrazo's synopsis of the relationship between Laugier and Quatremére de Quincy's theories.

However, with the aim to define the *type* more clearly, Quatremére de Quincy stressed the difference between the "type" and "model" in his historical dictionary the *Enciclopédie metodique*.

He wrote:

> "The word "type" presents less the image of a thing to copy or imitate completely than the idea of an element which ought itself to serve as a rule for the model. Thus, one should not say (or at least one would be wrong to say) that a statue, or composition of a finished and rendered picture, has served as the type for the copy that one made. But when a fragment, a sketch, the thought of a master, a more or less vague description has given birth to a work of art in the imagination of an artist, one will say that the type has been furnished for him by such and such an idea, motif or intention. The model as understood in the practical execution of the art, is an object that should be repeated as it is; the type, on the contrary, is an object after which each [artist] can conceive works of art that may have no resemblance. All is precise and given in the model; all is more or less vague in the *type*. At the same time, we see that imitation of types is nothing that feeling and intellect cannot recognize, and nothing that cannot be opposed by prejudice and ignorance."[106]

Through his definition it could be understood that *type*, even as a principle to create or transform something, has a "vague or indistinct" peculiarity in itself, which cannot be defined in a literal sense. Within this process Quatremére de Quincy "posited the notion of the *ideal* type, never realized, never tangible or visible, and never to be slavishly copied, but nevertheless the representative form of the principle or idea of

[106] Op.cit. , Quatremére de Quincy, "Type", p. 618

building."[107] This "type" seen as *invisible* is something like an inference of an accumulated knowledge that established through the creative mind of man as 'particular characteristics', which are observed in each individual building. It is a shared essence that leads to the object and shows us a kind of historical condition within which we situate architectural knowledge. As a result "type expresses an abstract notion of historical continuity in architecture produced by man."[108]

Moreover, Quatremére de Quincy saw the inference of the notion of *type,* the search for the origin through society and science, in its ability to supply a common understanding between even the different forms which were constituted in the history of architecture.[109] He, thus, removes the uncertainty of Marc-Antoine Laugier's *primitive hut*, and defines *type* as having the capacity for the essence underlying various forms.

Therefore, *type* from the very beginning, traced in the *primitive hut* or in the common 'particular characteristics' of the buildings, is actually *non-visual* (in Leandro Madrazo's terms). Only after the transformation, when it becomes a kind of code or a schema to systemize architectural work, is *type* a *visual* (in Leandro Madrazo's terms) reference. However, we recognize *type* through this *double-nature* (in Leandro Madrazo's terms)*,* in the process of transformation from the common essence (the *non-visual*) into the particular characteristics (*the visual*). It is a re-constructed process, which leads to the knowledge of typology.

However, *type* that materialized within the context of *nature* in this period had to be changed because of the needs of the society, which encountered with the *new industrial reality.*

[107] Op.cit. , Anthony Vidler, "The Idea of Type: The Transformation of the Academic Ideal, 1750-1830", p. 449
[108] Op.cit. , Sylvia Lavin, p.92
[109] Stanford Anderson, "Types and Conventions in Time: Toward a History for Duration and Change of Artifacts", in Perspecta, Vol.18, 1982, p.12

CHAPTER 3

THE MEANING OF 'TYPE' IN THE NINETEENTH AND EARLY TWENTIETH CENTURY WITHIN REFERENCE TO THE 'MACHINE'

After the emergence of the notion of *type* in the eighteenth century architectural theory, which was in general affected by nature, *type* shifts into a condition where it is affected by the "*new nature of mass-production*", which occurs in the second industrial Revolution;[110] a period that began to influence the world in a mechanistic and aesthetic view from the mid nineteenth century up to the twentieth century through machines that is to say, science and technology.[111]

It was a new way to clarify architectural principles by way of an analogy between buildings and machines.[112] Moreover, it was "a *mechanical analogy* that was used in an attempt to solve problems of architectural theory."[113]

This period named by Anthony Vidler as the second typology, was a transformation in the sense of "mass-production of machines by machines. The effect of this transformation in production was to give the illusion of another nature, the nature of

[110] Op.cit. , Anthony Vidler, "The Third Typology", Architecture Theory Since 1968, p.291 The history of the second Industrial revolution began in the mid nineteenth century with rapidly changing social and economic patterns, which extended to virtually the entire continent. Especially in Europe in countries like Germany, England, and France the technological changes like new processes of iron smelting or the expanded steel production expanded the industrial operations. In addition with the development of electrical and internal combustion engines the transmission of power could be used even outside factory centers. As a result the machines were began to used in areas such as cloth manufacturing or bakeries and other food-processing centers which indicated that the machine became a component of social life. In this sense, technological transformation was virtually universal in industrial societies and this condition changes all the known parameters of social life especially in production. "Europe, history of." Encyclopædia Britannica.2006. Encyclopædia Britannica Premium Service. 22. June. 2006 <http://www.britannica.com/eb/article-58448>.
[111] Robert Adam, "Technology and Contemporary Architecture", in Architectural Design.Vol.90 9/10 1989, p.ix.
[112] Peter Collins, Changing Ideals In Modern Architecture 1750-1950, 24 Russell Square London: Faber and Faber, 1965, p.159
[113] Ibid. , p.159

the machine and its artificially reproduced world."[114] Thus, the relation between the column, the house and the city in architecture was now compared to the production of the complex machine beginning from its smallest tool.

Moreover, under the impression of the *machine age*, *type* transformed its self-understanding through facts such as economy, modernity, technology, and purity… etc., into a condition from which the architectural discipline could be re-defined.

Anthony Vidler stressed this change of viewpoint in architecture in his words:

> "Buildings were to be no more and no less than machines themselves, serving and modelling the needs of man according to economic criteria."[115]

This sense, dominated then the whole period through which the rules, the understanding, actually everything was renewed in the attempt to response the necessities of its age.

3.1 The technical transformation

Kenneth Frampton, in his book *Modern Architecture: a critical history,* clarifies the technical evolution in this period, which had began actually in the last quarter of the eighteenth century, with the transformations of the rotary steam power and the iron frame.[116] Throughout the beginning of the technical transformations, the relation, strictly speaking, the integration of this progress with architecture appears in the nineteenth century when elaborate iron elements were incorporated in Neo-Classical architecture.[117] However, until the mid-century, the technical evolution was more apparent in bridge and the railway constructions.[118]

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[114] Op.cit. , Anthony Vidler, "The Third Typology", Architecture Theory Since 1968, p.290
[115] Ibid. , p.291
[116] Kenneth Frampton, Modern Architecture: a critical history, New York and Toronto: Oxford University Press, 1980, p.29
[117] Kenneth Frampton asserted in his chapter "Technical transformations: structural engineering 1775-1939" that "First Rondelt and than Durand codified a technique and a design method whereby a rationalized Classicism

Back then, urban centres like market halls, exchanges and arcades were new challenges. They arise through "cast-iron columns and wrought-iron rails, used in conjunction with modular glazing that constitutes the standard technique for the rapid prefabrication."[119] The prefabrication then gives the possibility for the industrialized countries to reach a level of speed in the way to transport cast-iron structures between large intervals all over the world.[120] Rephrase! not clear. This transformation in the technical field was the starting point that has effected and changed the period not only in the realm of architecture.

The best known example of the period is the Crystal Palace. It was built in London for the Great Exhibition of 1851 by Joseph Paxton, who was a horticulturalist/engineer, in effect; he transferred the greenhouse from one context to another."[121] The theme of the Great Exhibition was founded on tree preservation and an arrangement of a group of mature trees in this exhibition, Paxton designed a central transept with a high curved roof and a double symmetry that constitutes the form of the Crystal Palace.[122]

Fig 3.1 front view of the Crystal Palace

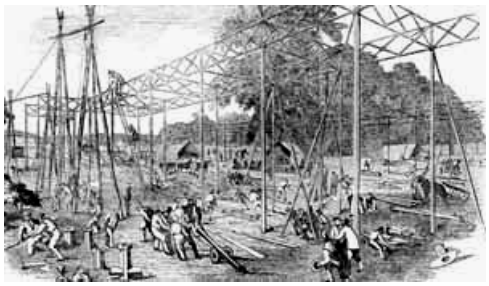

Fig 3.2 the construction of the Crystal Palace

The whole building process of the Crystal Palace was actually an example of the flexibility due to its construction through modular parts. Kenneth Frampton saw the whole "realization of it, which took barely four months, as a simple matter of mass

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could be brought to accommodate not only new social demands but also new techniques. This comprehensive programme influenced Schinkel who, at the beginning of its architectural career in 1816, began to incorporate elaborate iron elements into his Neo-Classical embellishments for the city of Berlin." Ibid. , p.30

[118] Ibid. , p.30

[119] Ibid. , p.33

[120] Ibid. , p.33

[121] William Curtis, "Industrialization and the City: the skyscraper as type and symbol", Modern Architecture Since 1900, 3rd ed., London: Phaidon Press Limited, 1996, p.36

[122] Op.cit. , Kenneth Frampton, p.34

production and a systematic assembly."[123] However, it was for "the Rationalists an evidence for a new architecture" but for others it was at the same time a "brutal materialism and the death of craft." In spite of this difference in interpreting the period through the Crystal Palace, it is no doubt a product that is "constructed following a method of serial production."[124]

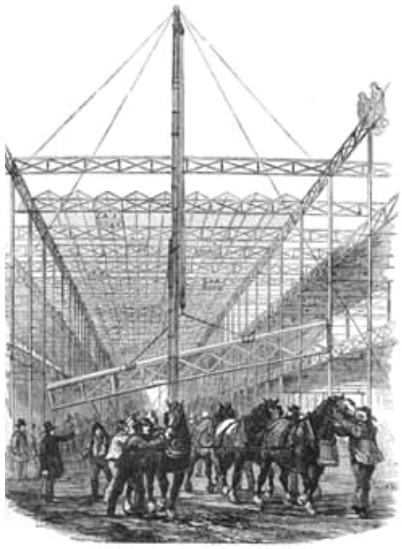

Fig 3.3 Crystal Palace under construction, showing glaziers' cradles

After the achieved standard in technology that became a coherent form on the Crystal Palace, other exhibitions, railways, bridges and stations were also developed especially in France. And examples in Paris like the *Galerie des Machines* in the International Exhibition of 1889 or the Eiffel Tower constitutes an aesthetic convention that renders *the technological power as an instrument of national progress*.[125]

The usage of materials like iron, steel and glass, concrete were another aspect that influenced the development of building construction in this period. Known since the last quarter of the eighteenth century, "cement, was used firstly as a consequential new material by François Coignet in 1861….He developed a technique for

[123] Ibid. , p.34
[124] Op.cit. , William Curtis, p.37
[125] Ibid. , p.38

strengthening concrete with metal mesh named as *ferroconcrete*."[126] In the course of time the development of the technique and use of the reinforced concrete continued in different countries such as Germany, America, England and France. Especially in the last quarter of the 19th century the *reinforced concrete* technique has shown developments that proved its efficiency in building construction. For instance, beginning with the French builder Françoise Hennebique, who had solved the problem of *the provision of a monolithic joint in ferroconcrete* in 1892 it continued with other developments that occurred during the same time and afterwards up to circa 1913.[127]

After the 1913s the development of the reinforced-concrete that seemed to stay between engineering and architecture, mostly nearer to the field of engineering, was integrated into the field of architecture through Le Corbusier's *Masion Dom-Ino,* which became at least, as Kenneth Frampton mentioned "a reference to the development of the *new architecture* after the manner of Laugier's primitive hut."[128]

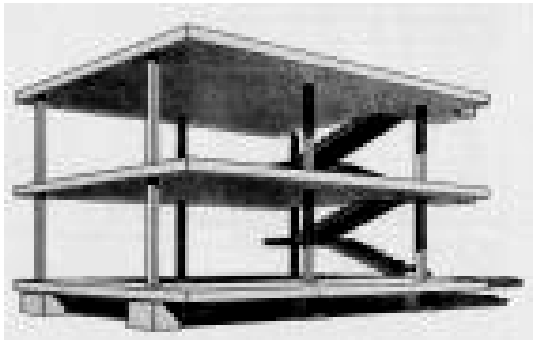

Fig 3.4 Le Corbusier, Masion Dom-Ino, 1915.

[126] Op.cit. , Kenneth Frampton, p.36
[127] Ibid. , p.37,38
[128] Ibid. , p.39

3.2 The analogy through *mass-production and the standard*

The Dom-ino seen as a prototype refers to two properties of Le Corbusier's architecture in this period. As Kenneth Frampton mentioned, "on the one hand it was simply a *technical device for production*, on the other it was a play on the word 'Dom-Ino' as a patent industrial name, denoting *the house as standardized as a domino*."[129] In addition, it is said that Le Corbusier actually wants "to see the Dom-Ino as a piece of equipment, analogous in its form and mode of assembly to a typical piece of product design that were named by him as *Objets-types,* whose forms had already become redefined in response to typical needs."[130]

In Le Corbusier's view these needs were required by the modern society and to respond to them with the means of mass production the new architecture should be based on an idealization of types and forms.[131] These types and forms which came into existence through technology changed at the same time the meaning of architecture. After such a transformation in the formal basis architecture asked no more for conventional signs but for signs that would become its own. And in this sense "architecture was to be not only the symbol but also the instrument of a new society."[132]

The Dom-Ino that was constituted on a six- point support concrete skeleton with cantilevered slabs, therefore, materialized this idea in a fast finish of the modern dwelling with mass produced windows and furnishings.[133]

[129] Op.cit. , Kenneth Frampton, p.152
[130] Ibid. , p.153
[131] William Curtis, "Rationalism, the engineering tradition and reinforced concrete", Modern Architecture Since 1900, 3rd ed., London: Phaidon Press Limited, 1996, p.83
[132] Alan Colquhoun, Modernity and Classical Tradition: Architectural Essays 1980-1987, Cambridge, Massachusetts and London: The MIT Press, 1989, p.167
[133] Op.cit. , William Curtis, p.84

Moreover, Le Corbusier said that:

> "If we eliminate from our hearts and minds all dead concepts in regard to house and look at the question from a critical and objective point of view, we shall arrive at the 'House Machine', the mass production house, healthy (and morally so too) and beautiful in the same way that the working tools and instruments which accompany our existence are beautiful."[134]

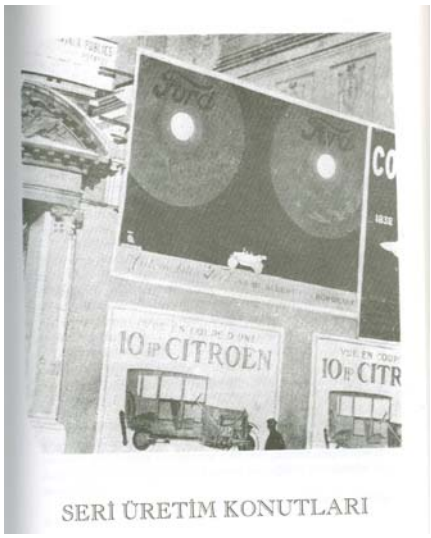

Fig 3.5 A Poster of Mass-Production Houses

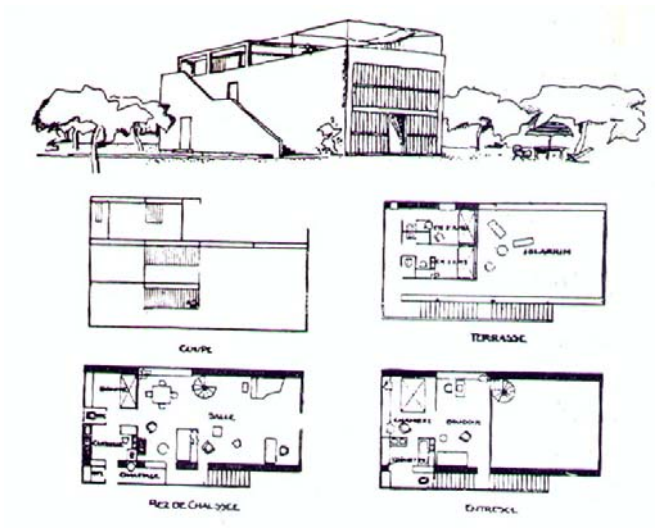

Fig 3.6 Le Corbusier, Project for Maison Citrohan,1920: the forms of a typical studio-house raised to the level of a universal mass-produced dwelling, comparable to a car in price and availability.

Among *the mass production house* examples the Maison Citrohan is one of them, which indicates Le Corbusier's intention that *a house should be as standardized as a car* and to emphasize this notion he used the patent name of an automobile company and played on it.[135] He wrote: "…*houses must go up all of a piece, made by machine tools in a factory, assembled as Ford assembles cars, on moving conveyer belts*."[136]

[134] Le Courbusier, Vers une architecture cited in Kenneth Frampton, Modern Architecture: a critical history, p.153
[135] Ibid. , p.154
[136] Reyner Banham, Theory and Design in the First Machine Age, New York: Praeger Publishers, 1960, p.222

Just like the car, the liner was another subject of analogy for Le Corbusier to explain the new epoch and its influence on architecture. For him the liner was one of the answers that were expected from industrial production. Therefore, in transferring its form, strictly speaking, its general impression to architecture his intention was to shift the meaning of architecture into a new context.[137]

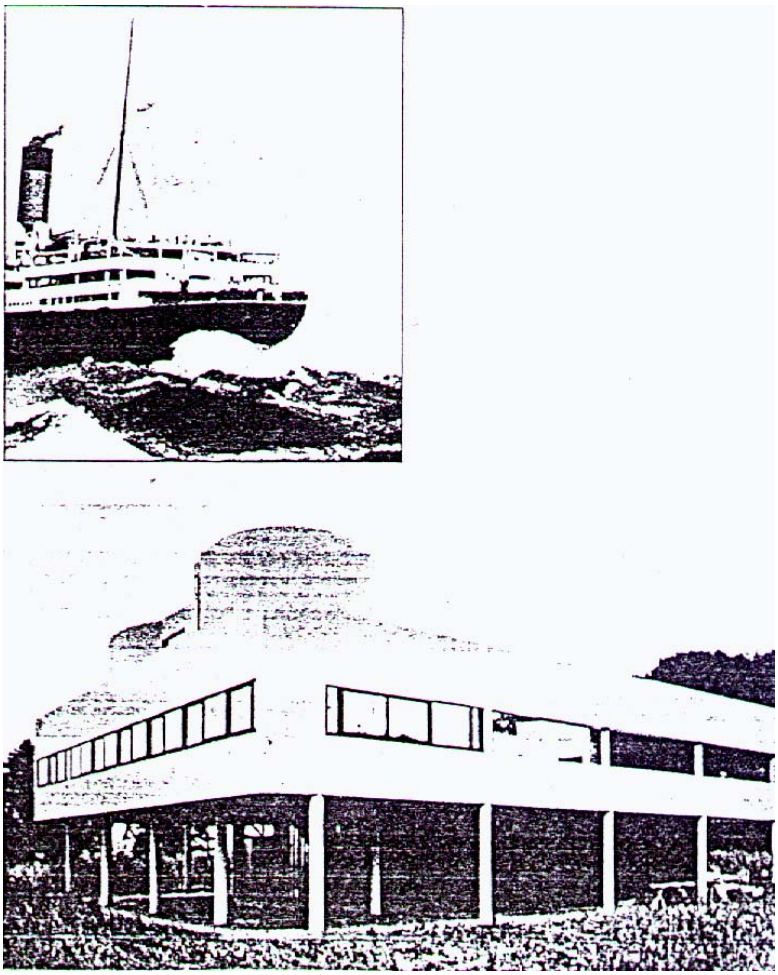

Fig 3.7 Above: Aqutiania, CunardCompany. Below: Le Corbusier, Villa Savoye, Poissy, 1929. The combined image is citied in Peter Eisenman, "From object to Relationship II: Giuseppe Terragni's Casa Giuliani Frigerio", p.40.

[137] Peter Eisenman, "From object to Relationship II: Giuseppe Terragni's Casa Giuliani Frigerio", in Perspecta, Vol.13-14, 1971, p.40

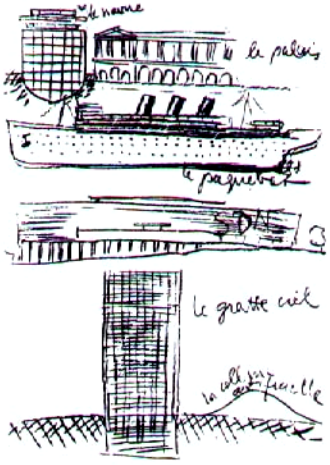

Fig 3.8 Sketch from
Précisions,1929. Le Corbusier

He said about liners that:

> "If we forget for a moment that the steamship is a machine for transport and look at it with a fresh eye, we shall feel that we are facing an important manifestation of temerity, of discipline, of harmony, of beauty that is calm, vital and strong. A seriously-minded architect, looking at it as an architect. (i.e. a creator of organisms), will find in a steamship his freedom from age-long but compatible enslavement to the past[138]

Also Alan Colquhoun stressed the notion of the metaphorical role of the liner in Le Corbusier's architecture in his essay "Displacement of Concepts in Le Corbusier". And he mentioned that the meaning of the ocean liner was not restricted with its design *according to the scientific principles,* it was also a symbol for the organization of the *society* through rational principles. He gives the example of the *Unité d'Habitation* that at same time bears the rational principles and the expression of the form of the ocean liner.[139](fig 3.8)

[138] Le Corbusier towards a new architecture cited in Reyner Banham, Theory and Design in the First Machine Age, New York: Praeger Publishers, 1960, p.242
[139] Alan Colquhoun, (1981) "Displacement of Concepts in Le Corbusier", Essay in Architectural Criticism: Modern Architecture and Historical Change, 4th ed., Cambridge, Massachusetts and London: The MIT Press, 1986, p.63

He said that:

> "The building is poised on its *pilotis* like a ship afloat; its inhabitants have the same relation to the surrounding countryside as the passenger of a linear have to sea. It reproduces the liners communal Promenade decks and its private cabins; its plant is arranged on the roof like the liner' funnels and superstructure. But this is not just a picturesque evocation. The liner is not just a romantic image of the modern age; it is an example of its very principles at work and is thus a valid model for architecture."[140]

As the liner, the airplane was another achievement of the serial production. Its analogy was conceived as "*a little house that can fly and resist the storm*. In the aircraft factories, therefore, the soldier-architect decided to build a house like an aircraft, with the same methods, lightweight framing, metal bracers and tubular supports."[141]

This complementary thinking or the analogy between the house, *Maison,* and the cars, airplanes, ships and machines in general shifts in Le Corbusier' thought to a guiding principle of architecture whose pronunciation could be summarize in his manifestation; "The house is a machine for living in".[142]

The intention which is disclosed by Le Corbusier in the analogical thinking to the cars, airplanes, ships and machines, is actually a way to clarify what he means with *standardization* in a new context.

For instance, as mentioned in Leandro Madrazo's dissertation, Le Corbusier used the development of planes also to explain its notion of *standard.* For him, the analogy with the process in that the planes have to be proved of trial and errors shows us how a standard form is obtained. The process functions in an evolutional way in that the first plane was replaced by another plane whose forms were more reasonable for

[140] Ibid. , p.63
[141] Op.cit. , Reyner Banham, p.222
[142] Ulrich Conrads, (1964) Programs and manifestoes on 20th century architecture, 18th ed., Cambridge, Massachusetts: The MIT Press, 2001, p.60

flying as the former one. In this manner each plane was compared with its former until the trial and errors are exterminated. Thus, at the end the standard form of a plane appears in a required fitness between the form and the function.[143]

In addition, Le Corbusier stressed his notion of *standard* in sentences like "we must aim at the fixing of the standards in order to face the problem of perfection.", or "The Parthenon is a product of selection applied to a standard.", or "Architecture operates in accordance with standards."[144] This *standard*, however, that seems like a general principle for architecture is, in Leandro Madrazo's opinion, "a concrete exemplar, rather than an abstract principle (e.g. type)."[145]

And in the aim to integrate such a standard, which comes into existence through a form evolution, to architecture, Le Corbusier stressed his well known examples of the Parthenon- Delage 1921 Grand-Sport automobile and the Basilica at Paesteum-Humber of 1907 and the automobile analogy in his book *Vers une Architecture nouvelle (Toward a New Architecture).*[146]

It is emphasised by Reyner Banham that this page (fig 3.9), on which the analogy is shown, displays at the first sight for the reader a condition that he is supposed to compare similar things; i.e. between the Basilica and Parthenon and Humber and Delage. But the usual action occurs, actually, in reading the page down which leads in this case to an image of contrast.[147]

In spite of such a comparison it is not obvious how they were compared. Neither the form nor the function of the Greek Temple compares with the car that could be observed directly. And it is known that this was not a comparison between the Mechanical and the Classical.[148] But he tried to establish an analogy between them

[143] Op.cit. , Leandro Madrazo, p.264
[144] Op.cit. , Ulrich Conrads, p.60,61
[145] Op.cit. , Leandro Madrazo, p.264
[146] Alexander Tzonis, (2001) Le Corbusier: The Poetics of Machine and Metaphor, NY: Universe Publishing, 2004, p.41
[147] Op.cit. , Reyner Banham, p.223
[148] Ibid. , p.224

so that “Classical architecture and the Machine design are represented as having in common such ideas as *selection applied to a standard*, and the paring away of accidents from a type.”[149]

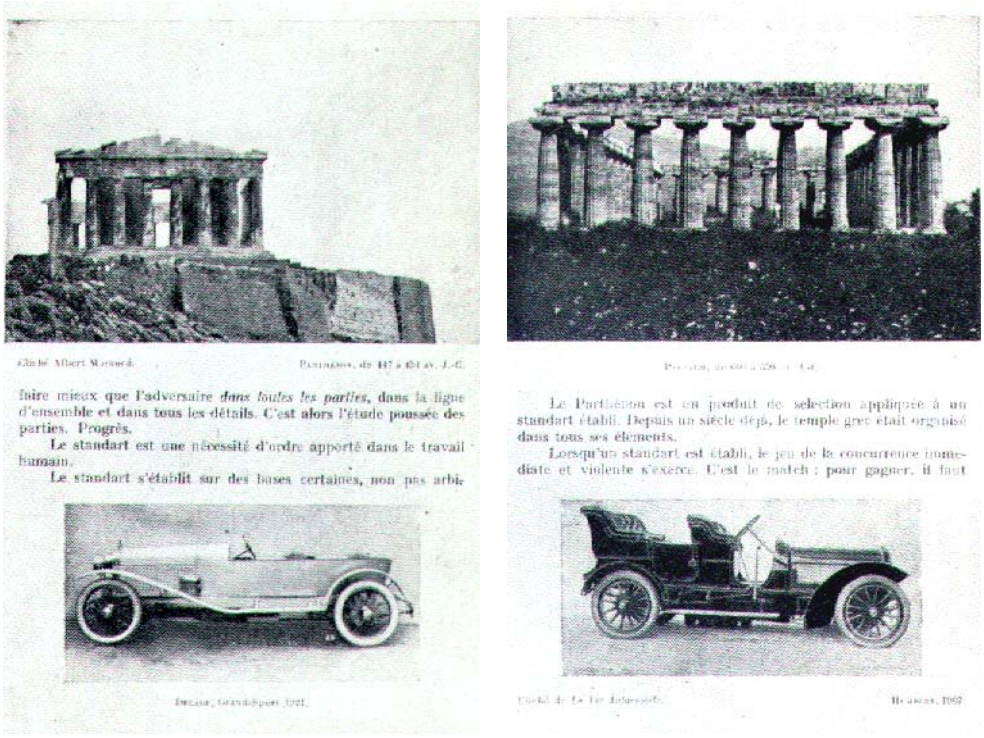

Fig 3.9 The Basilica at Paesteum-Humber of 1907 automobile on the left and on the right the Parthenon - Delage 1921 Grand-Sport automobile.

As mentioned in Leandro Madrazo’s dissertation, the Parthenon, therefore, means in Le Corbusire’s eyes “a gradual transformation from construction to architecture……and for him the *standard* is not the starting point of the process of form development (e.g. the type or the primitive hut) but it represents the culmination of a process of evolution.”[150]

The starting point, however, lies in the interpretation of the machine that raises the question, how *type* could be formed in architecture through the comprehension of the

[149] Ibid. , p.224
[150] Op.cit. , Leandro Madrazo, p.265

new way of thinking. In this sense *type* is a search to understand the changing conditions in this period within architecture. It gives us the possibility to examine this condition between the oscillation of its abstraction of the machine that could be defined as *a conceptual construct (non-visual* in Leandro Madrazo's terms*)* and its standardized perfection that could be defined as *sensible (visual* in Leandro Madrazo's terms*)*.

Moreover, another interpretation on the analogy between the Parthenon and the Machine was made by Danilo Udovicki-Selb in his essay "Between Formalism and Deconstruction: Hans Georg Gadamer's Hermeneutics and the Aesthetics of Reception."

He said that:

> "For Le Corbusier, the Parthenon is a [*machine à émouvoir*.] The *guttae* (fig 3.10) adorning the edges of the entablature appear to us now as series of tightly secured 'nuts' and 'bolts' of a machine, while the *trygliphes* (fig 3.11)are mechanically cut steel bars crafted with the precision and firmness of an object designed for serial industrial production."[151]

In Le Corbusier's view this interpretation lies certainly in his admiration of engineering through which he compares the profiles of the Parthenon with the machine tools as being analogous.[152]

He asserted that:

> "All this plastic machinery is realized in marble with the rigour that we have learnt to apply in the machine. The impression is of naked, polished steel."[153]

[151] Danilo Udovicki-Selb, "Between Formalism and Deconstruction: Hans Georg Gadamer's Hermeneutics and the Aesthetics of Reception", In M. D. Pollak (Ed.), The Education of the Architect: Historiography, urbanism, and the growth of architectural knowledge, Cambridge, Massachusetts: The MIT Press, 1997, p.244
[152] Op.cit. , Kenneth Frampton, p.152
[153] Le Courbusier, Vers une architecture cited in Kenneth Frampton, Modern Architecture: a critical history, p.152

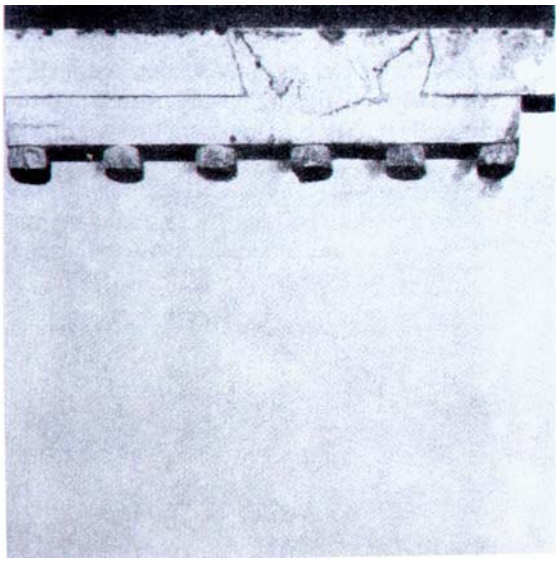

Fig 3.10 Guatte on the Parthenon

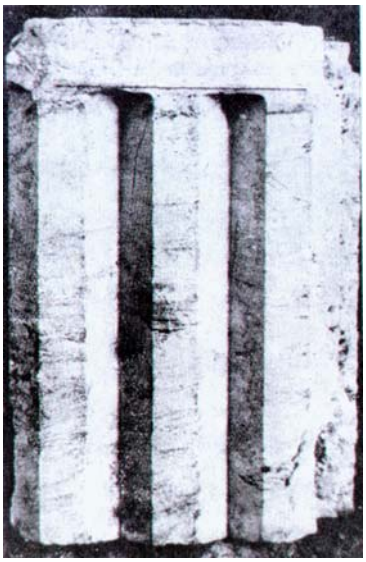

Fig 3.11 A trygliph on the Parthenon

In this sense the meaning of the Parthenon differs from the point of view of Le Corbusier when he interpreted it through the knowledge of the machine. And this condition lets us realize that "the same object…has the 'capacity' to reveal in time quite different meanings, manifestly unforeseen by its creator."[154] Therefore, *the mechanical properties of the Parthenon* described by Le Corbusier's are actually based on the dependence of its knowledge of the machine.[155]

The whole age, influenced by the notion of the *machine* was no doubt a new one. It had its own *spirit* as Le Corbusier said. But in spite of its attractive way William Curtis mentioned that the period could be interpreted from two different viewpoints. First as a new nature where the machine functions as an instrument of progress, which could challenge the existing conditions based upon science and rationality. The second, in contrast, saw the *very image of the machine* as "a destroyer which raped nature, obliterated identity and region, and enslaved the working class in an endless cycle of drudgery."[156]

[154] Op.cit. , Danilo Udovicki-Selb, p.244
[155] Ibid. , p.244
[156] William Curtis, "Industrialization and the City: the skyscraper as type and symbol", Modern Architecture Since 1900, 3rd ed., London: Phaidon Press Limited, 1996, p.35

Although, including seemingly a negative side the influence of the machine affected thought decreased during the 1930s. Reyner Banham saw the problem of this condition in the works (ex. Futurists) that had restricted themselves in "their choice of symbolic forms and symbolic mental processes, and their use of the theory of types."[157] He mentioned that even Le Corbusier, who has stated the technological influence in his book *Vers une Architecture,* was not able to transform architecture with the knowledge of the machine age into a creative discipline.[158] For him the comparison between the car and Parthenon or the other analogies which were used to transform the meaning of architecture through planes and ships became in time just a forced symbolic image in forms and methods.[159]

However, in their intention to follow the continuous process of the technological development that produced at the end a norm or a final type, Reyner Banham has doubts in their attitude and thought that:

> "The designer and the theorists were for allowing technology to run its course, and believed that they understood where it was going, even without having bothered to acquaint themselves with very closely. In the upshot a historian must find that they produced a *Machine Age* architecture only in the sense that its monuments were built in a *Machine Age*, and expressed an attitude to machinery"[160]

He saw the whole process that demanded the integration of architecture with technology at last as a witness which shows the incompatibility of the two which disciplines.[161]

[157] Op.cit. , Reyner Banham, p.327
[158] Ibid. , p.328
[159] Ibid. , p.328
[160] Ibid. , p.329
[161] Ibid. , p.329

3.3 The Autonomy

Furthermore, Beatriz Colomina explained in general the aim of the *Machine Age* in her eassay *L'Esprit Nouveau: Architecture and Publicité* as an understanding that "sustained the myth of the "modern movement" as an autonomous artistic practice and of the architect as "interpreter" of the new industrial reality."[162] And Le Corbusier as one of the specialist interpreters of the *new industrial reality* was part of this autonomous practice that defines in Alan Colquhoun's opinion "a discipline that constitutes a specific technique by which this *reality* is transformed, rather than divorced from contextual *reality*."[163]

For Le Corbusier the transformation of the industrial reality was, actually, the main issue in *Vers une Architecture* as mentioned above. And its basic notion, as said by Alan Colquhoun, "is that by committing himself to the general principles of modern engineering, the architect will rediscover the sources of its own discipline."[164] In this case the intention of the architect to rediscover its discipline has an autonomous stand point.

The notions of an 'architectural discipline' and *type* are closely related to the subject of autonomy. It is said that "the possibility of autonomy ultimately depends on architecture's reference to a priori, ideal forms."[165] However, the difference of the *Machine Age* was that they did not seek after a priori forms; the interest lied in creating "new and modified *types* in the face of new programmatic and social demands. Through this *active type*, the modern movement broke the continuity of an architectural discipline based on the classical tradition"[166] The current manner now within this transition was to adapt to the process and the principles of the *machine*. Le Corbusier shows this notion in his *house type* whose conception includes the

[162] Beatriz, Colomina, " L'Esprit Nouveau: Architecture and Publicit.", in Architecture Theory Since 1968, K. Michael Hays Ed., Cambridge, Massachusetts and London: The MIT Press, 1998, p.628
[163] Alan Colquhoun, Modernity and Classical Tradition: Architectural Essays 1980-1987, Cambridge, Massachusetts and London: The MIT Press, 1989, p.89,118
[164] Ibid. , p.97
[165] Editorial, "Autonomous Architecture" in The Harvard Architecture Review, vol.3, Winter 1984, p.2
[166] Ibid. , p.2

potential of transformation and progress of the *machine*. The *type*, therefore, in identifying itself "with a technological determinism based on progress, became dynamic in nature while remaining stable in origin and essence."[167]

The *types*, in this sense, which have been formed through the abstract notion of technology, certainly "represented the perfection and efficiency of the machine."[168] This acknowledged machine-affected thought, which was based upon an interpretation of the machine, became at last a status where the observer or the interpreter could no more see the object without the technological knowledge of the machine. The meaning, therefore, was not only acquired through architecture, but also with the improvement of technology that was integrated to architecture.

However, Michael Hays indicated that the general intention of the historian or the architect is to protect the original meaning of the architectural object. But he thinks that this is not current because of the changes that affect architecture in time and at last cause a separation between the architectural object and its interpreter. In Michael Hays' opinion, to avoid such a condition "the meaning must be recovered by a disciplined reconstruction of the cultural situation in which the object originated."[169]

From this point of view *type* in the architectural field is tried to be redefined by referring to the machine that is actually a transformed man-made project and an end in itself, which derives from technology. However, the perception and comprehension of the building through the machine gives the opportunity to the interpreter to see the building in another context in which it gains new meanings. *Type* in this condition, as a potential to create new meanings and transformations, does not have literal rules but could be seen as a *conceptual construct* (*non-visual* in Leandro Madrazo's terms). But when the column and other parts of the building were seen as pieces, which came together for a specific function to create a working

[167] Ibid. , p.2
[168] Ibid. , p.5
[169] K. Michael Hays, "Critical Architecture: Between Culture and Form", in Perspecta, 21, 1984, p.16

machine, *type* becomes at the and a *sensible* (*visual* in Leandro Madrazo's terms) object and discloses the process of its own *physical construction*.

This process that adopted *type* as the perfection of the *machine* both in its abstraction and its function, however, was charged with the assertion that it has cause an interruption in the continuity of history in architecture.

CHAPTER 4

THE MEANING OF 'TYPE' IN THE LATE TWENTIETH CENTURY WITHIN REFERENCE TO THE 'CITY'

Anthony Vidler sees the two typologies that are mentioned in the previous chapters as "compared and legitimised by another 'nature' outside architecture itself."[170] The first was legitimised by *nature* and the second by the *new nature of mass-production*, the third typology, however, which is exposed by Anthony Vidler in the work of the Neo-Rationalists, refers to architecture itself. He explained this in saying that:

> "Columns, houses, and urban spaces, while linked in an unbreakable chain of continuity, refer only to their own nature as architectural elements, and their geometries are neither naturalistic nor technical but essentially architectural."[171]

This desire to see architecture rescued from the external influences give then rise to a tendency which constituted the new typology.

4.1 *Neo-Rationalism*

The new typology in the late 1960s and the early 1970s, however, was a project of the *Neo-Rationalist* doctrine, which was constituted by a number of architects such as Aldo Rossi, Carlo Aymonino, Guido Canella, Ezio Bonfanti, Giorgio Grassi, Giorgio Polesello, Luciano Semerani, Nino Dardi, Vittorio Gregotti, and others[172] to

[170] Op.cit. , Anthony Vidler, "The Third Typology",in Architecture Theory Since 1968, p.291
[171] Ibid. , p.291
[172] Ignasi Sola-Morales, "Neo-Rationalism and Figuration", Dr. Andreas Papadakis Ed., in Architectural Design Profile , vol.53 published as a part of AD vol.54, 5/6, 1984, p.15

oppose the elemental, institutional and mechanistic typologies, which do not allow the continuity of form and history in the concept of the city.[173]

Moreover, it was actually a general critic of the orthodox Modern Movement, in which Modern architecture was criticized for its rejection of history that in the end lead to a "formal vocabulary, which was seen by the new generation as too restrictive."[174] In addition, another criticized point was the inter-disciplinary knowledge of the Modern Movement including disciplines like economy and technology that pulled architecture out from its own disciplinary condition,[175] which should actually be "in some sense a discipline of its own whose 'language' was derived from former architectures."[176]

Their thoughts and projects began to evolve during the 1960's under three main influences, which originated form cities of Milan, Venice, and Rome. The first and the most clearly formulated influence was the Milan Polytechnic whose contributors, first as students then as assistants and teachers, like Massimo Scolari, Aldo Rossi and Giorgio Grassi came together around their mentor Ernesto Rogers who was also the editor of the journal *Casabella Continuita*. Carlo Aymonino was teaching at the Venice School of Architecture where the second influence evolved; it was under the direction of Giuseppe Samonà. "The school stressed the importance of relating architecture to the city." And the third influence evolved in Rome around Ludovico Quaroni whose intention differed in that he did not break all the relation to Modern Architecture.[177]

This action of the Neo-Rationalists that began in the 60's, actually, came to its very defined condition in 1973 when the exhibition of Architettura Razionale, as a part of the 15th Milan Triennale which was organised by Aldo Rossi as well Ezio Bonfanti,

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[173] Op.cit. , Anthony Vidler, "The Third Typology", in Architecture Theory Since 1968, p.292
[174] Op.cit. , Leandro Madrazo, p.324
[175] Bruno Reichlin, "Tipo e tradizione del Moderno (Type and the Tradition of the Modern)", in Casabella, 509/510, Jan.-Feb, 1985, p.32
[176] Anthony Vidler, "The Ledoux Effect: Emil Kaufmann and the Claims of Kantian Autonomy", Perspecta, vol.33, 2002 p.27
[177] Op.cit. , Ignasi Sola-Morales, p. 15 and Belgin Turan, "Is 'Rational' Knowledge of Architecture Possible?" in JAE, 51/3 February, 1998, p 159

Rosaldo Bonicalzi, Massimo Scolari, and Daniele Vitali.[178] The exhibition came into existence with the participation of three aspects; the first was the works of the organizers and the second the works of Rationalists during the 1930s and the last was the works of the Rationalist from other countries, like the Krier Brothers[179] from Luxemburg and the New York Five.[180]

The Neo-Rationalists also named as the *Tendenza* by Massimo Scolari had the aim "to redefine the discipline of architecture as an autonomous field with its own [disinterested] history."[181] History in the sense of continuity reveals architecture's own guiding rules and principles.[182]

Moreover, Massimo Scolari mentioned that:

> "For the *Tendenza*, architecture is a cognitive process that in and of itself, in the acknowledgment of its own autonomy, is today necessitating a re-founding of the discipline; that refuses interdisciplinary solutions to its own crisis; that does not pursue and immerse itself in political, economic, social, and technological events only to mask its own creative and formal sterility, but rather desire to understand them so as to be able to intervene in them with lucidity- not to determine them, but not to be subordinate to them either."[183]

Evaluated by K. Michael Hays, this position of architecture, in these years, was against "the pressure of technological optimization and utilitarianism, the demand placed on it as service industry, and the positivist inquiries of the behavioural sciences, sociology, and operations research"[184] to protect its specificity. Therefore, the advocates of this position tried to establish a theory, which could be seen as an

[178] Op.cit. , Ignasi Sola-Morales, p. 15 see also Geoffrey Broadbent, "Neo-Rationalists", in Emerging Concepts in Urban Space Design, London, New York: E & FN Spon, 1990, p.157
[179] Leon and Robert Krier even have not a Rationalist tendency at the beginning of their projects they later pass to a Rationalist line that was concentrated on urban space. They made analytical and typological studies on space evolutions in the urban context.
[180] Geoffrey Broadbent, "Neo-Rationalists" in Emerging Concepts in Urban Space Design, London, New York: E & FN Spon, 1990, p.157
[181] Op.cit. , Belgin Turan, "Is 'Rational' Knowledge of Architecture Possible?" p.159
[182] "The Editorial", The Harvard Architecture Review, vol.3
[183] Massimo Scolari, "The New Architecture and the Avant-Garde", in Architecture Theory Since 1968, Cambridge, Massachusetts and London: The MIT Press, 1998, p.131-132
[184] K. Michael Hays, "Prolegomenon for a Study Linking The Advanced Architecture of the Present to that of the 1970s through Ideologies of Media, the Experience of Cities in Transition, and the ongoing Effects of Reification", Perspecta, 32, 2001, p.100

epistemology based on an architecture that is "a discipline of its own, a cultural practice, and an irreducible mode of knowledge and experience."[185] The theory of typology, constituted by architects in this attempt supplies in K. Michael Hays' words "the resolution of the contradictory desires of autonomy and an architectural representation of the city."[186] In addition, within the general agreement of typology it was aimed to describe the relationship of architecture to cities and to the *continuità* of the built world.[187]

Although, within such a main agreement in the general formation of the Neo-Rationalist movement the methods that put this theory into practice were different from each other. They differ not in using the same subjects like autonomy, discipline but in the relations that constitute these subjects. Aldo Rossi's thoughts became one of these methods, which "at least was more precise and pregnant with developments."[188] "He saw in the concept of *autonomy* a means of saving architecture from an increasingly disseminated field of aesthetic, social, and political authorizations, and understood the word to refer to the internal structure of architectural typologies and forms, as they formed part of the sedimented structure of the historical city."[189]

In this sense Aldo Rossi established his idea through a study in that he saw the city as a whole formed by architecture through its self-referential autonomy, depended on the knowledge of the principles of its own discipline.[190]

The Architecture of The City is one of his works in which he had emphasized this idea. Moreover, Aldo Rossi believed that the whole city could be represented or interpreted by a single building that contains the former codes of architecture.[191] And

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[185] Ibid. , p.100
[186] Ibid. , p.100
[187] Adrian Forty, Words and Buildings: A Vocabulary of Modern Architecture, London: Themes& Hudson, 2000, p.308
[188] Op.cit. , Massimo Scolari, "The New Architecture and the Avant-Garde", p.133
[189] Anthony Vidler, "The Ledoux Effect: Emil Kaufmann and the Claims of Kantian Autonomy", Selected articales from "Autonomous Architecture" in the Harvard Architecture Review, vol. 3 Winter 1984, p.25
[190] Rafael Moneo, "Aldo Rossi: The Idea of Architecture and the Modena Cemetery", Trans: AngelaGiral, in OppositionsReader, New York: Princeton Architectural Press, 1998, p.107
[191] Op.cit. , Adrian Forty, p.311

the drawing Citta Analogica by Aldo Rossi was an attempt to demonstrate this notion.

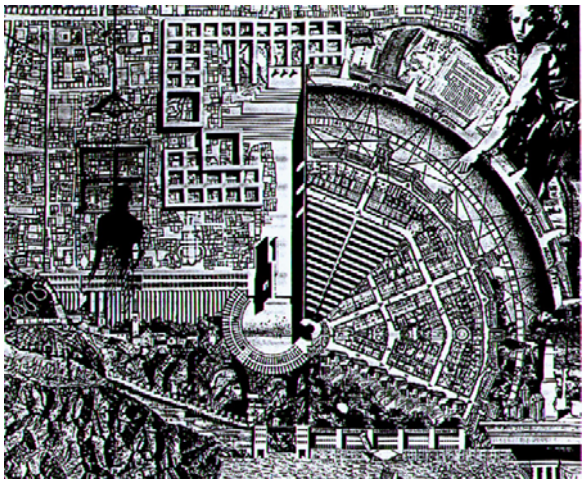

Fig 4.1 Aldo Rossi, Citta Analogica, drawing, 1976.

4.2 Rossi and *The Architecture of the City*

In an attempt to explain his main thesis Rossi starts the introductory part of his book *The Architecture of The City* with:

> "The city, which is the subject of this book, is to be understood here as architecture. I mean not only the visible image of the city and sum of its different architectures, but architecture as construction, the construction of the city over time."[192]

Architecture as construction means in this view to understand silinmiş the city as a whole, which is formed by elements based on rational principles within its own discipline.awkward Mentioned in Rafael Moneo's writing *Aldo Rossi: The Idea of Architecture and the Modena Cemetery*, "the aspect of the specificity of the discipline of architecture, announced by Rossi in his book, is to understand how the city is constructed, how it is produced from architecture, and how it forces the establishment of an autonomous discipline …"[193] The question 'how the city is

[192] Op.cit. , Aldo Rossi, p.21
[193] Op.cit. , Rafael Moneo, p.108

constructed' indicates the concept of the elements, the *Primary elements* seen by Rossi as a part of the evolution and formation process in characterizing the city over time in a permanent way.[194] Moreover they are mostly seen as physical, constructed, measurable artefacts, which act like catalysts in the spatial transformation of the city. For instance; buildings, monuments and sometimes even special events that create a spatial transformation are primary elements.[195] And in this sense Rossi explains that:

> "To conceive of a city as founded on primary elements is to my mind the only rational principle possible, the only law of logic that can be extracted from the city to explain its continuation."[196]

Therefore, "the experience of the city, for Rossi, is what permits the discovery of these elements, and identification of them as urban facts, … in a particular place. These elements are intelligible through memory, not through remembering."[197]

The tools, however, to read the whole permanent process of these relations in the context of the city are for Rossi fundamentally "history" and "typology".

Peter Eisenman explains Aldo Rossi's notion of *history*, in the idea of an "analogy" to a "skeleton" that is realized as an equivalent of the whole actions that occurred and will occur in the city and "*whose condition serves as a measure of time and in turn is measured by time.*"[198]

Typology on the other hand is the tool (*apparatus*) of this measurement of time in which its task is to code the actions. *History* and *type* in this sense are the elements of these processes through which the research of the transformation of the city, which means architecture is materialized.

[194] Op.cit. , Aldo Rossi, p.86
[195] Ibid. , p.87
[196] Op.cit. , Aldo Rossi, p.126
[197] Op.cit. , Rafael Moneo, p.108
[198] Op.cit. , Aldo Rossi, p.5

In the attempt to expose the idea of this new construction of architecture and, the city, Rossi emphasizes the role of *typology* and mentions that typology however never seen as having the most potential to proceed a *design process,* has the possibility of invention,[199] invention in the sense of creating new meanings through the idea of *type* as an *apparatus.*[200] *Type* in this sense is seen as both the process and the object at the same time.[201] The process as an aspect of *type* refers to its *manifestation of form*. In addition, it also indicates the possibility for invention through the *alterations of certain typological elements*. Within such a condition typology, besides its former consistence of known classification could now operate as *a catalyst of invention*.[202] Typology, therefore, could be seen as an inquiry into *type*.

4.2.1 Type

In the study of *typology* all scholars, who were related to this subject, turn back to a common point in the need to explain their own notion of *type*: that is the definition of *type* and *model* constituted by Quatremére de Quincy. However, Giulio Carlo Argan was the first architectural historian who revived Quatremére de Quincy's definition of *type* in his essay *On the Typology of Architecture* in the 1960s.[203]

Through its essay, in which the question of typology was exposed, Giulio Carlo Argan stated that typology was "a function both of the historical process of architecture and also the thinking and working process of individual architects."[204]

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[199]Op.cit. , Aldo Rossi, p.8
[200]Seungkoo Jo, "Aldo Rossi: Architecture and Memory", in Journal of Asian Architecture and Building Engineering, Vol.2, no.1, May 2003, p. 236
[201] Op.cit. , Aldo Rossi, p.8
[202] Ibid. , p.8
[203] "Introduction", Argan, Giuilo Carlo, "On the Typology of Architecture", in Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995, Kate Nesbitt Ed., New York: Princeton Architectural Press, 1996, p.240
[204] Argan Giuilo Carlo, (1962) "On the Typology of Architecture", in Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995. Kate Nesbitt Ed., New York: Princeton Architectural Press, 1996, p.242

In this view it was actually the aim by Giulio Carlo Argan , in Micha Bandini's words, "to demonstrate that *typology* is not merely a system of classification but rather a creative process."[205] And to express this notion he took the advantage of Quatremére de Quincy's definition of *type* that begins with " *type* does not present so much an image of something to be copied or imitated exactly as the idea of an element which should itself serve as a rule for the model…" and ends in declaring the difference between *type* and *model* in which the *model* was seen as "…an object that should be repeated as it is; the type, on the contrary, is an object after which each [artist] can conceive works of art that may have no resemblance. All is precise and given in the model; all is more or less vague in the *type*…"[206]

In addition, *type* for Quatremére de Quincy "was not only a static architectural element, it was also an operative principle of creation."[207] And In this process of creation "type" was used by Quatremére de Quincy to describe man's attitude of transformation.[208]

Aldo Rossi subscribes to this definition of *type* in the sense it is an element that is seen 'as a component of research, which allows for transformation of itself'.[209] Moreover, *type* as a kind of tool gained the possibility to guide the "design process". It is a process in which *type*, creates through its gathered and transformed meanings over time. Because of these different meanings that the notion of *type* includes, it could be recognized in each building differently. It has not a defined frame in which it occurs, on the contrary, it has the possibility to transform itself continuously. And even the reality of *type* could be observed particularly *visually* in each transformation, it could not be described only in one way. As Rossi says, "no type can be identified with a particular form but all architectural forms can be referred to types."[210]

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[205] Micha, Bandini, "Typology as a Form of Convention", in AA Files 6, 1984, p.75
[206] Op.cit. , Quatremére de Quincy, "Type", p. 618.
[207] Op.cit. , Sylvia Lavin, p.88
[208] Ibid. , p.89
[209] Op.cit. , Aldo Rossi, p.7
[210] Ibid. , p.41

This seeming plurality of *type* is also mentioned by Giulio Carlo Argan. He described this condition saying that:

> "Type is characterized as a set of rules deduced through a procedure of reduction of series of formal variants from a base-form or from a communal scheme. If the type is the product of this regressive procedure, the found base-form cannot be understood as a mere structural framework, but either as a internal framework of form in its autonomous artistic value or as the principle which includes in itself not only all the formal configurations from which it has been deduced but also the possibility of further variations and even the complete modification of the structure of the given types."[211]

Therefore, *type* becomes, actually, a *non-visual* (in Leandro Madrazo's terms) concept, which has its vagueness in its plural potential. However, in an attempt to systemize *type* in a precise functional definition such as hospital, factories, theatres, schools…etc. it becomes for us a reduced *visual* (in Leandro Madrazo's terms) concept, which losses its potential plurality.

Giulio Carlo Argan at this point shares the idea of the vagueness of *type* but says that in this position *type* cannot directly affect the design process of the buildings or the formal quality of it. For him *type* from the beginning contains formal and functional analogies of buildings through which it creates answers for the complex ideological, religious or practical demands, which arises in specific historical conditions.[212]
In addition he says that:

> "Type has to be understood as the interior structure of a form or as a principle, which contains the possibility of infinite formal variation and further structural modification of *type* itself."[213]

[211] Giuilo Carlo Argan, "Typology", in Enciclopedia Universale dell'Arte 1. vol. XIV, Venice: FOndazione Cini, 1958 citied in Micha Bandini, "Typological Theories in Architectural Design", in Companion to Architectural Thought, Farmer, Ben and Hentie Louw Eds., London, New York: Routledge, 1993, p.390
[212] Op.cit. Giuilo Carlo Argan, "On the Typology of Architecture", p.243
[213] Ibid. , p.243

Thus, *type*, more or less similarly defined in the context of architecture by others and by Aldo Rossi, actually had the general aim to explain and understand architecture in a coherent way, using the terms of architecture.

In this sense Aldo Rossi stated that:

> "Type is thus a constant and manifests itself with a character of necessity; but even tough it is predetermined, it reacts dialectically with technique, function, and style, as well as with both the collective character and the individual moment of the architectural artefact."[214]

Furthermore, "it is understood as an epistemological category with which it would be possible to build a scientific basis for the discipline of architecture. For the advocates of typology, *type* was the link between tradition and modernity, it was an abstraction derived from existing architectural works, which, in turn, would serve as a generative principle for new ones.[215] In Aldo Rossi's terms however type at last comes to that understanding through the formation of the city.

He says that:

> "We can say that type is the very of architecture, that which is closest to its essence. In spite of changes, it has always imposed itself on the [feelings and reason] as the principle of architecture and of the city."[216]

In this sense *type* acquires and accumulates a potential of meanings that are gained over time. And because of this process *type* has the possibility to transform itself continuously. For us the continuity of *type* becomes visible in the form of architectural/urban artefacts, which are permanent in the city (ex. Building, monument…). They are part of the history that constitutes the city; further, they cause a historical continuity between the past and the present, which could be recognized through memory.

[214] Op.cit. , Aldo Rossi, p.41
[215] Op.cit. , Leandro Madrazo, p.303
[216] Op.cit. , Aldo Rossi, p.41

Actually, Peter Eisenman, in explaining Aldo Rossi's notion of history and memory, describes the relationship between them in an exchanged way in that memory, which is established through history, however, begins with the end of it.[217] He stresses this in saying that:" history exists so long as an object is in use; that is, so long as a form relates to its original function. However, when form and function are served, and only form remains vital, history shifts in the realm of memory."[218]

Thus, we can mention that the object that is part of the material world contains history, which becomes understandable for us only when the object transforms "into a sign, a record of events that are part of the memory."[219]

In addition, Rafael Moneo's definition of history resembles this notion at the point where the object inherently is the conveyor of the history through which we could recognize it, but only through a history which comes into existence as collective memory.

He says that:

> "History, the collective memory of a certain past, is poured into the architectural object in order to make it intelligible, thus recovering its nature."[220]

Memory therefore is seen as a force in the continuity of the past but not as "the retrieval of stored information, but the putting together of claim about the past states of affairs by means of a framework of shared cultural understanding."[221]

In this sense the relationship between type, urban artifact, memory and history leads to the continuity of the process of architecture, which could be obtained formally within the city in places where architecture has the opportunity to be realized and

[217] Ibid. , p.7
[218] Ibid. , p.7
[219] Ibid. , p.7
[220] Op.cit. , Rafael Moneo, p.115
[221] Alan Radley, "Artefact, Memory and a Sense of the Past", in Collective Remembering. David, Middelton and Derek Edwards Ed., London: SAGE Publications, 1990, p.46 Quotation from Barlett, F.C. (1932) remembering: a Study in Experimental and Social Psychology. Cambridge: Cambridge University Press.

identified as an individual artifact. Aldo Rossi sees urban artifacts as difficult to define and complex in themselves; they are individual and collective all together, individual in the sense of a singular constructed element in a specific *locus* and collective in the sense of its gained different and various meanings. Place on the other hand is more specifically defined by Aldo Rossi as the *locus*: "the relationship between a certain specific location and the buildings that are in it. It is at once singular and universal."[222]

But to understand this continuity of the process the key is in the relation between memory and *type*. Memory, individual or collective, leads us to recognize *type* through artifacts and their location in specific places within which our collective memory operates. Therefore, the understanding and perception of architecture confirms through collective memory as the guiding rule in the city of artifacts. Aldo Rossi gives explicit examples of these artifacts in his book *The Architecture of The City*. For instance, the monument *Palazzo della Ragione,* which is in the city of Padua in Italy is seen by him as an individual artifact through which we live and experience the city.[223]

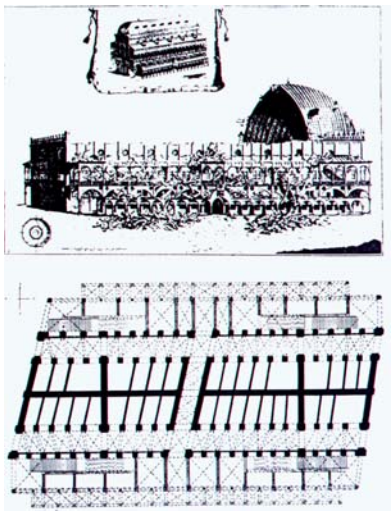

Fig 4.2 Palazzo della Regione, Padua, Italy. Above: "Drawing ofthe remains of the Salone della Ragione ruind by a hurricane onAugust 17, 1956," by Giorgio Fossati. Below: Ground floorplan as it has existed from 1452 up today, according to thereconstruction by A. Moschetti. Thirteenth-century walls in black.

[222] Op.cit. , Aldo Rossi, p.103
[223] Ibid. , p.29

Fig 4.3 Palazzo della Regione, Padua, Italy.

And other examples were also given by him to stress the relation between the urban artifact, memory and locus such as pilgrimage, piazza (squares); elements which at least constitute the structure of the cities, in Aldo Rossi's case the cities of Italy.

4.2.2 Collective Memory

Peter Eisenman exposes this relation between *type* and memory in the introduction of *The Architecture of The City* as:

> "The new time of architecture is thus that of memory, which replaces history. The individual artefact for the first time is understood within the psychological construct of collective memory. Time as collective memory leads Rossi to his particular transformation of the idea of type. With the introduction of the memory into the object, the object comes to embody both an idea of itself and a memory of a former self. Type is no longer a neutral structure found in history but rather an analytical and experimental structure which now can be used to operate on the skeleton of history; it becomes an apparatus, an instrument for analysis and measure."[224]

It could be said that in Rossi the collective memory becomes through *type* the most important tool with which the city and its components come together as a meaningful architectural reality in a particular culture or society.

[224] Ibid. , p.7

For Aldo Rossi:

> "One can say that the city is the collective memory of its people, and like memory it is associated with objects and places, the city is the *locus* of the collective memory. This relationship between the citizenry then becomes the city's predominant image, both of architecture and landscape, and as certain artefacts become part of its memory, new ones emerge. In this entirely positive sense great ideas flow through the history of the city and gives shape to it."[225]

Therefore, collective memory actually is a conception between the city and the *social agent* of the city. And it is possible to observe the collective memory on the collective and individual nature of the urban artefact. "The nature of the urban artefact, thus, creates the urban structure. Memory, within this structure, is the consciousness of the city."[226]

Memory even more sociologically discussed by Maurice Halbwachs was a reference for Aldo Rossi and many others in the study of collective memory.[227] M. Christine Boyer one of these scholars mentioned that:

> "Halbwachs' memory was based on lived experience, something that reached out of the past and seized the individual in the manner of naïve and immediate knowledge. Memory had to be linked to lived experience: otherwise it was reduced to [history,] becoming abstract or intellectualised reconstructions, debased or faked recollections."[228]

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[225] Ibid. , p.130
[226] Ibid. , p.131
[227] Maurice Halbwachs thoughts on the subject of 'collective memory' were not the only one that Aldo Rossi used to explain the relation between the artifact and the city. He benefited also from the geographers of French School like Pierre Lavedan, Georges Chabot, Jean Tricart, and Marcel Poéte to explain his theory of the urban artifacts. Chabot studies as Rossi himself stated was related to the study of the city which he believed "is a totality that constructs itself." However, in mention Jean Tricart studies Rossi points to the urban evolution that takes the city as the social content. And with respect to Pierre Lavedan's work Rossi emphasized "the structure of the urban artifacts" including the streets, the monuments and the like. In addition Rossi refers to Marcel Poéte's "the theory of permanences" through which he explains the urban artifacts within the difference of past and future. The past is seen as a fact that "is partly being experienced now." Op.cit. , Aldo Rossi, The Architecture of the City, p.51,55
[228] M.Christine Boyer, The City of Collective Memory, Cambridge, Massachusetts and London: The MIT Press, 1996, p.26

Moreover, Maurice Halbwachs describes "collective memory as a social construction."[229] The constitution and support of the collective memory as a social construction, however, materialises through individuals who are part of a *social group* which are delimited in space and time.[230] Every social group has its own memory that is constructed through individuals as group members who remember and recall the past in the concern of the present.[231] And in Maurice Halbwachs' sense this "memory made the rememberer aware of time and offered a perspective on the past that membership in a group provided."[232]

Furthermore, the methodology to understand the whole context of the relation between collective memory and the group is the *social morphology* in which the spatial distribution of human population and the material settings of societies play an important role.[233] More simplified, it is an attempt to explain the life of a social group, which is restricted to a specific space and time.[234]

The attempt in referring to Maurice Halbwachs in a short view after Aldo Rossi, in the continuity of the discussion was actually to emphasise that the collective memory depends on a defined domain (in Rossi's case the city); is a construction (architecture); has a *social agent* to recall and remember the past in the form of memory (*type* through which memory operates) and has the methodology to understand its own process (architecture).

Within collective memory, remembering is seen as an act that recalls the past in a constructed way. The ways, in which we remember the past, however differ. It could be institutional or individual but in both cases the material world is the main field through which we actually remember. The material world is constituted from images, objects, artefacts, bodily experiences, ceremonies…

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[229] My knowledge on this issue depends on the theme Memory discussed in the course "Arch 526 Politics and Space" Fall 2004-2005 given by Assoc. Prof. Dr.Güven Arif Sargın.
[230] Maurice Halbwachs, On Collective Memory, Chicago: The University Of Chicago Press, 1992, p.22
[231] Ibid. , p.25
[232] Ob.cit. , M.Christine Boyer, p.26
[233] Ob.cit. , Maurice Halbwachs, p.15
[234] My knowledge on this issue depends on the theme Memory discussed in the course "Arch 526 Politics and Space" Fall 2004-2005 given by Assoc. Prof. Dr.Güven Arif Sargın.

Furthermore, remembering is not just simply the act of recalling the past, it is rather the fact that "our experiences of the present largely depended upon our knowledge of the past, in which our images of the past commonly serve to legitimate a present social order."[235] Thus, it is possible to understand that our past experiences actually form the context in that we experience our present. In other words, we look from the present into the past through our past experiences and reconstruct them to form the present.

Therefore, "in the dynamic process of memory we reconstruct the past in each present moment when we remember. For Rossi, the inventive nature of this process is adopted in order to maintain a relationship to the history of architecture, but also to inspire new meanings and associations (correspondences) within the framework."[236]

The relationship to the history of architecture is the memory. As mentioned before memory reconstructed the past through *type* and reveal the *type* within which we can explain the continuity of architecture that comes to shine as a meaningful construction in architectural elements. Alan Colquhoun says in this sense that "typology, as an instrument of cultural memory, is a condition of architectural meaning. It is the context with which new work is understood."[237] The architectural meaning, however, is embedded in the artefacts, which are designed through the knowledge of type, which "depends on the existence of pre-established types…"[238]

In this sense the reason of the continuity of architecture, even historically or practically, is *type*; defined as an instrument that transforms itself and gains new meanings without loosing its former meanings. And because of its former meanings

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[235] Paul Connerton, How Societies Remember, Cambridge University Press, 1989, p.3
[236] Jeremy J. Beaudry, Meaning Building: Aldo Rossi and the Practice of Memory, Unpublished MS in Architectural Studies, The University of Texas at Austin, December 2002, p.70
[237] Alan Colquhon, "Typology and Design Method", in Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995. Kate Nesbitt Ed., New York: Princeton Architectural Press, 1996, introduction.
[238] Alan Colquhon, (1981) "Int.: Modern Architecture and Historicity", in Essays in Architectural Criticism: Modern Architecture and Historical Change, 4th ed. Cambridge, Massachusetts and London: The MIT Press, 1986, p.15

it is already a part of the collective memory, therefore within the collective memory we remember and reconstruct through *type*. And as a result of this reconstruction we recognize and understand the artefacts in the context of the city.
Therefore, *type* as the reason of transformation and the historical continuity in architecture in the context of the city is at the same time responsible for the reconstruction of the collective memory.

The attempt by Rossi to explain architecture, as architecture in a logical expression[239] seems to have a coherent foundation but when we look at architecture today it is evident that it is not possible to create architecture only in such a frame. However, even though it is not a leading thought, it is a past experience in the architectural field that of course was and is one of the most provocative periods through which the present architectural area is reconstructed.

[239] Ob.cit. , Jeremy J. Beaudry, Meaning Building: Aldo Rossi and the Practice of Memory, p.41

CHAPTER 5

CONCLUSION

At the end of these three chapters it is obvious that the conception of the mentioned *type* in each period is not the same. Although, the last interpretation made by Aldo Rossi is related to the first formation of Quatremére de Quincy's *type* it is again different in its intention and operation. However, the interesting aspect of *type*, in this thesis, is seen in its differences that did not hinder its permanence as a *subject matter* in architecture. But of course there were reasons that distinguished *type* in each architectural debate.

The architectural debates, in which *type* was one of the main subjects, as mentioned throughout the whole thesis, were started first at the end of the eighteenth century when the insistence on the tradition of classical architecture against the formal developments became a problem of primary significance. *Type* in this period, with respect to its relation to *nature*, gained an ideal role through which the principles of architecture were defined.

Also mentioned previously, the first attempt to define the principles of architecture in this period was made by Marc-Antoine Laugier. In his view the principle was found in the *primitive hut* which represented the experience and the knowledge of architecture through man's natural instinct to dwell. He supported this process with the concept of imitation that took *nature* as a model. This condition based on the analogy between the tree and the column resulted in the *primitive hut* as a perfection

that describes architecture's essential members. Thus, Marc-Antoine Laugier found the principles of architecture in *the primitive hut.*

Moreover, it is mentioned by Leandro Madrazo that the *primitive hut* has two aspects. The first is based on a *conceptual* interpretation in that man acquired knowledge from the *nature* as much as he understands or imitates it. The second is based on a *sensible* interpretation which is seen as the physical construction of acquired knowledge.

The second attempt to define the principles of architecture in this period was made by Quatremére de Quincy with his notion of *type*. Although, the notion of *type* was exposed before I will re-emphasize the point in that the *type* is seen as *invisible*.

Leandro Madrazo argued that *type* in Quatremére de Quincy's notion became abstract and invisible through the shift in the object of imitation which was no more a visible and concrete form of nature. Thus, the *primitive hut* as a concrete form of imitation turns, despite its seemingly *double-nature,* in Leandro Madrazo's terms into a *visual* conception. The condition of *type* as invisible was further stressed in its definition given in comparison to the *model* by Quatremére de Quincy. Through this definition the *invisible* condition of *type* could be described as a shared essence that shows us a kind of historical condition within which we situate architectural knowledge.

Afterwards *type* became again a fact in the nineteenth and early twentieth centuries when the Modern Movement within a new epoch influenced a change in the aesthetic means of buildings that would serve for the needs of modern society.[240] This change became a fact throughout the "new nature of mass-production", which was a result of the technological and scientific developments, that is, the *machine*. It was actually the intention to designate the principles of architecture in a new way, strictly speaking, a new analogy that was seen between building and *machine*.

[240] Micha Bandini, "Typological Theories in Architectural Design", in Companion to Architectural Thought. Farmer, Ben and Hentie Louw Eds., London, New York: Routledge, 1993, p.387

From this point on, in the attempt to answer the needs of this new condition, architecture transformed its meaning through *type,* which was renewed within the influence of the machine-affected thought, in a position where it no more asked for conventional signs but for signs that would become its own.

As Le Corbusier mentioned, the demand for these signs were searched in the analogy with the new technological developments such as machines, cars, liners, airplanes, which indicates at the same time the new way of social life. Architecture in this sense totally interrupted from its past constitutions defines the relations in society in a new context.

We can understand the difference of the new condition by the example of the analogy between the liner and the building, which was given by Le Corbusier. He said that: "The building is poised on its *pilotis* like a ship afloat; its inhabitants have the same relation to the surrounding countryside as the passenger of a linear have to sea…"[241] The relation defined here between human being and *nature* was no more that from the first typology in which the he took nature as a direct model. On the other hand the condition of the new industrial society defines the relation between human being and *nature* in more abstract terms, in a distant, indirect way. As described, the man as a passenger who watches the sea (*nature*) from the liner and the human being who inhabits the modern building have a similar relationship with their surrounding countryside; both of them watch *nature* from a distance rather than directly operating on it.

This kind of a relation was also stressed in comparisons between the car and the Parthenon or the house and machine, indicated at the same time the notion that architectural principles should response to a *standard*. This *standard* was obtained in an evolutionary way in which the manner of selection determines it as the fittest in its desired form and function. But the determined *standard* does not counterpart of the

[241] Alan Colquhoun, (1981) "Displacement of Concepts in Le Corbusier" in Essay in Architectural Criticism: Modern Architecture and Historical Change, 4th ed., Cambridge, Massachusetts and London: The MIT Press, 1986, p.63

notion of *type*. It is the result of the evolutionary process which we can observe at the end, but *type* on the other hand is also a search to understand the changing conditions in this period within architecture through its analogy with the machine that integrated the new thought of life into architecture. *Type* in this sense disclosed this condition between its oscillation of the abstraction of the machine that could be defined as *a conceptual construct (non-visual* in Leandro Madrazo's terms*)* and the standardized perfection that could be defined as *sensible (visual* in Leandro Madrazo's terms*).*

Therefore, *type* was transformed in architecture because of the process and the principles of the machine within a new industrial reality. The architectural discipline, thus, tried to redefine itself in regard to this condition. The attempt to redefine the discipline in this sense, however, has an autonomous stand point in that the interpreter used the *new industrial reality* to constitute new techniques.

In this view the representation of *type* was based on the abstraction of *machine* that causes at the end a machine-affected thought in the mind of the interpreter. And because of this the interpreter could no more see the object without the knowledge of the *machine*.

Thus *type* in reference to the *machine* acquired a potential to create new meanings and transformations in architecture. However, *type* in this case does not have literal rules but could be seen as a *conceptual construct* (*non-visual* in Leandro Madrazo's terms). But when the column and other parts of the building were seen as pieces, which came together for a specific function to create a working machine, *type* becomes at the and a *sensible* (*visual* in Leandro Madrazo's terms) object and discloses the process of its own *physical construction*.

However, it emerged once again in the late twentieth century, when the condition of Modern movement and its solutions began to be criticized by a number of architects centred in Italy.[242] Aldo Rossi as one of these architects used the notion of *type*

[242] Op.cit. , Micha Bandini, "Typological Theories in Architectural Design", p.387

differently than the previous period in an attempt to define the principles of architecture within the city as part of a historical continuity. However, type as both in the first and the second period has a vagueness aspect which appears in the sense of its plural notion. It is stressed by Aldo Rossi that *type* does not refer to an only form but because of its plurality it is mentioned that all the architectural forms exist in the city could be referred to *types*. Therefore, the *non-visual* (in Leandro Madrazo's terms) aspect of *type* in this period comes from is plurality, the *visual* (in Leandro Madrazo's terms) aspect, however, is the materialized and systemized realization of *type* that transforms from this plural meanings into concrete descriptions.

In respect of these different debates, yet we can say that they have a common attempt to define *the principles* of architecture, though, each one in regard to a different reference; the *nature*, the *machine*, and the *city*, respectively.

The emergence of these references, however, was in relation to the changing conditions of the "cultural parameters which have lent authority to a certain manner of formal expression lose their credibility and thus became less prescriptive."[243]

We can mention at this point that all these periods thought about *type* in the attempt to understand and define architecture in regard to their particular conditions. This shows us actually that for thinking in *types*, as Oswald Mathias Ungers mentioned in an issue of Casabella about type and typology that:

> "one must understand thought in terms of analogies, images, and metaphors. It does not define what is to be understood in reality, but rather how to understand it. It gives direction to intellect and thought and especially believes in the concept of continuity. In the same way one understands continuity of a type, so one understands its changes and transformations, its different states and meanings."[244]

In this sense *type* as a subject did not change in time but its content, therefore its meaning transformed through the changing conditions in architecture. And within

[243] Ibid. , p.387
[244] "Ten Opinions on the Type", in Casabella, 509/510, Jan.-Feb, 1985.

this process *type* could not be accepted as a primary principle that is just understandable in one way.

The common point in seeing *type* in each debate as an attempt to define architectural principles is actually not the only one. It is argued in this thesis that in all these three debates despite its differences *type*, as mentioned before, has a *double-nature* (in Leandro Madrazo's terms). This *double-nature* however comes into existence through its *visual* and *non-visual* aspects. These aspects seemingly distinguished act actually together in that the *visual* (in Leandro Madrazo's terms) condition of *type* appeared in the sense how its *non-visual* (in Leandro Madrazo's terms) condition is re-constructed. And because of this re-construction it is possible to follow the continuity of architectural knowledge, which designates the changing boundaries of the architectural discipline and gives the means for a tendency to define it as autonomous.

Therefore, the main aim of this thesis was to explore *type* as the vehicle of architectural knowledge, whose potential lies in the materialization of form and meaning which were transformed through history between the relation of architecture and society in a continues re-construction.

Throughout the whole thesis as a designer I came across with the problem of the architectural discipline, its autonomy and its meanings over the notion of *type.* And I will admit that, before this study, I had regarded *type* as a superficial design tool which could not have the potential to be inventive in its nature. But through its overall conception it seems now possible to understand the present condition of architecture. The knowledge which is embedded in the *type* does not disappear but transforms and therefore transmits as form and meaning throughout history until today. And within this continuity we recognize and understand architecture. Although it is an unavoidable aspect of this process it is still not the only reference to disclose the relations within architecture.

However, the position of this thesis, because of its content, is seen in a theoretical view. And as a suggestion related to this thesis it can be possible to choose a case study (a building or buildings) in the attempt to re-read the whole process in a more practised view. But to advance this thesis it would be better to ask a question that examines the architectural meaning nowadays, and try to define the reference or references through which *type,* transforms and redefines it in the present condition.

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