SEDAD HAKKI ELDEM'S TYPOLOGICAL ANALYSIS OF THE "TURKISH HOUSE" AS A TOOL FOR AN OPERATIVE DESIGN METHODOLOGY

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
OF
THE MIDDLE EAST TECHNICAL UNIVERSITY

BY

N. AYŞE ÖZBİL

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARCHITECTURE
IN
THE DEPARTMENT OF ARCHITECTURE

SEPTEMBER 2002

Approval of the Graduate School of Natural and Applied Sciences

Prof. Dr. Tayfur Öztürk
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Architecture.

Assoc. Prof. Dr. Selahattin Önür
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Architecture.

Asst. Prof. Dr. Cânâ Bilsel
Supervisor

Examining Committee Members

Assoc. Prof. Dr. Suha Özkan

Assoc. Prof. Dr. Aydan Balamir

Assoc. Prof. Dr. Belgin Turan

Asst. Prof. Dr. Elvan Altan Ergut

Asst. Prof. Dr. Cânâ Bilsel

ABSTRACT

SEDAD HAKKI ELDEM'S TYPOLOGICAL ANALYSIS OF THE "TURKISH HOUSE" AS A TOOL FOR AN OPERATIVE DESIGN METHODOLOGY

Özbil, N. Ayşe

M. Arch., Department of Architecture

Supervisor: Asst. Prof. Dr. Cânâ BİLSEL

September 2002, 236 pages

This thesis aims to introduce new contributions to the already established views on Eldem's architectural discourse. It is an attempt to unravel the complex of aims and attitudes involved in his preoccupation with typological analysis of the "Turkish House" as a tool to achieve a design methodology to base his architectural discourse on.

In the first part, discussion on "type" and "typology" is held through the various definitions and different existing typological attitudes. In the second part, Eldem's researches on the "Turkish House" is studied via his analysis of plan types and their evolution. This section also comprises the typical elements and

compositional principles inherent in the "Turkish House". In the third part of the thesis, the typological method in Eldem's design approach is tried to be deciphered through his use of planimetric typologies, compositional principles and typical elements of the Turkish traditional architecture.

In the conclusion, the significance of Eldem's architectural approach and products as ideas to foster broad and their potentiality to suggest new directions towards "appropriating traditional patrimony as a tool to make architecture in a modern sense" is re-stated. The thesis is concluded by posing a question: does the typological analysis have the merit of teaching design through valid means?

Keywords: type, typology, model, archetype, composition, *programme,* "Turkish House", tradition, modernity.

ÖZ

SEDAD HAKKI ELDEM'İN "TÜRK EVİ" TİPOLOJİK ANALİZLERİNE DAYALI TASARIM METODU

Özbil, N. Ayşe

Yüksek Lisans, Mimarlık Fakültesi

Tez Yöneticisi: Yard. Doç. Dr. Cânâ BİLSEL

Eylül 2002, 236 sayfa

Bu tez, Sedad Hakkı Eldem'in, yapmış olduğu "Türk Evi" tipolojik analizlerine dayanarak oluşturduğu tasarım metodunun altında yatan mimari yaklaşımı ve amacı inceleyerek Eldem'in mimari kuramı ile ilgili görüşlere yeni bir boyut kazandırmayı amaçlamaktadır. Çalışma, Sedad Hakkı Eldem'in mimari tutumu ve kaynakları ile birlikte tasarım metotlarının incelenmesiyle kısıtlanmıştır. Kısaca, bu tezin ana amacı Eldem'in tasarımlarının ve mimari kuramının altında yatan yapıcı gücü ve fikri ortaya koymaktır.

Çalışmanın ilk bölümünde "tip" ve "tipoloji" kavramları üzerine bir tartışma yer almaktadır. Bu iki kavramın değişik tanımlarına değinilerek tipolojik çalışmalar üzerine varolan çeşitli mimari yaklaşımlar incelenmekte ve bir tasarım metodu olarak tipolojik araştırmalar tartışılmaktadır. İkinci bölümde, Eldem'in

"Türk Evi" kavramı, mimarın üretmiş olduğu "Türk Evi" plan tipleri araştırmaları ve "Türk Evi"nin evrimi üzerine geliştirdiği kuram incelenerek açıklanmaktadır. Üçüncü bölümde, Eldem'in tasarımlarının dayandığı tipolojik metot, mimarın, geleneksel Türk konut mimarisinin plan tiplerini, kompozisyon kurallarını ve tipik elemanlarını tasarımlarına çeşitli şekillerde uyarlamasını inceleyerek ortaya konulmaktadır.

Sonuç kısmında, Eldem'in mimari kuramının önemi ve tasarımlarının altında yatan düşünce yeniden vurgulanmakta; bu yaklaşımın "geleneksel mirası modern bir tutumla yeniden yorumlama" yeterliği bir kez daha tartışılmaktadır. Tez, bir soru sorarak bitirilmektedir: Tipolojik analiz, mimari tasarım eğitiminde geçerli bir yöntem olma erdemine sahip midir?

Anahtar kelimeler: tip, tipoloji, model, ilkörnek (arketip), kompozisyon, program, "Türk Evi", gelenek, modern.

ACKNOWLEDGMENTS

I express sincere appreciation to Asst. Prof. Dr. Cânâ Bilsel for her guidance and insight throughout the research and for encouraging me with her everlasting smile. To my family I am grateful for their thorough support and patience to endure with me the vicissitudes of my endeavors. To my friends in İstanbul, I thank them for helping me through the most stressful times and for understanding my frequent depressive mood. To my friends in Ankara, I offer sincere thanks for making their homes available for me during my visits to the city and for cheering me up through my stressful moments.

TABLE OF CONTENTS

LIST OF FIGURES

FIGURES

CHAPTER 1.

INTRODUCTION

We must return to the source,
to the principles, and to the type.
(Ribard de Chamoust quoted in Vidler, 1977:95).

1.1 THE SCOPE AND OBJECTIVE OF THE THESIS

Sedad Hakkı Eldem is one of the architects (or **the** architect) in Turkey on whose works and architectural ideas dozens of papers and books have been written. However, this master's thesis does not intend to be no more than a variation and elaboration of those earlier works or just "another study" on Eldem's architectural approach, but it aims to look at his works from a distinctive point of view. Most of the research and analyses on Eldem's works have tried to compress his architectural discourse into certain labels such as "nationalist", "regionalist", "native" or "historicist"; hence, they have bypassed the endeavors of Eldem until recent times. Though it is possible to find traces of each category within the diversity of Eldem's works, such labels reduce the true value of his architectural discourse and the power intrinsic to his works. This dissertation, on the other hand, argues that the essential ideology lying in Eldem's architectural

discourse is his typological studies on the "Turkish House", which served him as an operational design methodology. The aim of this thesis is, thus, to introduce new contributions that surpass the already established views on Eldem's architectural discourse, unraveling the complex of aims and attitudes involved in his preoccupation with typological analysis of the "Turkish House" and in his intentions in extracting out a design methodology from these studies. The study is restricted with an analysis of Sedad Hakkı Eldem's architectural approach and methodologies along with their sources of inspiration. Thus, the main intention of the thesis is to reveal the generative idea lying behind Eldem's works and architectural discourse, which might still be reinterpreted as a relevant approach to architectural design.

> The work of Eldem as an architect is rich and diversified: from the early thirties to the present, Eldem has been a key figure and realized the most continuous architectural production during this period covering half a century. He experienced different tendencies which can be identified during these five decades: the so-called "Rationalized Architecture" of the thirties, the following "Second National Style" movement, some internationalist designs, and then his more recent realizations always reflecting a certain historic interpretation (Yücel, 1983:60).

The common factor of these four "episodes" put forward by Yücel, a factor dominating Eldem's life-long architectural process, is, however, his persistent typological analysis of the "Turkish House" and certain traditional Islamic works, and his consistent search to pull out a modern idiom from those typological readings. However, Eldem's intention is not merely restricted to a notion of planning in modern terms, as it is the case with much of the official architecture in Turkey during the early 20th century. The Great Post Office (1905 -

1909) designed by Vedad Tek and the 4th Vakıf Han (1911) designed by Kemaleddin Bey, for example, are all modernly planned buildings with spacious inner voids, although their façades carry the features of Ottoman architecture. The reference to royal Ottoman architectural tradition in the design of these buildings remains superficial and functions very much as décor stuck onto a Western structure. Different from these, Sedad Hakkı Eldem follows a specific typological process. In his works, the reference to Turkish dwelling tradition is not reduced to an eclectic language that decorates the architect's buildings; rather, it is connected more deeply to the traditional dwelling architecture –extending from planimetric typologies to the typical elements and their variations. The "Turkish House" provides the material for classification, and the compositional principles of its types and variations over time provide the basis for re-composition. His classificatory book *Türk Evi: Osmanlı Dönemi,* consisting of five volumes, presents both the entire matrixes of plan types that are deeply rooted in tradition and the analyses of the architectural elements. This research provides a repository of principles for Eldem. The house types are arranged in progress from the most primitive type to the refined versions. Therefore, his concept of history is a "linear progressive" one. However, his aim is more fundamental than that of simple collection. Eldem views type as an inclusive idea linking the historical development and function to form and suggesting a method. Though Eldem does not introduce his ideas on type and typology in written form, through his designs and studies it is legible that his typological researches were directed towards a design methodology. He was highly influenced from the architectural tenets of the *Beaux-Arts* tradition during his educational years, and their impact on Eldem lasted throughout his entire professional life. His deliberate choice in adopting a

typological method of study in his design process can be explained by the influence of his *Beaux-Arts* education.

He sees the typological analysis as a necessary preparatory step for design. He breaks the "Turkish House" into its archetypes and from those he derives the essential elements of architecture and their rules of combination. Following these formative rules embedded in traditional types, Eldem's design process takes on more precise features suggested by the characteristics of the project site, by the social, cultural, and economic context, and by the designer's own experience and attitude towards society and the architectural realm. Sedad Hakkı Eldem perceives an existing type as an idea to foster broad, free to be transformed by the various combinations of its basic elements and its technology. This process of transformation is realized in his designs through two instances: either as a simple adaptation of an existing archetype (*sofa*, *cumba*, pavilion) or as a more or less radical elaboration. In the first case, the selected archetype is restated, its validity for and its adaptability to the present corroborated. In the latter, Eldem adapts certain characteristics of the selected archetype and introduces innovations. In summary, his methodology is one of performing operations on typologies whose outcome enables Eldem both to link his buildings to tradition and cultural patrimony and to enforce his personal language.

However, Eldem does not discredit modernity in his retention of tradition. His main intention is to ease the polarity between the traditional and the modern through a synthesis of the universal principles inherent in the "Turkish House". Eldem believes that to produce innovative architecture is at the same time to draw from the past, through types, and to examine the past from a critical perspective out of which transformed types/archetypes and finally new types/archetypes are to

emerge. These two notions –type and innovation– are generally seen as contradictory. Typological approach is often conceived as an architecture of convention and seen as limiting the creativity of the architect. However, Kahn points out the universal value inherent in the tensive relationship between such perceived opposites as convention and innovation, suggesting that this relationship is indeed essential to the production of form (Kahn, 1991:110). Petruccioli, who is an Italian scholar from the typo-morphological school, exemplifies this argument within a specific country:

> In the United States the discourse on typology is periodic, and has sometimes had qualified success, but soon it is rapidly absorbed and transformed into images for the market. This is because the architect operates in a quandary between awareness that design is based on precedents and fear that this reference to precedents might become an attack on individual freedom of expression (Petruccioli, 1995:9).

Yet the idea of type does not suggest a recipe or a formula. Rather it remains as a question. Oechslin, in his article *Premises for the Resumption of the Discussion of Typology,* argues that by stressing alterations to a certain type throughout the design process, the typological approach implies "more demanding conditions and premises", but it does not restrict or deny creativity (Oechslin, 1986:44). In fact, since type encompasses an interrelation between form and use, applying the same physical form for each building problem is an inadmissible method from a typological viewpoint.

What Eldem does, on the other hand, is adapting not the same form but the same theme (the "Turkish House") with all of its types, variations and elements for a whole range of building problems, thus turning them into a style. Here, his intention is not to take a shortcut to sound architectural principles via the usage of

elements that are already agreed upon. It is not cowardice but courage. Eldem argues forcefully that the traditional "Turkish House" bears modern qualities that are compatible with the contemporary architecture. His goal through this task is to unveil the potentiality of the "Turkish House" in order to fulfill contemporary needs and aesthetical aspirations, and to produce examples of modern architecture with traditional consciousness. Eldem believes that making architecture is a continuous work of re-manipulating precedents, and that this continuity forms the basis of the architectural discourse. For him, traditional works of a nation have the potentiality to serve as a source of inspiration since these are the true representatives of the values of their society. Therein lies the validity of typology –the study of types. Typological analyses equip the architect with a set of fundamental principles that constitute the structural essence of architectural artifacts. However, in Eldem's perception, no longer is architecture restricted within the boundaries of history –that is, of a specific time or place. Indeed, Eldem is concerned with the single architectural object freed from the urban fabric and the territory –except the high regionalistic consciousness paid in his Social Security Complex in Zeyrek. In fact, through this point of view, it can be claimed that Eldem pronounces architecture's autonomy in his works, but this does not, of course, render him an "art for art's sake" designer. His work ensures a relation at another level to traditional continuity. His work belongs to two architectural traditions –the private Ottoman/Turkish architecture and the public modern architecture– which donate the buildings a complex quality representing tradition as well as modernity. Many critics would see the signs of eclecticism in his projects whereas each of them simply reflects its architect's struggle to mediate between the conflicting forces in architecture. These so-called contradictions take

up an essential part of the creative design process. These contradictory notions are intoned by Cerasi: "There is in architecture an inner tension and an interplay of forces which come from contrasting or converging but heterogeneous ideas even within a given typological concept." (Cerasi, 1995:185) Eldem conceives typological studies as a critical study on a dynamic and sound conception posed and raised against a static and reductionist definition of "modern architecture". Apparently, Eldem is interested not in historicist procedures but systematic observations on the character of types. He seeks to communicate universal principles, abstracting them from a national tradition to create a modern architecture. Eldem's works have the merit of showing a possible alternative architectural approach for the use of history and tradition as a design methodology.

1.2 THE CONFIGURATION OF THE THESIS

Opening the concepts of "type", "typology", "tradition" and "modernity" to discussion, the plan of this study is as follows:

1. Introduction: The definition of the problem
2. Discussion on concepts of "type" and "typology"
3. Sedad Hakkı Eldem's "Turkish House" as a typological method of analysis
4. Typological method in Sedad Hakkı Eldem's design approach
5. Conclusion

The first part of the study comprises a discussion of "type" and "typology". In this chapter, firstly, various definitions of these two concepts are introduced; secondly, typological approaches in the European architectural traditions and two important schools of the 20th century –namely the Italian and French Schools– are examined comparatively in this perspective. The notions "composition" and "*programme*" are highlighted. Typological discourse in its classical sense, its inherent limitations and contradictions within the definitions of type and archetype are also criticized by mentioning some revolutionary typological theories. And lastly, typological analysis is discussed and introduced as a design methodology.

In the second part, Sedad Hakkı Eldem's notion of the "Turkish House" is studied. In this chapter, Eldem's documentation of the "Turkish House" is exposed, his evolutionary theory of the Turkish traditional dwelling architecture is discussed, and typical elements and compositional principles inherent in the "Turkish House" are examined. This chapter is actually a preparatory step to understanding the intentions lying behind Eldem's works and the critical ideas of his architectural discourse.

In the third part of this thesis, the typological method in Sedad Hakkı Eldem's design approach is tried to be deciphered through his use of planimetric typologies and typical elements of the Turkish traditional architecture. The principles of composition in Eldem's architecture based on the "Turkish House" are evaluated and exemplified by his architectural edifices. In addition, Eldem's sources of inspiration and the factors shaping his architecture are introduced throughout the thesis wherever they support a theme.

In the conclusion, firstly, the validity of typological issues is delineated in order to comprehend the teachings of Eldem's architectural discourse. Then, the significance of Eldem's architectural approach and products as ideas to foster broad, and the potentiality of his works to suggest new directions towards "appropriating traditional patrimony as a tool to make architecture in a modern sense" is re-stated. The thesis is concluded by posing a question: does the typological analysis have the merit of teaching design through valid means?

CHAPTER 2.

TYPE AND TYPOLOGY

Before beginning to analyze Sedad Hakkı Eldem's design approach and the principles of his compositions, it is important first to dwell on the concepts of "type" and "typology", and to provide a brief insight to the history of these notions and the analytical methodology that they suggest. It is crucial to understand the relationship between the typological analysis and the design process in order both to comprehend the intensions lying behind Eldem's design methodology and his contributions to the debates on architectural discourse in Turkey. Furthermore, the typological analysis equips the architect with critical awareness of operational criteria in his own design process, deeply rooted in collective memory and tradition. This analytical approach to issues of "type" and "typology" gains much more importance during a time when the insolent emphasis on modernity and the consideration of modernity as superior to tradition in the last century set aside the analytical studies on typology and type. Ellen K. Morris argues forcefully that: "In the decades following the Second World War, architects under the sway of Modernism...specifically set themselves against the very concept of type." (Morris, 1982:17) They dispensed with it in the name of something else –namely function. In *Architectural Type and the Institutional Programme*, Morris echoes this last sentiment:

> Because Modern Architecture depended upon circumstantial function, it successfully expunged itself of a concern for functional type, and the shared formal assumptions which constitute any institutional legacy easily elude the architect who now aspires toward their recovery (Morris, 1982:17).

In this chapter, firstly, the various definitions of "type" and "typology" will be given; secondly, a brief discussion on the different typological approaches in the 19th and 20th centuries will be presented. Finally, typological analysis will be discussed as a design methodology and as a tool to extract compositional principles.

2.1 DEFINITIONS

As Ahmet Gülgönen and François Laisney –both currently teaching at the School of Architecture (of Paris-Belleville)– explain, the term "typology" refers to the classification of objects (Gülgönen and Laisney, 1982:26). Therefore, type can be reckoned to be an abstract object extracted by the designer through classification. The type is based on the categorization of objects according to common characteristics determined by certain criteria. Type has been generated according to the social needs and aesthetical inclinations of a certain society. Thus, type is associated with a form and a way of life.

> What then is type? It can most simply be defined as a concept which describes a group of objects characterized by the same formal structure. It is neither a spatial diagram nor the average of a serial list. It is fundamentally based on the possibility of grouping objects by certain inherent structural similarities (Moneo, 1978:23).

In this view, type is regarded as a structure inherent in all architectural artifacts. However, types do not only serve for purposes of classification but also for the purposes of the act of making architecture. They also act as architectural tools with which the diffusion of collective memory and cultural heritage throughout time is enabled.

The birth of type is established by the fact that a sample of architectural artifacts shares common functional and formal characteristics. In the process of generating type, the qualities peculiar to specific buildings are eliminated; instead, merely those elements common to the entire sample are taken into consideration. Attilio Petruccioli shared this idea when he remarked: "Type is depicted as a scheme deduced through a process of distillation from a group of formal variants to a basic form or common scheme." (Petruccioli, 1995:11) In this regard, typology can be realized as the study of types of artifacts, which come into being in various forms. According to Aldo Rossi, type is "...something that is permanent and complex, a logical principle that is prior to form and that constitutes it." (Rossi, 1984:40) Although type is the accumulation of *a priori* notions, it displays a pronounced dialectical relation with social and political context, technique, collective memory and style. It therefore seems clear that typological discussions are significant and that "...type is the very idea of architecture, which is closest to its essence" (Rossi, 1984:41).

In their article *Contextual Approaches to Typology at the Ecole des Beaux-Arts* (Gülgönen and Laisney, 1982:26), Ahmet Gülgönen and François Laisney distinguish three categories of definition of typology, depending on the criteria used. They explain the first meaning from the perspective of Carlo Aymonino, Aldo Rossi and Saveiro Muratori as "treating typology as the totality

of the peculiarities which characterizes a given moment of the architectural production of a society or a social class." This definition provides a connection between architectural typology and urban morphology. Aldo Rossi believes that: "Just as the walls, the columns, etc., are the elements which compose buildings, so buildings are the elements which compose cities." (Rossi, 1984:35) The second definition revealed by the authors is based on the classification of spaces according to their spatial and formal qualities, as analyzed by Rob Krier in his book *Urban Space* (Krier, 1979:27). A third definition of typology by Gülgönen and Laisney is based on "...classifying buildings according to use, and upon their institutional characteristics" in the sense that the Enlightenment theoretician Jean Nicolas Durand employed it. Durand analyzed the elements of buildings, such as columns, walls, openings, foundations, and roofs and explained how to combine these elements (Pèrez-Gòmez, 1983:303). Typology, for Durand, was a rational tool to derive at fixed constants extracted from history.

2.1.1 "Type" and "Model" According to Quatremère de Quincy

In all of the above-mentioned definitions, the notion of type is perceived as an abstraction. In Diderot's *Encyclopédie*, type is defined as "a symbol, a sign, or a figure of something yet to come" (quoted in Lavin, 1992:91). Although the *Encyclopédie* encompasses the Greek root of type as "the copy, image, or resemblance of some models" (quoted in Lavin, 1992:90), type and model are not simply interchangeable. This predominant principle is revealed clearly in Quatremère de Quincy's distinction between "type" and "model":

> The word type represents less an image of a thing to copy or to imitate...but rather an idea of an element which can serve as a principle. The model, understood in terms of the practical execution of art, is an object that must be repeated such as it is; type, on the contrary, is an object according to which one can conceive works that do not resemble one another at all. In a model, all the givens are precise; in a type they are ambiguous (Quatremère de Quincy quoted in Rossi, 1984:40).

Through this passage, it is manifest that according to Quatremère's theory, type is associated with "the art of characterizing" –in other words, type does not lend the architect the possibility of copying, because the replication of type would prevent the making of architecture. In this perspective, architecture can be considered as being generated by a typology of objects and, as Waldman holds, "...a particular 'syntax of structure' that would provide the basis for composing them into an 'accommodating' whole" (Waldman, 1982:10). Architectural historians and critics most commonly associate the notion of type with Durand; however, Sylvia Lavin opposes this common belief and argues that *type* was first introduced into architectural theory by Quatremère de Quincy, and that his intention was to extract operational principles from programmatic systems inherent in architectural types (Lavin, 1992:86). Therefore, it is clear that Quatremère de Quincy did not perceive type merely as an architectural constant but also as an operative design methodology. That perception alone suffices to render him a major personality within the architectural theory. Lavin emphasizes this point of view:

> With Quatremère's integration of new attitudes toward history, language, and architecture, traditional theories about the origins of building became an operative theory of architectural typology (Lavin, 1992:100).

The notion of abstraction inherent in type is also revealed in Quatremère's version of architectural type as an abstract and temporal notion of historical continuity. Lavin opens up this situation: "Quatremère believed that every modern building is anticipated by and reflects back to its ancestral origin (and that this interrelationship was fundamental to contemporary architecture)." (Lavin, 1992:99) This notion of abstraction implicit in the definitions of type and particularly in Quatremère's perception is the fundamental component of the understanding of type.

2.2 TYPOLOGY IN THE EUROPEAN TRADITION

Typological studies were born in the 18th century French Enlightenment as a reaction to the break in the historical continuity and the separation in the building process between the designer and the client (Petruccioli, 1995:10). The notion of typology in the 18th century was very different from that of the 20th century, as intoned by Petruccioli:

> In the past the idea of type and architecture almost coincided; both were part of the same creative process, because type was a collective product shared by the architect and the people at any given time (Petruccioli, 1995:10).

In this section, the evolution of the typological theory will be examined through the teaching of the *Ecole des Beaux-Arts* and through the architectural doctrines of Durand and Boullée. The notions of "type", "programme" and "composition" will be analyzed; what they stood for in the *Beaux-Arts* tradition,

and the doctrines for Durand and Boullée will be demonstrated since these notions are also of much importance for Eldem's architectural theory.

2.2.1 The notions of "character" and "composition" in *the Ecole des Beaux-Arts*

The Enlightenment dialectic between type and *programme* was central to the architectural methodology of the *Beaux-Arts* tradition; however, the notion of *programme* should not be mistaken for the word program. The difference between the two is crucial. Ellen K. Morris, in her article in the *Journal of Architectural Education*, discusses the difference between 'program' and '*programme*':

> The first, a compilation of explicit requirements, is the 'brief' for a building. The second differs chiefly in that it represents *implicit* requirements. It is the 'ideological baggage' behind any building and represents the general cultural expectations of the building (Morris, 1982:17).

The *programme* of a building is an indicative sign of its type through the reflection of common formal assumptions on the architectural form. According to Morris, every institutional building since the mid-18th century has been affiliated with a specific program for its production but not always sponsored by a *programme*. The use of "the mid-18th century" is a deliberate choice, because Morris suggests that it is around this date when the invention of the program and the split in architectural thought between program and type occurred (Morris, 1982:17). The modern movement's attacks were both on the disjunction between form and content caused by growing industrialization, and the *programme*, the content of which was believed to be obsolete.

Morris argues that the *Beaux-Arts* tradition emphasized the dialectic between the explicit and the implicit, namely the program and *programme*, asserting importance on the concept of *programme* (Morris, 1982:17). From this assertion, it is evident that the *Beaux-Arts* architect reckoned with the goal of equipping the program with character, thus achieving equilibrium between the theoretical and the physical. Richard Chafee, in his article *The Teaching of Architecture at the Ecole des Beaux-Arts*, remarks that in the teaching of all the *ateliers* of the *Ecole*, the importance of character is evident –a building with character was the one that fulfilled its purpose (Chafee, 1977:97). The character was the representation of this fulfillment. Arthur L. Tuckerman –a student at the *Ecole* in 1880s– remarked on the emphasis placed on character in a letter he wrote to the secretary of the R.I.B.A. in March 20, 1884:

> Each plan is prepared with due regard to the requirements of the particular building it is intended for...The principle of all the design is that every building shall have its own character, as a natural development of the use it is up to (Tuckerman, 1883-1884:113).

This vague quality –character– is actually based on the *programme* of the building, as Morris names it. David Van Zanten –of the Department of the History of Art at the University of Pennsylvania– clarifies this notion: "In the Beaux-Arts system, the building had to be usable in a general sense and had to be recognizable for the sort of building it was." (Van Zanten, 1977:124)

As a result, it can be claimed that *programme* was regarded as the essence of a pure compositional study and the architectural form was perceived as an outcome of the dialogue between composition and *programme*. In *Analyzing Organizational Schemes*, Bruce Abbey and Robert Dripps –both members of the

faculty of the School of Architecture at the University of Virginia– clarify this situation as follows:

> The ideal issues of order and composition, and circumstantial issues of *programme* and context are seen as both physical and intellectual issues, involving formal solutions to the organization of architectural issues (eg, *programme*, context) and conceptual solutions to the configuration of a given form (eg, order and composition) (Abbey, Dripps, 1982:14).

The notion of "composition" implied the essential act of architectural design in the *Beaux-Arts* tradition. David Van Zanten points out, in his article *Architectural Composition at the Ecole des Beaux-Arts from Charles Percier to Charles Garnier*, that before the mid-19th century, instead of the word "composition", the word "disposition" was more commonly used in the *Beaux-Arts* tradition (Van Zanten, 1977:112). However, these two words should not be taken to express the same meaning. In the *Dictionnaire de l'Académie Française* (1835), disposition is defined as "to arrange, to put things in a certain order"; and composition as "to form, to make a whole out of several parts" (quoted in Van Zanten, 1977:112). As seen, the change in terminology brings with it a change of implication: the first word talks of "fragmented parts", whereas, the latter implies a unification. According to Van Zanten, the use of the word in this latter sense was not until the last half of the 19th century (Van Zanten, 1977:112).

As Colquhoun argues, the notion of composition is associated by the avant-gardes with the stylistic imitation applied by the *Beaux-Arts* architecture; however, composition in the *Beaux-Arts* tradition implies a set of principles that are "astylar" (Colquhoun, 1991:39). David Van Zanten wrote of composition: "What composition signified was not so much the design of ornaments or of

façades, but of whole buildings, conceived as three-dimensional entities and seen together in plan, section, and elevation." (Van Zanten, 1977:112) That is, composition means the materialization of architectural ideas, but it does not concern itself with the origins of these ideas. Thus, the *Beaux-Arts* does not denote a style, but rather principles. This academic doctrine was rationalist; it was based on reason. As Van Zanten puts it: "...order and axes, the linking of interior space and gardens, and the creation of vast ensembles of architectural masses represented the conquest of reason..." (Van Zanten, 1977:142) Therefore, it can be claimed that the *Beaux-Arts* composition was concerned with masses rather than detailing and ornamentation –masses enclosing spaces. Composition in the academic tradition was the means by which a set of principles of design methodology to all styles could be established.

In his book *Modernity and the Classical Tradition*, Alan Colquhoun argues that stylistic tradition perpetuated before the 1880s, but after this date stylistic eclecticism was abandoned and the compositional formulae became a major source of making architecture for both the French and the English (Colquhoun, 1991:39). According to Colquhoun, the 20th–century avant-garde inherited the notion of composition directly from the *Beaux-Arts* tradition. If this argument were considered to be true, then it would reveal a contradictory situation for the avant-gardes would have borrowed the principles and structures of a tradition that they absolutely rejected. The *Ecole des Beaux-Arts* was also held responsible for the unrelatedness of elevation and section to the plan. However; Van Zanten argues forcefully that a *Beaux-Arts* building was designed from the inside out (Van Zanten, 1977:189). This argument contradicts the Modern Movement's belief that, among many institutions, the *Ecole des Beaux-Arts*

remains in the first place for the responsibility of the apparent severance of elevation and section from the plan. Arthur Drexler, the director of the Department of Architecture and Design in the *Ecole*, opposes this blame put on the *Beaux-Arts* by Modern Movement by claiming that: "...a favorite Beaux-Arts theme was the correspondence of a building's exterior to its internal organization." (Drexler, 1977:7-8)

The power of composition lies in its rejection of any stylistic a *priori* principles. The English architect Howard Robertson echoes this idea in his book *The Principles of Architectural Composition* by claiming that the validity of styles depends on the evolutions of taste, whereas the values of architecture are permanent (Robertson, 1949:42). Robertson examines the constant principles of architecture under such themes: unity, proportion, composition of the plan, composition of masses, contrast, scale and confrontation between plan and elevation. As Colquhoun puts it, these issues are based on the teaching of the *Ecole des Beaux-Arts* (Colquhoun, 1991:43).

The above-listed principles are entirely astylar and the *Beaux-Arts* architectural theory is based on the pursuit of applying the universal principles of composition, not so much in the sense of decorative elements or façade ornamentation but in terms of the whole building, seen as the synthesis of plan, section and elevation. Composition concerns itself with bringing together the parts of architecture in a set of certain principles to form a whole. Julien Guadet identifies the main rules of composition as proportions and general principles of structure (Guadet quoted in Rykwert, 1982:12). In the academic tradition proportion is seen as the fundamental component of composition since it is believed to have its origin in Adam's body, which is the creation of God.

Colquhoun asserts that the compositional understanding between the 16th and the 18th centuries was associated with arranging the architectural elements according to a system of proportions (Colquhoun, 1991:48). According to Colquhoun's argument, the perception of composition as the arrangement of parts existing within a single body gave way to an expansion in the understanding of the concept after the 18th century: composition began to be conceived as the problem of assembling various parts of different bodies. In this latter conception, the act of composing means the combination of parts existing in different cultural or historical contexts. In a sense, the idea of composition is thought of as a system that has the potentiality to be fragmented into its components –each of which can be explored on its own. However, both versions of the notion of composition reiterate the idea of a whole composed of pre-defined parts. The idea of composition (together with the idea of character) remained in the core of the architectural tenets of the *Ecole des Beaux-Arts* and was seen as the only way of imposing order upon the act of designing. In fact, Emile Kaufmann discusses in *Von Ledoux bis Le Corbusier* that: "There is in fact a common mentality characteristic to all European architecture since 1775, and its essential element is the concept of composition." (Kaufmann quoted in Van Zanten, 1977:288)

2.2.2 Durand and Boullée

The Enlightenment generated twin ideas: the functional approach and the formal approach to type as perceived by two leading theoreticians of the first half

of the late 18th and early 19th century, Jean Nicolas Louis Durand and Etienne Louis Boullée (Petruccioli, 1995:10).

Durand was a defender of rationalism and, for him, type functioned as a rational compositional device. In *Architecture and the Crisis of Modern Architecture*, Alberto Pèrez-Gòmez asserts that according to Durand, architecture's only way of proving its legitimacy was through its assurance of its usefulness by following rational and immutable rules (Pèrez-Gòmez, 1983:298-299). Durand's insistence on this idea equipped him with a compositional *a priori*. As explained by Pèrez-Gòmez, Durand, in his *Précis des Leçons d'Architecture* (1802) –a summary of his lessons at the *Ecole Polytechnique*– describes the basic principles of his architectural discourse in three points: the analysis of the archetypes according to the materials used in their construction and in relation to the forms and proportions they possess; the combination of these architectural elements into diverse parts, then into whole structures; the analysis of the typical properties of different buildings (Pèrez-Gòmez, 1983:298). These three groups of components of architecture are composed in various ways, in which history is perceived as a repository of types, and thus of certain compositional principles. In Durand's theory, the proportional systems and geometry lost their architectonic autonomy and were applied only as technical instruments, acting merely as vehicles for ensuring a systematic generative system. This notion of pure pragmatism has been subject to much criticism, accused of being a theory of mechanical combination (Benevolo, 1977:34). In Petruccioli's point of view, the real weakness of Durand's theory resides in its consideration of the legibility of the elements unimportant (Petruccioli, 1995:10). In his pursuit of transforming history into an objective science, one that was

based merely on material evidence and pragmatic solutions, Durand refused any act of interpretation: "...the classic forms are used only in a conformist attitude and for convenience." (Petruccioli, 1995:10) This positivistic conception of history gave way to a mechanical predisposition in his designs. The talent of the architect was reduced to his ability to solve the problems of design and construction through a framework in which the details were already given. As Pèrez-Gòmez maintains, for Durand, economy and efficiency became the only acceptable values of architecture (Pèrez-Gòmez, 1983:303).

Boullée, on the other hand, believed that memory had an educational value, and that historical forms could communicate the shared values of both the designer and the society (Petruccioli, 1995:11). As Petruccioli explains, all of Boullée's designs show little interest in technology and are organized around complicated non-functional disposals. The difference between Durand's and Boullée's architectural points of view can be traced in the projects of Durand and the drawings of Boullée. Because Durand believed that architecture should be set on pragmatic values, his projects consisted of perfectly sharp plans, sections and elevations and he abandoned perspectives, shading and watercolor; whereas, Boullée decorated his drawings with watercolor (Pèrez-Gòmez, 1983:308). The reason behind Boullée's use of color and shading is demonstrated in Van Zanten's words:

> Boullée's rejection of the Orders meant that the expression of character must be lodged in another architectural element, and Boullée proposed that that element was the overall impression of the building experienced in light and shade (Van Zanten, 1977:159).

In the light of these words, it is not surprising to encounter Boullée's words in his manuscript: "*ed io anche son pittore* (I also am a painter)" (Boullée quoted in Van Zanten, 1977:159). Boullée's aim in rendering his projects in colors and in different modes of drawing effects was, in fact, to lend them their own "characters" –to individuate his designs. However, in *The Idea of Type*, Anthony Vidler points out to the conflict between the idea of type and the idea of character inherent in Boullée's work (Vidler, 1977:102). According to Vidler, Boullée's notion of character served to isolate the buildings from one another so firmly that any general typology was rendered impossible. Boullée's notion of character, thus contradicts any classificatory or typological process. In summary, Durand's theory was in search of convenient, economical solutions; on the contrary, Boullée's only intention was that of transporting signs and images extracted from historical forms.

Many critics of architecture believe that Durand made a radical break with the classical tradition (one of these critics is Rykwert, 1982:16). Classical tradition –the tradition of the Enlightenment– constitutes of fragmenting architecture into its fundamental elements, reducing them into simple geometric forms and combining them to form ensembles. The point where Durand diverges from this tradition is suggested by Vidler to be in his aspiration to develop *rules* for these combinations that transcended the merely formal patterns (Vidler, 1977:107). However, it can be argued that instead of generating a discontinuity, Durand modified the classical tradition through these compositional principles. In his article *Durand and the Continuity of Tradition*, Werner Szambien observed of Durand: "The original plan, after a series of transpositions, emerges as an abstract, schematic demonstration of compositional rules and principles."

(Szambien, 1982:32) For Durand, these compositional rules served his aim to produce abstract typological diagrams. This notion of abstraction is a fundamental component of design process, not only because it equips the architect/designer with a sound operative compositional logic, but also because it provides the essence of types. Durand employed this methodology to all of his designs, creating a vast repertoire of his compositional logic. He introduced his idea of abstraction with the following statement: "On the whole, the less a model is slavishly copied, the closer one will be to an understanding of the real business of composition." (Durand quoted in Szambien, 1982:32) Although Durand did not use the word *type* in his statements, the word *model* in the above-mentioned quotation substitutes for *type*, and through these words, Durand emphasizes the notion of abstraction implicit in type.

As a result, it can be claimed that Durand did not break with classical tradition in architecture; instead he reinterpreted it to form a basis for his design logic, both theoretically and compositionally. As Szambien concluded: "In practice, Durand upheld inherited traditions. He broke with them only in his radical theories. Therein lies his originality." (Szambien, 1982:33)

2.3 TYPO-MORPHOLOGY AS AN ALTERNATIVE DESIGN METHODOLOGY TO MODERNISM AND FUNCTIONALISM

From the 18th century –the birth of typological analysis– up to the mid 20th century, typological research swung between these two approaches –the functional and the formal– until in the 50s and 60s in Europe new typological

concepts were developed. Two pioneering schools began to elaborate theories for the understanding of the relationship of urban structure to building types: the Italian School and the French School.

2.3.1 The Italian School

In his article *Type, Urban Context, and Language in Conflict*, Maurice Cerasi elaborates on the Italian School and its achievements:

> The work of the Italian School, in the first place of Muratori, and later of the Milanese-Venetian School, with Aldo Rossi as its leading theoretician, was revolutionary. Not so much in the conception of categories it introduced as in the use it made of these categories establishing new references for architectural design (Cerasi, 1995:179).

They sought ways and solutions for providing continuity with the historical context of urban and architectural artifacts. The Italian School rejected the mentality that conceived of the historical urban textures as "tabula rasa"; instead sought for objective criteria to re-evaluate the spatial aspects of urban context. This is briefly the revolutionary architectural aspect of the Italian School that Cerasi gives credit to. In addition, there exists another major achievement of the Italian School which is introduced by Kropf as:

> For the Italian School, the goal of typo-morphological research is to establish a correct formulation of the design process, and in fact, Muratori talks of *storia operativa* –operational history (Kropf, 1993:35).

The Italian School conceives typological analysis as the foundation for a theory of design, furnishing the architect with the necessary components and the various ways in which the elements may be composed to make a whole. For the Italian School, typo-morphological studies are the means by which these elements may be integrated within the urban structure. In other words, analyses based on type have the potentiality to equip the architect with certain operative rules of creation, sound principles to base his design criteria on. Muratori's *storia operativa* actually intends to develop the means to convert the theoretical into practice. In his article *Designing In Stages*, Giancarlo Cataldi summarizes the theoretical assumptions at the root of Muratori's ideas in four stages (Cataldi, 1995:35-37):

1- "Building type is *a priori* a synthesis or a spontaneous living concept peculiar to a culture, variable in time and space. It is the assemblage of a set of principles, characters assimilated into a civilization throughout time, establishing its authority through its infinite number of variations."

This is a prevalent definition on which the current typological debates are based on. Type is perceived as a whole composed of the combination of various parts that are dependent on numerous variables. Thus, an alteration in any of these variables will also affect the structure of the type.

2- "Building history is a sequence of spontaneous constructional phenomena."

This is the logical derivation of the first definition demonstrating the reason behind the historical continuity of building types within a given context.

3- "The history of architecture is a sequence of designed constructional phenomena. It has no bearing on the scale of special buildings, apart from expressing the greater individuality of the architect designer and the typological influence that greater cultural areas can have on him."

This approach establishes a critical framework and reduces the individual creativity of the architect to a constructive reading of the typological process.

4- "The crisis in Modern Architecture is a typological and linguistic crisis."

The antagonism towards the notion of "type" in the architectural theory of the Modern Movement is due to its perception of type as a ready-made solution to a problem, as an answer, rather than as a question, a point of departure. As Martin Symes emphasizes, the choice between adapting an established type or starting from the beginning is the modern fallacy about typological method of design (Symes, 1994:168). There are other ways of benefiting from types. They may be re-modeled; they may be fragmented into their components which may then be synthesized and re-combined in various alternative ways. The typological crisis of Modern Architecture stems from its perception of type as immutable. On the contrary, types are changing, and in fact evolve to reflect change. As Cataldi remarks, this crisis was Muratori's starting point in the early 70s when he began to deal with the systematic disposition of his thought –thought that tends to interpret reality through architecture (Cataldi, 1995:37). Muratori was profoundly disturbed by the devastating effects of modern architecture on cities and his theory was aimed to restructure architectural design and building typology through the dialectic between typological reading and design. The crisis of Modern Architecture is perceived as resulting due to the growth of "rootlessness"

and a loss of historical insight; and the aggregation of their effects inevitably interfere with both the continuation of building typology and architectural language (Cataldi, 1995:37). For Muratori –and for the Italian School– continuity is the basic constant. The trans-historical aspect of types is echoed by Cataldi: "One can do anything but invent new things: real invention lies in not inventing anything." (Cataldi, 1995:47) Accordingly, Muratori's theory is based on the continuous search for a design methodology that has the potential to re-establish links with history and memory. Strappa explains this interrelationship between history and memory in the following statement:

> If for the historian, memory is the recording and ordering of the built environment in all of its different forms over the course of time, for the architect memory expresses itself in the attempt to reduce the built environment to general unifying principles (the structural essence) of which buildings are but particular manifestations (Strappa, 1995:92).

The architect perceives memory as encompassing a vast set of already interpreted and accumulated information about the act of making architecture, which may present universal design principles. Types are composed of consistent sets of characteristics and concepts. Studies on types and their reduction to abstract schemes lend the architect the opportunity to reach at sound principles as operative design criteria.

The concepts dominating the work of the Italian School are the "building type" and "organism". Organism, derived from biology, relates architectural artifacts and the city to bodily organs whose functions justify their forms. Thus, it conceives any built complex as a living structure constituted of elements linked together under certain principles, serving for the same purpose. Another leading

concept "the building type" is defined by Strappa as "...a heritage of common transmittable characters preexistent to the formation of the organism, governing the generation of the single element on the structure of their relationships." (Strappa, 1995:92) According to Strappa's definition, types are not copies of certain idealized forms but the synthesis of the structural essence of architectural artifacts. The transmittable characters inherent in types lend them their trans-historical aspect. Types are based on general principles that provide their transformation throughout time and space. According to Petruccioli: "The concept of building type is different from the formal schema of the formalists or the assembly box of the functionalists, because it is something that actually exists in reality –it is history." (Petruccioli, 1995:12) This notion of building type certainly contradicts that of the functionalists', which perceive it as amorphous containers, deprived of any meaning or character, waiting to acquire its form through enclosing whatever function is assigned to it. Building type in the Italian School's perception, however, is a synthesis of certain features inherited on a collective basis, and it has a historical accumulation. This definition is critical in understanding the notion of type and its virtues to design practice.

Aldo Rossi and Carlo Aymanino, pioneering figures in the Venetian-Milanese group of typology, were the leading theoreticians of the Italian School in the 60s. In his article *Exoteric, Polytheistic Fundamentalist Typology,* Petruccioli defends that these two leaders remained within the formalist camp, and that Rossi never mentioned the term typology in his *Autobiography* (1981) (Petruccioli, 1995:13). However, Rossi, in his famous book *The Architecture Of The City* (1984), elaborates his ideas on typology and urban structure:

> The concept of type became the basis of architecture...it therefore seems clear that typological questions are important. They have always entered into the history of architecture, and arise naturally whenever urban problems are confronted (Rossi, 1984:40).

In his book, Rossi argues that the problem of typology has never been treated with much attention within the past studies, and it has suddenly been displaced by something else –namely the function. Rossi severely opposes the notion of functional classification of artifacts. The validity of functional categorization is certainly undeniable to a certain degree, and it cannot be undermined that it is one of the important criteria which equips the architect with certain kinds of data. Functional classification has a certain utility only if it is perceived as a criterion among many other criteria; a part of the whole. Typological studies provide a complete and true classification of artifacts, of which functional categorization is one of its components. In this sense, type is the whole and the classification according to function constitutes one of its aspects. On the other hand, if alternatively a classification based on function were accepted as the general denominator, as Rossi argues (Rossi, 1984:47), then type would be completely diversified and would become "the organizing principle of certain functions". However, Rossi perceives this definition as corrupting the reality, and remarks that the insistence on the primacy of function reduces the artifact to a mere problem of organization and classification, which, in return, render them without either historical continuity or individuality. In this optic, it is evident that the act of classifying buildings based on their functions displays the point of view adopted in the classification rather than the essence of the artifact. An example given by Strappa clearly demonstrates why the adaptation of

functional classification to the reading of the built environment and to design corrupts the reality:

> If one compares two buildings commonly addressed as 'churches', such as a basilica and the central-plan church, it may be found that they have fewer features in common than an early Christian basilica has with Berlage's Stock Exchange in Amsterdam (Strappa, 1995:91).

As displayed in Strappa's example, terms like "church", "basilica", and "stock exchange" define only certain functions assigned to a building; therefore they are insufficient to declare its dominant character and its essence. Furthermore, the reference to biological organism in the functionalists' approach does not lend any validity to the permanence of artifacts. As Rossi asserts, if urban artifacts had the potential to reform themselves simply by establishing new functions, then the permanence of buildings and forms would have no significance (Rossi, 1984:47). However, the original characteristics are not conveyed throughout time on their own; rather, they react dialectically with the collective basis: they are absorbed by civilizations and are transformed due to cultural and socio-economical changes in time. Hence, it can be argued that type is more a function of tradition and cultural continuity than of functionalist approach. As a result, classification of artifacts cannot be formulated on a functional basis, but, in order to serve for "true scientific knowledge", it should be based on a typological framework which embodies the immutable compositional principles distinguishing the "unchangeable" from the "changeable".

2.3.2 The French School

The French School, amongst the leading members of which are Jean Castex and Philippe Panerai as Petruccioli states, claims its origin both from Aymonino and Rossi and from S. Muratori, but differs from the Italian School in two important general characteristics: in its dialectic between urban form and social action, and its dialectic of modern-non modern (Petruccioli, 1995:13). As discussed by Petruccioli, due to the influence of the French sociologist Henri Lefebvre, the French School, as opposed to the Italian School, places the social component to the uppermost rank, where the attention to physical space is the same as that given to use, furniture, the material culture, and the etymology of the terms of dwelling. The Italian School conceives the Modern Movement as a rupture with the historical and traditional continuity; and claims that discontinuity is crisis. The French, on the other hand, do not perceive the inheritance of the Modern Movement as an unfortunate mistake, but a patrimony just as those of other periods (Petruccioli, 1995:13).

In summary, both the Italian and French Schools provided instruments to help us determine the relationships between urban structure and building types, the emergence, the adaptation and transformation of architectural elements through a slow and long process of both cultural and socio-economic assimilation, and to guide us through compositional problems. In the words of Cerasi:

> They taught acting architects to look at context not as a fascinating if mysteriously compact and inarticulate entity, but as an objectively definable and articulate reality which could be explained through its elements, and through their interplay in the multiple process of formation of that reality (Cerasi, 1995:181).

The attention paid to planimetric typologies, to the intricate relationship between the building type and its context, and to the structural principles in the alignment of elements are important in both reading the urban texture and extracting general design criteria. To emphasize the revolutionary role of both schools through the words of Anne Vernez Moudon:

> Both schools of typo-morphology offer an intellectually challenging framework for thinking about the built landscape within the historical context of the city...Debates about typo-morphology in the schools illuminate the use of type in design theory (Moudon, 1994:308).

On the other hand, Cerasi, who is also a member of the Milanese School of typo-morphology, criticizes the works of Muratori and Rossi by blaming them for implying typological analysis *a priori* as a set of rules both for the interpretation of the context and for the project (Cerasi, 1995:186). This can be more specifically taken to mean the capacity to limit typological repertoire to urban context; in other words, they allow for the application of certain types within a given context. However, Cerasi believes in the necessity of a typological analysis operating *a posteriori* on concepts in the design process, because he argues that: "Both the active architect and the historian are not looking for rules but trying to understand the making of architecture and its inner logic." (Cerasi, 1995:186) Via the notion of "inner logic", Cerasi, in a way, states architectural autonomy. That is, types, while constituting strong links with the past, refer only to their own nature through the architectural elements. From this perspective,

Cerasi's proposal to overcome the reductive typological approach is notable and worth mentioning. It includes a partial return to 19th century academism's point of view –especially that of Durand's– in which plan, elevation, distribution, language were analyzed separately. According to Cerasi, this might overcome basic typological approach's tendency to conceive type as a unit and consequently as monolithic material. In the basic typological approach, it is postulated that type is a "whole" embodying certain unchangeable principles and elements. This perception is clearly legible in Rossi's words: "...typology presents itself as the study of types of elements that cannot be further reduced, elements of a city as well as of an architecture." (Rossi, 1984:41) What eludes the eye is the importance and autonomy of archetypes, that is of elements which are transmitted throughout time by different civilizations. Archetypes are idealized forms that represent ideas. Analyzing the relationships between the various archetypes within a type, and interpreting them through a conscious design process might enable new ways of designing within a given type, and suggest new methods of analysis of typology. As Cerasi believes: "Once accepted the notion that type is an abstraction, ...typological study can help the individual project acquire a skeleton, a conceptual structure." (Cerasi, 1995:187)

2.4 TYPOLOGY AS A DESIGN METHODOLOGY

Due to the great impact of Modern Movement on our age and the arrogant appreciation of modernity in modern architectural history writing, type is viewed as regressive, rather than interacting with modern architecture. Fortunately, today

its study has gained validity in various schools of architecture –not as much in Turkey as in Europe and America–, and it is a promising fact that typology is conceived as a remarkable analytical tool with which to examine architectural history and deduce sound principles that would guide us at present and in the future. Gülgönen and Laisney argue the relevance of types to design as follows: "If we understand the fact of designing in the sense of 'composing', then analyses based on type will show us the various ways in which these elements may be composed." (Gülgönen and Laisney, 1982:27) In the light of this view, it becomes essential for the contemporary designer to familiarize himself with existing types, their origins, their interactions, the way they were generated within different societies and the deeper structures embodied within them. Naturally, analyzing the social, cultural and political dynamics of a specific society will help to understand the organizational schemes of types belonging to that society.

But how to derive new types? As types are engaged in a close dialogue with the dynamics of a society, the alterations of these forces and the emergence of new social necessities entail the invention of new types. When a type is established in architectural practice, it is due to the fact that it is in conformity with certain cultural and ideological demands. Typological invention does not necessarily exclude the re-use and re-interpretation of the elements and structural principles of pre-existing types. New types might be constructed on the same principles as the existing types through an assemblage of the basic elements of construction, according to the deduced compositional rules. However, this process is never formulated *a priori* but is always derived from a series of alterations. In his article *On The Typology Of Architecture*, Giulio Carlo Argan

maintains that: "The birth of a 'type' is dependent on the existence of a series of buildings having between them an obvious formal and functional analogy." (Argan, 1962:117). Therefore, type is generated through a process of reducing those analogies to a common kernel.

In order to derive at new sound types, the architectural tenets being taught in schools should also involve themselves with the application of typological studies to modern design. As Morris states, this endeavor aims at integrating the architectural program with its typological *programme*, thus, converting the implicit into explicit (Morris, 1982:18). The architectural program is the explicit requirements from a sound design of a building for its production. The latter, however, represents the general cultural expectations of a certain building –of the way it should look like and the way it should be organized. Jacques François Blondel wrote in 1749:

> 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 determines the general form and which declares the building for what it is (Blondel quoted in Vidler, 1977:99).

Through these words, Blondel implicates that any type of building should express itself. In short, *programme* stands for the implicit requirement of what a building should symbolically represent. Studying the existing building types as a starting point may equip the architect/student with the applicability of the generic qualities of those types to new functions or contemporary design procedures. What remains important in these typological studies is the opportunity to fuse the richness and effective spatial/cultural qualities of our architectural heritage with the global utterances and technological developments.

Let us recapitulate before concluding this chapter. Today in architectural schools, there seems to be a re-emergence of the concepts of "type" and "typological" studies, which have never been dealt within a systematic way and have been pigeonholed as unimportant under the support of modern architecture. The problem of typology was tried to be eliminated due to a point of view which regards form as severable from content. However, contrary to the Modernist dogma, the typological elements constitute an important complex part of the making of architecture. To acknowledge such complexity might introduce innovations to the architectural discourse, and might establish new references for architectural design. The infinite recombinations of these elements and the organizational schemes offer possibilities to provide a sound ground on which to construct imaginative, reliable interpretations.

Today, typological questions are beginning to capture the architect's attention and gradually he is liberated from the constraints set by the prejudiced hypotheses, which, as Hollein puts it, "...consider modernity good and important and tradition second-rate and parochial." (Hollein, 1982:10) Recent experiences over the past years have shown that typological theory constitutes an important part of the making of architecture and of the creative development of the architect. In a competition held at the Venice Biennale in 1985, its chairman, Paolo Portoghesi wrote in his introduction to the catalogue:

> As for the 'new familiarity' with the heritage of the past, whether recent or remote, this exhibition shows that it is no longer a question of a critical hypothesis, but of a solid, stable body of information with which future generations must also come to terms unless they want to remain emprisoned in their false distraction (Portoghesi quoted in Cataldi, 1995:45).

This remark should be given credit for two reasons: firstly, for unveiling the typological reading as a method based on formulating a design process able to establish links with history and cultural memory; and secondly, for not seeing the heritage of the Modern Movement as an accident but as a "tool for self criticism".

Typological studies need yet to be explored in order to be exploited fully. As Gülgönen and Laisney defend:

> These issues are not merely analytical tools applied in an effort to understand context, program, and the formal and spatial qualities of architectural objects themselves; they also represent conceptual instruments for design (Gülgönen, Laisney, 1982:28).

Typological analysis provides an understanding of the full nature of the type selected, but more importantly develops a way to adjust, respond to a given context through the structural principles extracted from the studied type. Typological methodology is useful for design process, because it allows the architect to consider a set of criteria that can be agreed about. However, when considering typology as a methodology of design, the difference between "quotation" and "interpretation" should clearly be revealed. Typological design procedures do not presume "replication" of existing types. The solution to this dilemma lies in the reconstructive reading of the typological process. Otherwise, any reference to imitation would only lead to a re-appropriation of certain elements. Hence, it is rather important to distinguish between "imitation" and "interpretation", just as between "model" and "type", and to comprehend the possibility that a typological reading can be perceived as the disciplinary framework of architecture.

Before concluding the chapter, it is important to remark on S. H. Eldem's insistence on his adoption of typological theory both as a tool to comprehend the structural essence of the "Turkish House" and to apply this essence as an "operative design methodology" in his designs. Although Eldem's typological studies pre-date the theoretical developments on type in the Italian and French Schools, those discussions on the typological discourse are included in the chapter to provide the reader an insight into the theory of type and to make it easier to comprehend Eldem's architectural theory. Eldem's architectural intention was to create buildings in the "modern" sense and to perpetuate the links with cultural and historical heritage at the same time. In order to establish this dialectic between the modern and the traditional, Eldem chose to elaborate on the "Turkish House" –an idealized concept on the various Turkish/Ottoman houses. Eldem argued forcefully that Turkish dwelling architecture had the capacity to cope with the contemporary designs through the re-structuring of its elements. Eldem also responded to the programmatic concerns: with the use of idealized characteristics of the "Turkish House", he inserted "Turkishness" into his designs, which in return equipped his edifices with a character. In Eldem's conception of type, the word had two meanings: the study of types (their classification and description) and the study of a type (remodeling, interpretation). As for the first meaning of type, Eldem made a typological analysis of the "Turkish House", both demonstrating its planimetric evolution and classifying its architectural components. However, Eldem's intention was not merely to record the classificatory information on the Turkish dwelling architecture, but primarily to transform conceptual and structural systems inherent in the "Turkish House" into operative means for making architecture in

the modern world. After his typological analysis of the "Turkish House" and its fragmented parts, Eldem reinterpreted the compositional rules and principles to constitute his own design methodology. Thus, Eldem's theory of type claimed an operative dimension, and this argument constitutes the main hypothesis of this dissertation.

CHAPTER 3.

SEDAD HAKKI ELDEM'S "TURKISH HOUSE": A Typological Method Of Analysis

During Sedad Hakkı Eldem's enrollment in the Academy of Fine Arts, the curriculum of the Academy was based on the French model of the *Beaux-Arts* School. As Yenal states, students began by learning classical orders (including Byzantine and Ottoman) and gradually went onto composing larger buildings whose elements were usually derived from studies of antique and contemporary examples (Yenal, 1987:159). Having studied within the curriculum of the *Beaux-Arts*, it is no astonishment that Sedad Hakkı Eldem was conscious of *typology* as being a methodology of design; of the idea of *type* and *typology;* and of the *Beaux-Arts* tradition of *composition* and *programme*. During his post-graduate study in Europe Eldem practiced under the guidance of Le Corbusier in Paris; in Berlin he acquainted himself with the Bauhaus tradition and the architecture of Frank Lloyd Wright via Wright's published designs. However, it can be argued that, among these various architectural theories, Eldem deliberately chose to adopt a design methodology close to the teaching of the Academy.

This thesis argues that, almost in all of Eldem's designs, a typological research is evident, extending from his typological studies on the "Turkish House" in his projects for various small houses, villas or *yalıs* –most of them along the Bosphorus– to the origins of Turkish tomb architecture as it is the case in Eldem's

design proposal for the Mausoleum of Kemal Atatürk (Anıtkabir, 1942) (Özkan, 1987:18). Eldem foresaw his typological studies as a tool to increase preoccupation with what is "Turkish", and throughout his career, he maintained a continuous search in cultural heritage. In the words of Özkan:

> He himself persistently displayed what he meant by generating a modern idiom from this heritage. This, in brief, is not repeating what was valid and built for the past but is continuous search for abstract intrinsic values to guide new solutions (Özkan, 1987:14).

What renders a study on Eldem's architectural approach (based on his idea of composition and type) difficult and open to discussion is that it is almost impossible to trace his ideas through his words since Eldem chose to communicate his architectural tenets via his designs. Özkan points out to this situation: "Unlike his contemporaries, Hassan Fathy of Egypt and Rifat Chadirji of Iraq, Eldem did not present his personal philosophies in written form." (Özkan, 1987:21) Thus, all proposed and stated in this thesis is to a great extent a personal re-interpretation of Eldem's architectural theory in the light of various architects' and critics' hypotheses. The result achieved in this study on the origin and aim of Eldem's typological research may be incomplete, however, this work may gain importance when perceived as an attempt aiming to amplify the attention paid on "typological studies" in the architectural education in Turkey and to put the problem of typology onto the agenda. The fact that Eldem's documentation of plan types of the "Turkish House" –a remarkably important piece from the perspective of typological studies, which was conceived to construct a sound design methodology and an alternative way of teaching architecture– could only

be published approximately thirty years after its completion is in itself a major evidence displaying the inadequate attention paid to typological studies in Turkey.

It might be argued that Eldem's preoccupation with what is Turkish had an impact on several contemporary architects; an impact not widespread yet cannot be despised. As exemplified by Özkan, the abstract reference to the protected central s*ofa* in the design of Turkish Historical Building by Turgut Cansever –the Aga Khan Award for Architecture winning project in 1980– successfully corresponds to Eldem's typological studies on the *sofa* types of the "Turkish House"; similarly, Çinici's reflection of Eldem's idiom occurred in the Middle East Technical University Staff Housing, where he referred to the central Anatolian courtyard type house plan with many details from "Turkish House" types (Özkan, 1987:20). However, these two examples proposed by Özkan may be questioned whether they are due to the impact of Eldem's teachings or these three architects are all fed by the same sources. In any case, these two illustrations amongst many others once more prove Eldem as an effective instructor and highlight the fact that interpretations of his doctrines, rather than imitation, may lead to successful results. Thus, Eldem's main significance resides in his success in forming a background for anyone who is aware of a typological method of study to base architecture on heritage.

3.1 THE "TURKISH HOUSE"

Eldem has based his studies insistently on the typological reconstruction of the "Turkish House". At this point two questions need to be answered: what is the

"Turkish House" and why did Eldem choose to elaborate on the conceptual framework of the "Turkish House"?

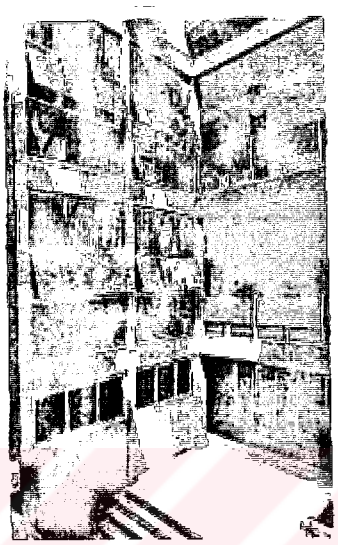


Fig.3.1 Turkish Historical Society by Turgut Cansever and Ertur Yener, 1966. Interior Courtyard. Source: Özkan (1987).

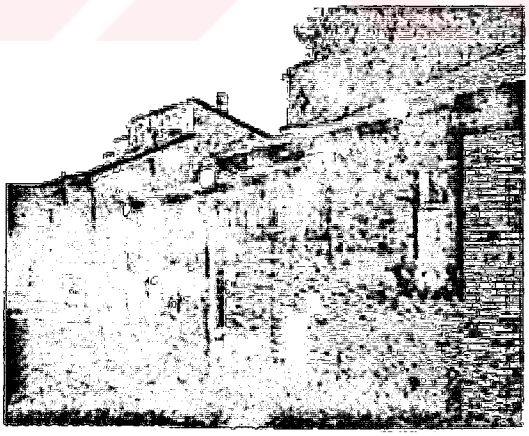


Fig.3.2 Middle East Technical University Staff Housing by Behruz Çinici, 1966. Source: Özkan (1987).

3.1.1 Description of the "Turkish House"

Due to the variety in the historical, cultural and regional domains of the Ottoman Empire, it is impossible to give a single definition to the term "Turkish House". Thus, unless what it stands for Eldem's architecture is not explained, this notion is bound to remain ambiguous. It is a generic term applied to the timber-frame Turkish house that is spread from the Central Aegean to the northern side of the Taurus Mountains, from the coasts of Anatolia to the mid plateaus and reaching out to the Balkans and Rumelia. According to Doğan Kuban (Kuban, 1982:197), this house type is the "true representative" of the dwelling culture, which the "Turkish Era" had developed throughout Anatolia; the dwelling architecture of İstanbul may be considered as an altered, elaborated modulation of the same type within time.

In his article *Morea, Thessaly, İstanbul; Local Heritage and Interactions in 18th Century Domestic Architecture*, Yannis Kizis gives a brief explanation of the Ottoman dwelling architecture:

> Finally during 18th and early 19th centuries, a mature and typical image and layout of urban house, expressing a new, vivid and financially emerging society, forms the established architectural model. If it must be named after the state where it flourished, then we may call it 'Ottoman'. If after its origin, we may call it 'Byzantinate', if the word expresses the centuries of urban civilization of the preceding empire. If after its craftsmen, we may call it Turkish, or Greek, or Albanian, or Bulgarian and so fourth (Kizis, 1995:134).

However, Sedad Hakkı Eldem denies any claim that the Byzantine house tradition continued to live in the Turkish House and the Ottoman House: "...it is

practically impossible to determine the relation, or the assumed relation, between the Byzantine House and the Ottoman House." (Eldem, 1984a:27)

Due to the social and cultural interactions between different ethnic groups, it is most of the time quite impossible to draw fixed lines in order to determine the frontiers of the Turkish vernacular type; in many regions different vernacular types coexist, interwoven in intricate patterns. Hence, this generic term –the "Turkish House"– has always been the subject of serious criticisms and interrogations. Deniz Orhun shares this sentiment:

> The term, *the Turkish House*, which is used for the traditional houses of Turkey, has been criticized for not being clear about which houses in the vast geography of the Ottoman world and in its long history it signifies (Orhun, 1995:276).

Eldem claims that throughout time the Ottoman House was transformed into the "Turkish House" type, and that among the numerous external factors contributing to the development of this type, the Turkish element –derived from Turkish life style and modes of aesthetics– was the common denominator (Eldem, 1984a:21). It is certainly natural to witness how the "Turkish House" interacted socio-economically and culturally with different nations' vernacular architecture in the areas wherever Turks settled –"Turkish House" type being absorbed as an acceptable part of local heritage and the "Turkish House" taking on additional features in return. Yannis Kizis explains these interactions in 18th century domestic architecture as:

> At the turn of the 18th century a peculiar architecture which penetrated all regions under ottoman rule and which, without projecting specific ethnic traits, was adopted and assimilated equally by the Muslim element and the Christian population of Asia Minor and the Balkans (Kizis, 1995:124).

Nowadays historians and archeologists understand that even the most isolated regions show indications of common typological factors. It is not only the stylistic characteristics that are shared; house plans, too, are typical of the period with numerous variations, in conformity with a socially and an aesthetically accepted design. Thus, it is crucial to realize that native heritage could be explored to its real dimensions only on comparative grounds, far from ethnic isolation. Eldem bases the reason behind the Ottoman House type's possession of similar qualities whether in Crimea or Macedonia, in Bosnia, Albania or Anatolia on the strong existence of the Turkish heritage –its life style and cultural framework– (Eldem, 1984a:21); whereas, Kizis relates it to the emergence of a class of bourgeois merchants and manufacturers throughout the Ottoman Empire during the 18th and early 19th centuries:

> The architectural image of the residences cannot be separated from this occurrence, for in their evolved form, the houses acquired many common elements, overt manifestations of the rise of the middle class (Kizis, 1995:123).

It is quite evident that the late Ottoman House (or if a national term is preferred, the term "Turkish House" can be used, as applied by Eldem) is not an independent unity and it must be considered with references to its surroundings. However, it is a special type. In his book *La Città del Levante*, Maurice Cerasi lists three main factors distinguishing the late Ottoman House from the houses of the contiguous cultures and the settled Byzantine dwelling type within the region's urban culture (Cerasi, 1999:155). The first is the relation between *urban morphology* and the architectural type, that is, the adaptation of the courtyard surrounded by a wall on an urban lot. The second is based on the *compositional principle* in which geometrically shaped elements (especially the rooms) are

united forming free wholes. The last one is related with *technology*: the stone or brick walls have been replaced by timber frame construction system.

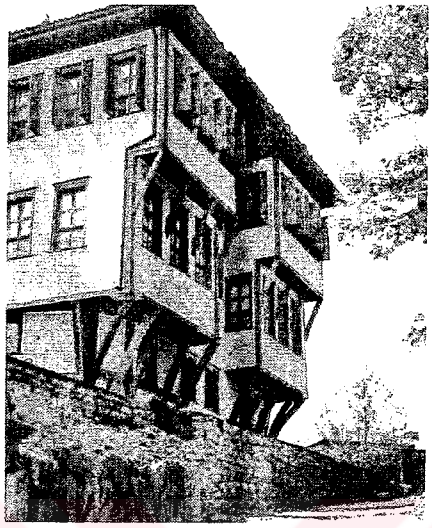


Fig.3.3 Dimitriadis House in Filibe-Plovdiv. Source: Cerasi (1999).

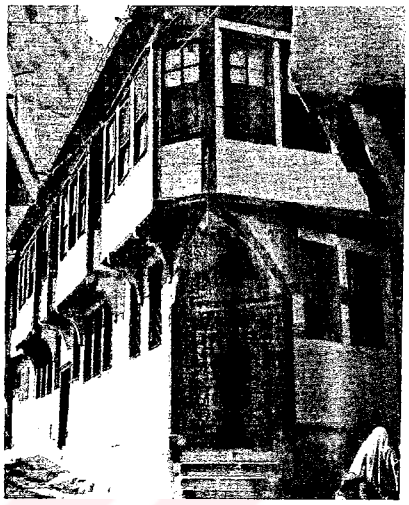


Fig.3.4 House in Afyon. Source: Cerasi (1999).

The intermingled cultural and social phenomena within the wide region under the Ottoman rule cause a naming problem; however, the discussions on this subject are out of the scope of this dissertation. What is important at this point, though, is the clarification of the meaning of the term "Turkish House" for Sedad Hakkı Eldem. Eldem divides the Turkish dwelling architecture into various categories such as the Black Sea coastal houses, the Rize house, the Northern Anatolia house, etc., but he expresses that the houses of İstanbul, Edirne and the Marmara region embody the most sophisticated qualities of the Turkish domestic architecture; and that the "Turkish House" has found its classical being in those types. In Eldem's own words: "In fact it would be proper to name the İstanbul House as a pure "Turkish House" while other regions could be described as regional provincial types." (Eldem, 1984a:31) Among the vast category of the

Turkish houses, it is the traditional timber-frame house that Eldem sets his design criteria on.

3.1.2 The Reason Lying Behind Eldem's Elaboration on the "Turkish House"

Historical Turkish houses in existence during the years Eldem started studying architecture were more numerous compared to the present. Yet, it is still quite an interesting fact that Eldem chose the "Turkish House" as his source of inspiration since neither there were influential systematic studies done on the evolution of the Turkish residential architecture and its types nor the academic staff in the schools of architecture in Turkey favored or encouraged such an architectural philosophy during that period. Mongeri's architecture was on the track of re-introducing the stylistic Ottoman architectural elements; Vedad Bey exhibited his revivalist Neo-Ottoman style –both displaying similarities to the Neo-Arabic style (Yenal, 1987:160). It is perhaps more appropriate to start tracing the reason lying behind Eldem's choice of the "Turkish House" as early as his first years in the Academy. It is evident from his words that Sedad Hakkı Eldem was not interested in his teachers' tenets at all and started to search for other grounds to base his architecture upon:

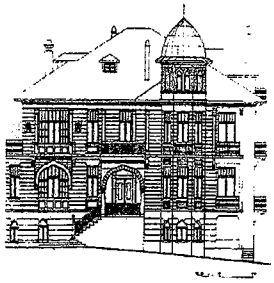
> As a student I was doubly rebellious. Firstly, I was violently against the "neo-Turkish" of domes and arches; secondly I was equally against the *kübik* international style. And at the same time, I was passionately in love with the Turkish house. If thereafter, I have achieved something in my career, I owe this achievement to the persistence of these strong feelings in me (Eldem, 1984:57).

Unlike Mongeri's and Vedad Tek's efforts to enliven the lost omnipotence of the Ottoman style through decorative elements and imitated features, Eldem chose to idealize the "Turkish House". It was not the stylistic features or the ornamental elements of the "Turkish House" that Eldem sought to imitate. Rather he was deeply committed to idealizing the compositional principles –via the planimetric interpretations and formal abstractions– to accord with his own ideas.

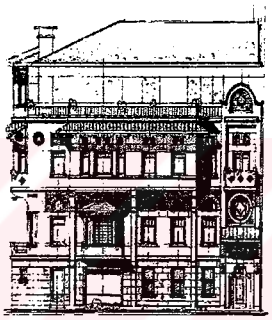
It was not the stylistic aspects but the "modern qualities" of the "Turkish House" that Eldem was concerned with: lightness, transparency, the modular logic and the structural clarity. Therefore, Eldem argued that his ideal "...decisively refuses formal imitation. Its indebtedness to tradition and national taste resides in the overall character of the building –the abundance of windows, the plan types, the feeling of lightness, etc." (Eldem, 1984:58) It is important to note that Eldem once more talks of *character* in the sense of the *Beaux-Arts* tradition, demonstrating his pursuit of equipping his buildings with a *programme*.

In Yenal's idea, Eldem's favorite architect during the years when he was a student was Alexandre Vallaury, whose latter work with apparent refinement echoes a mature understanding of Ottoman residential architecture (Yenal, 1987:160). Later, during his post-graduate study years in Germany, he had the opportunity to acquaint himself with the intrinsic systems of cultural heritage via The *Turfan Expedition-Exhibition* led by Albert von Le Coq. This exhibition, as Yenal suggests: " ...helped the young Eldem to discover, though intuitively, the deterministic patterns of the cultural continuity via exhibited artifacts on Central Asia, the ancestral homeland of the Turks." (Yenal, 1987:161)

Detail, the Mongeri residence. Photograph: Engin Yena



The Mongeri residence, Şişli, İstanbul, 1916. Drawing courtesy of Prof. Dr. Metin Sözen.



Vedad Bey's private residence, Nişantaşı, İstanbul, 1916
Source: Suha Özkan.

Fig.3.5 The Mongeri Residence, Şişli, 1916. (on top)
Vedad Bey's private residence, Nişantaşı, 1916. (at the bottom)
Source: Yenal (1987) and Özkan (1987).

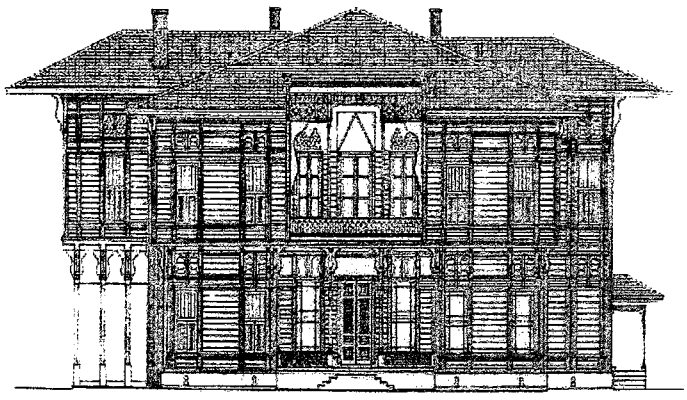


Fig.3.6 The Crown Prince Abdülmecid Efendi's residence, Bağlarbaşı, İstanbul. Architect: Alexandre Vallaury (ca. 1889).
Source: Yenal (1987)

Eldem claimed that through the Frank Lloyd Album *The Prairie Houses,* he discovered some important elements of the "Turkish House": "The long, low lines, the rows of windows, the wide eaves and the shape of the roofs were very much like the Turkish house I had in mind." (Eldem, 1978:5). The same way F. L. Wright exploited the spirit of the Japanese dwelling architecture, composing an international vocabulary from its conceptual kernel, S. H. Eldem's quest was to fuse the traditional with the modern through the universal qualities of the "Turkish House", such as lightness, transparency, modular logic, structural beauty and clarity. His exhibition of a series of color perspectives in Paris in 1928 under the title *Countryside Houses for Anatolia* (Bozdoğan, 1987:29) – displaying a recognizable Turkish character– and the sketches he made of the anonymous Turkish houses throughout his school years (Bozdoğan, 1987:26) bear evidence to Eldem's passion for cultural heritage and native Turkish domestic architecture even starting from his early years in the profession.

In an article he wrote on the "Turkish House", Eldem sets his aim as creating a "modern Turkish House" and explains his reason of dealing with the traditional dwelling architecture:

> Turkish House is the home of the Turkish nation. This house will constitute the frame of its life (Anonymous, 1983:18).

He highlights the importance of his studies on the "Turkish House" by claiming that whoever denies his past cannot create a new style, and in order to produce a modern architecture belonging to the Turkish nation, the historical anonymous Turkish architecture should be exploited. Eldem criticizes the foreign instructors/architects of his time for practicing architecture according to their own

tastes, without taking Turkey's local values into consideration; thus, he argues that they were incapable of responding to the native taste and needs:

> Deprived of the appropriate instructions, foreign experts have often followed their own intentions which fall short of responding to the national character. As a result, our country has turned out to be a ground for their experiments, and they have not given us a hand to create a native style. Instead, foreign influences have confused our native taste and thus prolonged the evolution of a national style (Eldem, 1940:69-74).

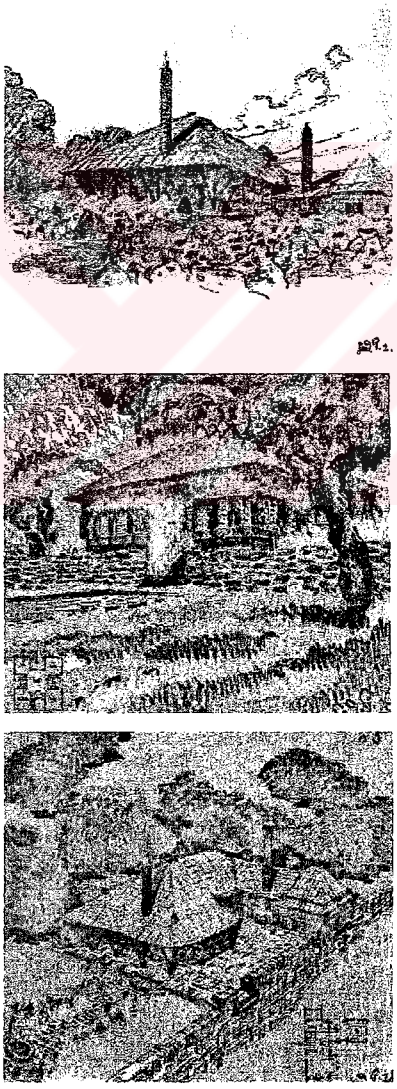


Fig.3.7 Watercolors of the Countryside Houses for Anatolia, 1928-1929.
Source: Bozdoğan (1987).

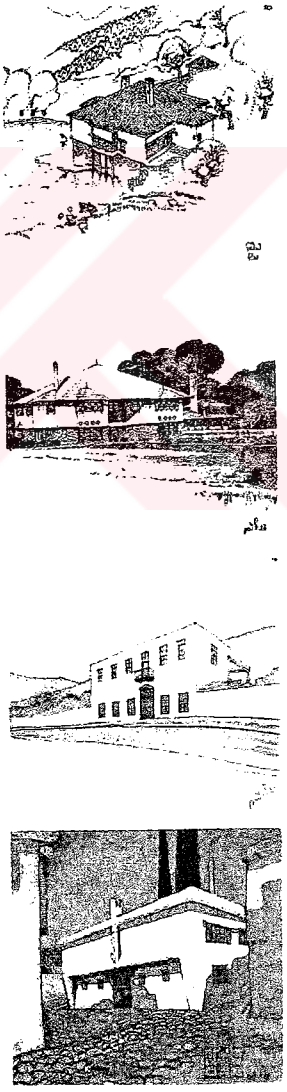


Fig.3.8 Eldem's watercolors.
Source: Bozdoğan (1987).

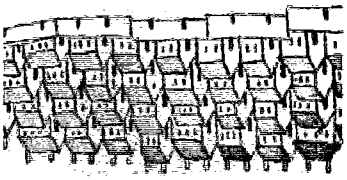
The *national character* Eldem talks about constituted an issue of heightened importance for Eldem's architectural discourse, demonstrating his pursuit in stressing a balance between the explicit and the implicit, or namely the program and *programme*. In Eldem's mind was the goal of endowing the program of his works with *character,* which is the pre-eminent programmatic given. However, Eldem's application of character surpassed any differentiation according to the various functional requirements of each building; it was rather a *national character* encompassing the whole set of his works. Eldem's constant craving was to achieve a native architecture using the terms of a modern discourse (i.e. reinforced concrete and the modern qualities of the traditional "Turkish House" structure, which will be explained later in the chapter) that brought Eldem close to the notion of "Turkish House", of whose overall effect, harmony of certain rhythms, motifs and certain smaller elements he had noticed to be coming to terms with the contemporary architecture.

> What becomes fundamental is the succession of forms in time, their repetition and their variation. It is for instance, the infinite diversity of the models that determinates the typology and the irreducible form of the house (Massimo Scolari quoted in Bozdoğan, 1984:45).

Sedad Hakkı Eldem had discerned the typological variations of the traditional Turkish domestic architecture and their extreme diversity, which led him to produce a classificatory study on the plan types of the "Turkish House". He believed that certain formulas and methods existed in the design procedure of the foremen (Eldem, 1954:22), and appreciated the plan types those foremen had developed throughout time according to the social needs and aesthetical aspirations of the Turkish nation. The Ottoman artist, as Cerasi argues, rather

than improving the tale-wise and dream-like discoveries, searches for the unexpected and new assemblages of the traditional elements and typological structures (Cerasi, 1999:241-242). The various combinations of the pre-determined elements produce a continuously changing order in the residential street and the urban perspective. The *Kalfa* (master craftsman) produces an infinite variety through the combinations of pre-determined elements and compositional rules, deduced from the local building tradition. This limited area of formal components and a mechanical order sufficed the development of a dwelling tradition. The Ottoman craftsman displays his talent and skills in finding the best solution for the task at hand, operating within a given framework. Thus, the products are almost always anonymous. Eldem draws attention to the same process in the evolution of the "Turkish House": "This attitude allowed a standard building style to develop throughout the Ottoman regions, and helped it to survive until well into the 19th century." (Eldem, 1984a:181) Hence, it was the master craftsmen who maintained a stylistic unity in the different types of the traditional dwelling architecture across the country by the dispersal of their skills beyond the boundaries.

> Their [craftsmen] viewpoints and understanding had had to confine within a relatively narrow framework with limited capacity. By departing from all kinds of egocentric claims an architecture without identity or in other words an 'anonymous' architecture has evolved. It consequently has safeguarded the profession and art of architecture from all kinds of dubious pursuits and eccentric attempts (Eldem, 1974:10).



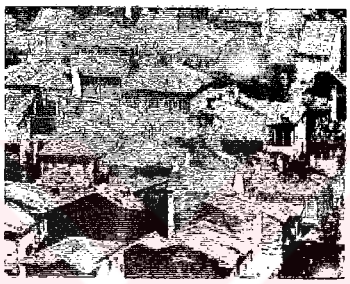


Fig.3.9 An İstanbul m*ahalle* in the 17th century.
Source: Yenal (1987).

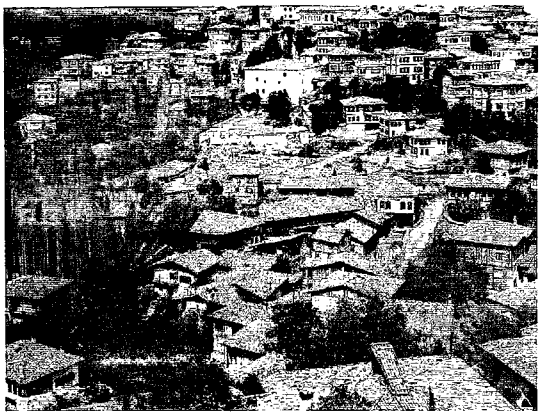


Fig. 3.10 *mahalle* in Safranbolu.
Source: Cerasi (1999).

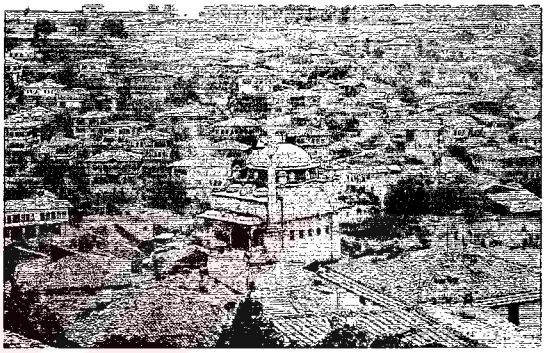


Fig.3.11 *mahalle* in Safranbolu.
Source: Cerasi (1999).

What Eldem meant by "dubious pursuits and eccentric attempts" can be more clearly comprehended in today's modern world. The products of the ancient master craftsman reflected the general taste and ideology of a certain culture. However, today, in Turkey, there survives nearly no such belief as creating products in continuity with the evolution of the Turkish architecture. In other words, the products of today's Turkish architecture do not share a common language: most of the buildings (including houses) constructed in this new era reflect solely the architects' personal preferences and a large set of variables (land speculation, material market, etc.). The results are mostly undefined

artifacts belonging neither to tradition nor to modernity. This prevalent attitude – in the name of liberty and pluralism "anything goes"– ruptures our links with our cultural identity. This is where the significance of the typological analysis resides in: enabling us to take a step further and at the same time maintaining bonds with our cultural identity.

Rather than putting his energy in the endeavor to re-generate a tradition capable of answering social needs and tastes, Eldem examines the existent types and decomposes them into their basic components and fundamental values, in order to re-synthesize them within a modern, creative interpretation. Yenal echoes this idea: "Since the structural perfectionism is already achieved the vernacular designers/folk builders are free to focus their individualistic talents to create spatial variations in different kinds of buildings" (Yenal, 1984:168). Eldem's historical analysis was intended both to make explicit the rich typological repertoire underscoring the "Turkish House" and to form the basis for his own design criteria. Therefore, it was intended to transcend the limits of the precedent in favor of the more abstract qualities intrinsic to the idea of type.

3.2 PLANIMETRIC ORGANIZATION AND PLAN TYPES OF THE "TURKISH HOUSE"

Equally integral to Eldem's definition of type is social organization, since it, along with physical conditions, determined which type was to take root. Eldem is probably aware of the social configurations that contributed to the character and mode of production of types. However, in his analysis of the plan types of

the "Turkish House", Eldem does not mention the social factors accompanying the planimetric organizations; rather his analysis is based on a purely compositional and constructional phenomenon. It is more of an operational research since Eldem's main intention is to build up a design methodology via the essential principles of the "Turkish House". The main intention of the author in including a section on the planimetric organizations and plan types of the "Turkish House" is to reveal the methodology of typological classification that Eldem put forward and to deduce the planimetric compositional principles that will be helpful in reading the planimetric organizations of Eldem's designs in the next chapter.

One may wonder the reason lying behind Eldem's intention in paying so much attention to the plan types rather than the volumetric configurations or the formal properties of the façade. Eldem perceives the plan as the common denominator of all various types of the "Turkish House"; as "...the chief factor of unity and conformity." (Eldem, 1968:216) The plan reflects the overall composition as well as the social and economic standing of the house. The spatial relationships among the typical components of architectural elements –such as column, wall, window, floor and room– are claimed by Abbey and Dripps to be established primarily in plan –the architectural tool that provides the abstract conceptual framework by which ideas are organized (Abbey, Dripps, 1982:14). It is a two-dimensional device that has the capacity to enable the configurations of three-dimensional space. In addition, Doğan Kuban asserts that the most interesting and uninterrupted aspect in the design of the Anatolian-Turkish residential architecture is the existence of a common plan organization that draws the different regional dwelling traditions close to one another (Kuban, 1982:198).

The general scheme of the planimetric organization of the "Turkish House" is mainly constituted of four elements: the room, the *eyvan* –a vaulted or domed recess open on one side–, the *sofa* or the central hall and the staircase. All typological variations are realized using these specific components. However, Eldem perceives the *sofa* as "...the most influential factor in the composition of the plan" (Eldem, 1968:218), whose shape and location directly determines the type of the house. Thus, in his explanatory book *Türk Evi Plan Tipleri*, Eldem classifies the plan types of the "Turkish House" according to their *sofas*. Actually what he does is condensing formal properties common to each group into a typological abstraction.

In their article *Analyzing Organizational Schemes*, Bruce Abbey and Robert Dripps convey the concept of *center* as the necessity for making 'identifiable place' from which the users are able to comprehend the physical location of one another, and they emphasize the fact that by conceiving the idea of 'making center' as a *typological* problem rather than merely one of composition, one can make an inquiry into the past that is not beset by stylistic bias (Abbey, Dripps, 1982:15). The center –especially through a planimetric analysis– can reveal the interrelation of the compositional schemes of the volumes within a building. In fact, the notion of center varies from culture to culture. The central distributive space in an Italian Renaissance *palazzo*, for example, is rendered as an internal void placed at the middle of the mass, providing light and circulation to the inner spaces, whereas, in the French "Hotel Particulier" plan types, this central space of distribution is shifted to a more peripheral position in order to act as a mediator between the external site conditions and the interior of the building (Abbey and Dripps, 1982:15).

The most characteristic element and the central distributive space of the "Turkish House" is the *sofa* (or *hayat*) –a spacious gallery lying in front of the rooms and *eyvans*– which connects different rooms together and, at the same time, constitutes the main living space. This distributive element has been applied for centuries: firstly, in the most ancient types and later, in warm climatic regions, as a long, wide and open outer corridor or a pavilion opening into the garden or as "...symmetrical, central spaces resembling the Venice houses" (Cerasi, 1999:159). Kuban foresees that the origins of the *sofa* are to be found in the ancient Turkish-Asian and Iraqian types (Kuban, 1982:36). In any case, the *sofa* has an inclination to be a representational space, serving common uses.

Fig.3.12a Sayvanlı House, Bursa.
Source: Eldem (1984a).

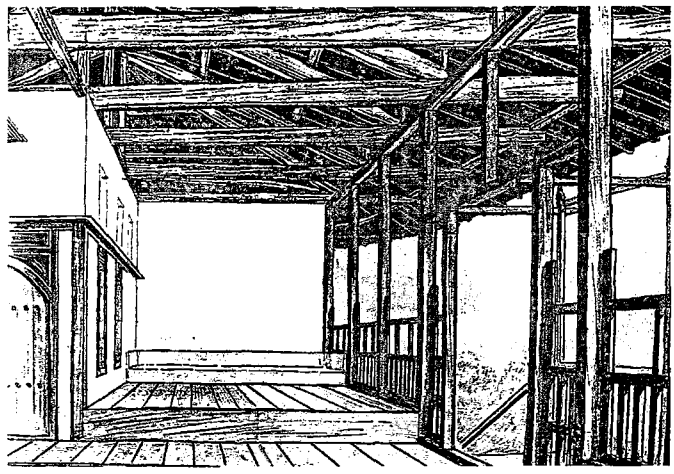


Fig.3.12b Restitution of the outer *sofa* of the Sayvanlı House.
Source: Eldem (1984a).

In her article *Is It The "Turkish House" Or Living-Integrated House*, Deniz Orhun classifies the traditional house of Turkey under two spatial-functional themes: the first one integrates and structures the house around the activity of living –namely the *sofa*– and, in the latter, the domestic interior concentrates around the activity of cooking where living can be either integrated to a certain degree to this activity or might be segregated. However, the difference is not to a significant degree for these two categories, and the common denominator in both themes is the *hayat* –the configurational center surrounded by other spaces. Hence, it can be claimed that the houses are unified and structured around the living space –namely the *sofa*. This central distributive space is inserted within the overall geometrical planimetric and volumetric compositions of the house. Freeing itself from being congested between other spaces, this central space almost always takes the form of the configurational center that defines the overall structure of the house; thus, the "Turkish House" provides fluidity maintained by the continuous and easy flow of movements through the *sofa*.

The *sofa* is a common distributive space, however, it is also the social configurational center. Eldem identifies the *sofa* also as: "...the place where the whole household assembles and where weddings and feasts are held" (Eldem, 1968:218.) Thus, it embraces some parts for sitting like *eyvans*. These parts may also overhang the *sofa* with a raised platform (*sekilik*), resembling a balcony. They are the pavilions (kiosks) added to one or both ends of the *sofa,* used as impressive motifs to emphasize the façades of the "Turkish House" (Kuban, 1982:204).

According to Eldem, the variations within the combinations of the typical elements create highly original plan compositions that are peculiar to the architecture of the "Turkish House" only (Eldem, 1968:224). The diverse compositions of the *sofa* and the combinations of its various parts permit rich planimetric compositions, which Eldem classifies in four categories:

3.2.1 House Type Without a *Sofa*

According to Eldem, this type is the most primitive house plan and it consists of one or more rooms lined up in a row (Eldem, 1968:220). The house is built around a centralized courtyard; the rooms are lighted by windows that open onto this courtyard. In this plan type, the courtyard serves as the *sofa*. At the upper floor, the rooms are connected to the courtyard with stairs and a passage lying in front of the rooms in the form of a balcony, which provides the focal point of the house. This type has been largely applied in the southeastern parts of Anatolia near Iraq and Syria due to the hot climate; in colder regions, the open

passage had to be covered; consequently this type did not come into general use (Eldem, 1968:220).

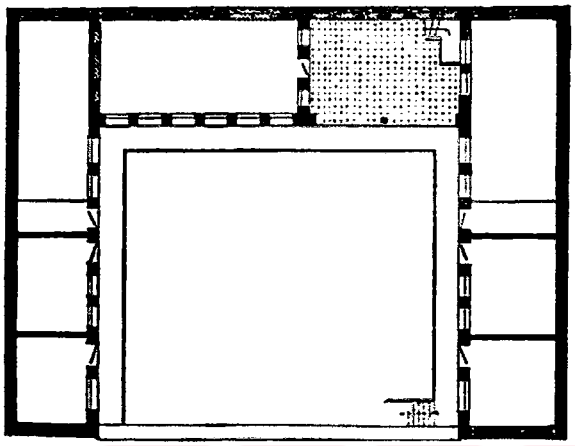


Fig.3.13 Bayram Güllaç House, Diyarbakır. The rooms, placed on three sides of the courtyard, are connected to each other with a gallery hanging above the courtyard.
Source: Eldem (1954).

3.2.2 House Type With an Outer *Sofa*

Eldem identifies this type as the first stage in the evolution of the plan. In this type, two standard elements of design are apparent: the room and the *hayat*: the first arranged serially at the backside, the second fronting the mild warmth and the natural light of the sun. The hypothesis Eldem brings forth is that the *sofa* was at first an open gallery with pillars instead of walls, covered only with a roof. However, as Eldem argues, with the improvement of the living standards and the requirement of an increase in the comfort of the house throughout time, the *sofa* was covered by large windows and taken inside the house, allowing a freer arrangement of space to the interior (Eldem, 1984:136). This type of house can

be described as the type with a colonnaded gallery along the whole front façade or continuing only along the central space of the house. Its façade is harmonious and has regular intervals.

Fig.3.14 A Greek House with a *hayat* in Epirus.
Source: Cerasi (1999).

The open gallery serves common uses, acquiring areas for sitting and receiving guests as well as providing access to the rooms. Eldem points out that the enlargement of the plan by increasing the number of rooms and placing e*yvans* between them necessitated a lighter form of construction, so a lighter wooden structure with infill walls began to replace massive walls (Eldem, 1984:136). The hall, too, acquired a different meaning when pavilions were added to its ends (Eldem, 1982:221). The architect insists on the multiplicity of possibilities that allow many variations and combinations within one type.

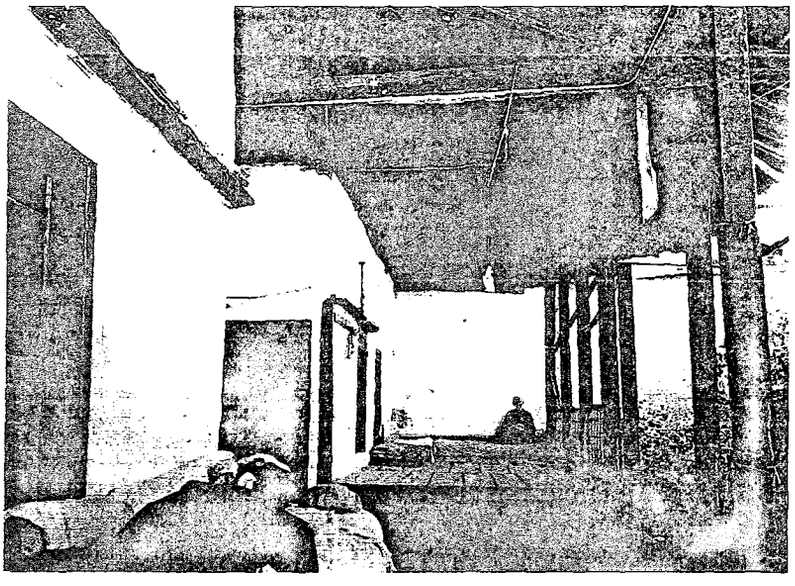


Fig.3.15 An example of outer *sofa* in the "Turkish House".
Source: Eldem (1987).

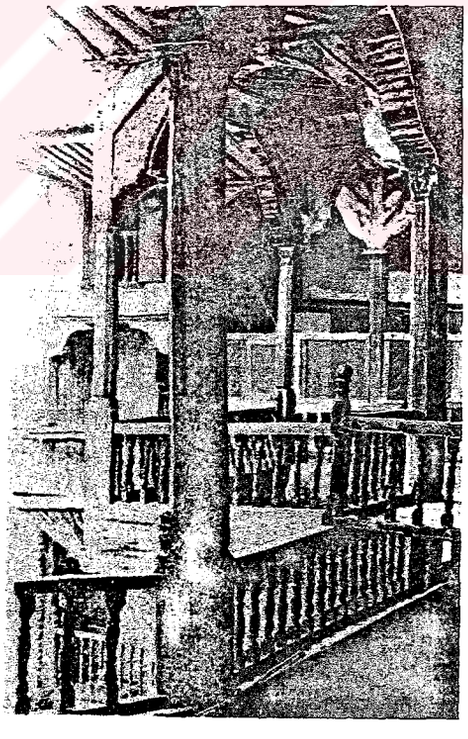


Fig.3.16 An example of outer *sofa* in the form of a balcony in the "Turkish House".
Source: Eldem (1987).

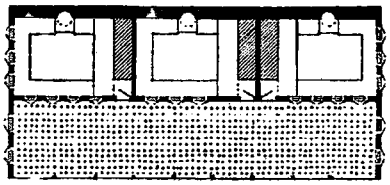


Fig.3.17a The ideal type of the plan with an outer *sofa*. Source: Eldem (1954).

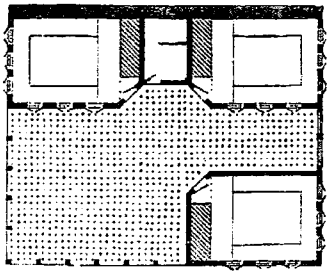


Fig.3.17b The plan type with an outer *sofa* at the corner. Source: Eldem (1954).

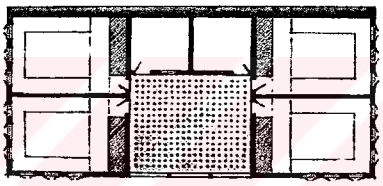


Fig.3.17c The plan type with an outer *sofa* surrounded by rooms at three sides. Source: Eldem (1954).

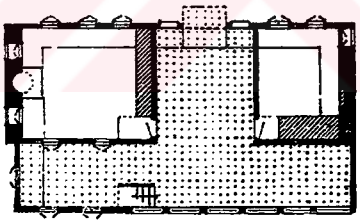


Fig.3.17d House in Bursa, 17th century. The outer *sofa* covered with windows. Source: Eldem (1954).

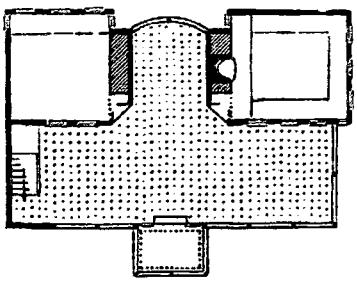


Fig.3.17e Abdülvahap House, Bursa. The *eyvan* is placed between the two rooms and across there is a *sekilik, a*nd it provides access to the rooms from the *sofa*. Source: Eldem (1954).

3.2.3 House Type With an Inner *Sofa*

This type, which represents the next stage in the evolution of the plan, is the most prevalent in Turkey in Eldem's idea (Eldem, 1968:221). This plan type, known as *karnıyarık* (split-belly) in colloquial language, is developed by the addition of another row of rooms to the outer side of the *sofa*. As Eldem mentions (Eldem, 1968:222), the placement of the *sofa* within two rows of rooms enables a more sheltered and spacious living area, an easier communication among the rooms and a more compact planning. These are the reasons for the preference of the plan type with an inner *sofa* and the transcendence of this scheme of the type with an outer *sofa*. As opposed to the single faceted scheme with an outer *sofa*, this new type has four façades and the *sofa* is totally integrated into the house. Eldem wrote of the type with an inner *sofa*: "The *sofa* becomes totally fluid and animated in form, the exterior façade undulates over the overhanging walls of adjoining rooms." (Eldem, 1984:136) The importance of the type with an inner *sofa* resides in the fact that the openings on both ends of the *sofa* provide a continuous view across the house, creating a spacious, well-lit and ventilated central space. The *yalıs* on the Bosphorus constitute the most beautiful illustrations of this type –the inner *sofa* giving way to an uninterrupted view extending from the Bosphorus to the garden and hills (Eldem, 1954:114). With these innovations, the inward-looking house type is replaced by the outward-looking scheme. Eldem defines this type as "...the Turkish House at its most mature stage" (Eldem, 1984:137).

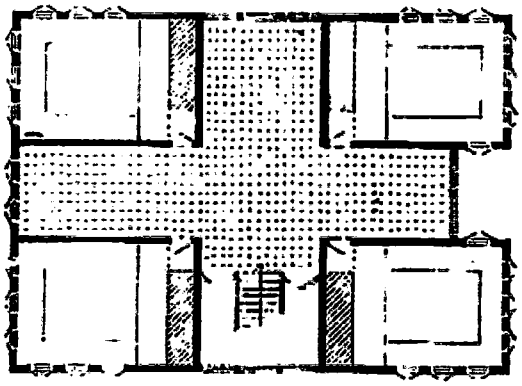


Fig.3.18a The plan type with an inner *sofa*, including two *eyvans* and a side *sofa*.
Source: Eldem (1954).

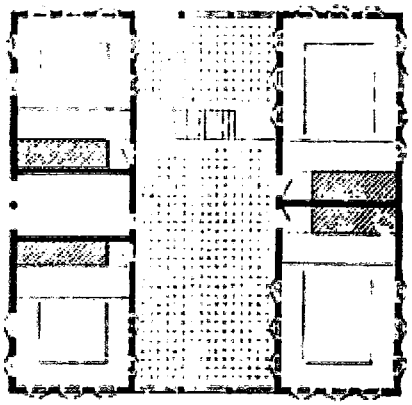


Fig.3.18b Two-faceted plan type with an inner *sofa*.
Source: Eldem (1954).

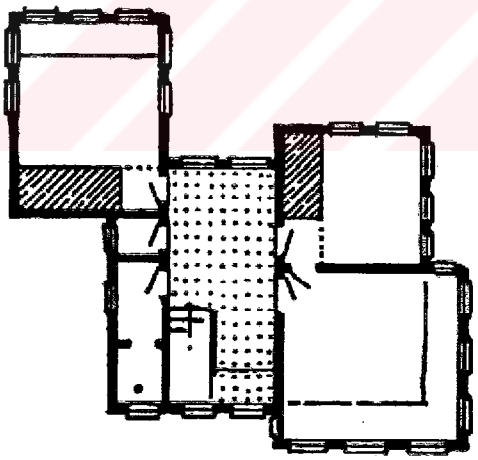


Fig.3.18c 19th century house in Erenköy. The planning is free and inorderly.
Source: Eldem (1954).

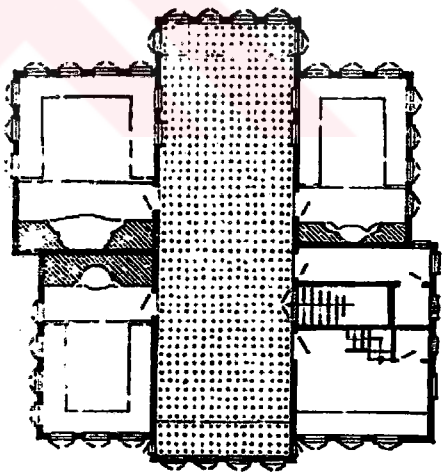


Fig.3.18d House in İstanbul, 18th century. The two ends are projected emphasizing the significance of the *sofa*.
Source: Eldem (1954).

3.2.4 House Type With a Central *Sofa*

This type is the last phase of the evolution of the plan amongst the four categories that Eldem identifies. The design is based on the theme of a unitary plan organized around a large central *sofa*. The *sofa* is situated at the center, surrounded by rooms on four sides. One or two rooms are subtracted out and replaced by *eyvans* in order to provide sunlight into the house and afford a view to the directions desired. Eldem claims that: "These *eyvans* are always disposed along the axis of the hall, so as to form an integral part of it." (Eldem, 1968:222) Various combinations are developed within this same type by increasing the number of *eyvans*; therefore, Eldem points out that this most elaborate plan type which is characterized by rich plan compositions are particularly applied for larger houses and residences (Eldem, 1954:127). This plan type exhibits a close relation to the previous type with inner *sofa*; however, Eldem believes that it would be misleading to relate the origins of the two types from the mere fact that they resemble each other (Eldem, 1968:223). The plan has an orderly but not a strict layout though attention is paid to the symmetry of the façade. In certain examples, the *sofa* is sky-lit from above. Whether the central composition is an open court or covered by a dome, the principal organization is always the same. Gradually, by beveling the edges of the rooms, the central *sofa* takes a round or elliptical form (Eldem, 1984:203). The beveled corners enable a more compact organization and a closer relation between the *eyvans* and the rooms. Cerasi argues that the curved lines –both in the planimetric schemes and on the façades– reflect the Baroque and Rococo influence (Cerasi, 1999:164). The placement of the *eyvans* in a perpendicular or parallel direction to one another in identical or

diverse shapes enable variations within the same type, causing great diversity in the form and expression of the resulting house. According to Eldem: "From the point of view of art, it is in the plan type with central hall that the Turkish House has reached the highest summit of its development." (Eldem, 1968:223)

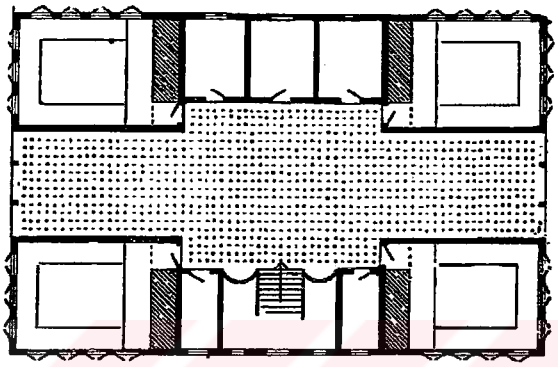


Fig.3.19a The plan type with a central *sofa* –two *eyvans* placed across one another. Source: Eldem (1954).

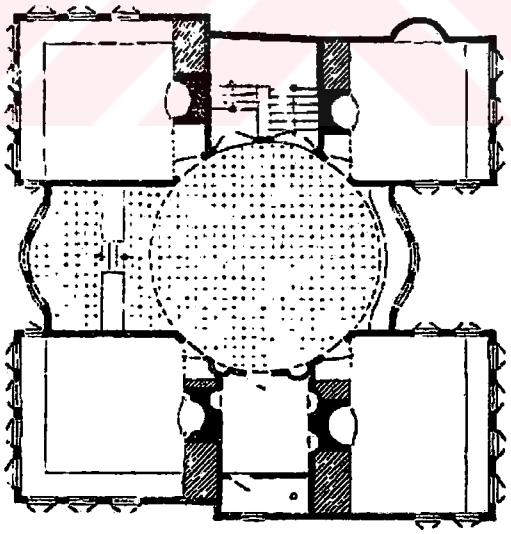


Fig.3.19b Abacı Yorgi House, Filibe, 19th century. The *sekilik* is placed on the right and the *eyvan* on the left of the oval *sofa*. The outer wall of the *sekilik* and *eyvan* are curved in order to make explicit the plan type of the house on the façades. Source: Eldem (1954).

3.2.5 Parts of the "Turkish House"

The "Turkish House" is mostly composed of two sections: *harem*, the part assigned to common uses; and *selamlık*, which serves for the private life of the family. *Selamlık* may possess a subordinate status; however, Eldem defends that the presence of these two parts does not always have a strong influence on the plan (Eldem, 1954:149). The juxtaposition of both parts, which is one of the most important characteristic features of the "Turkish House", permit rich, harmonious plan compositions.

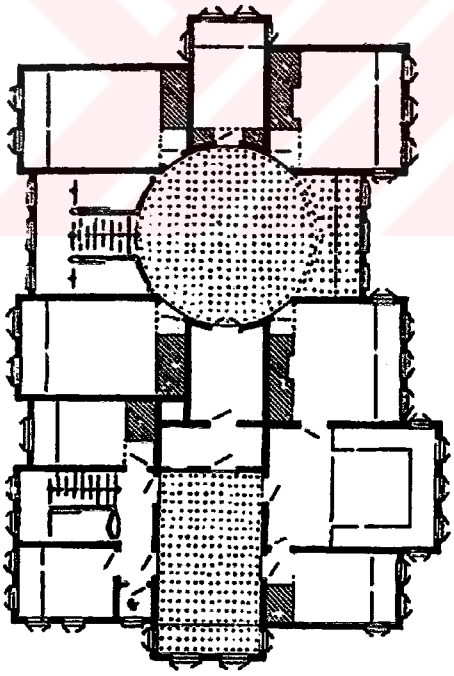


Fig.3.20a Yalı in Kandilli, 19th century.
Source: Eldem (1954).

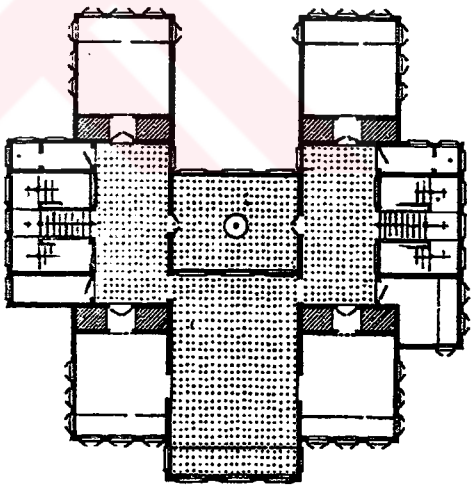


Fig.3.20b Seniha Sultan Köşkü, Çengelköy, 19th century.
Source: Eldem (1954).

This analysis made by Eldem on the planimetric organizations of the "Turkish House" was the first classificatory work produced on the traditional Turkish dwelling architecture. As a result of this analysis, Eldem not only demonstrates all possible variations of houses by classifying them according to the shape and location of the *sofa*, but he also develops his own vocabulary on the plan types of the "Turkish House". The house with an outer *sofa*, the house with a central *sofa*, etc. are all terms of Eldem's creation, which were later taken over by architects and art historians. Today in almost all the articles on the "Turkish House", it is possible to come across these terms for which Eldem is given credit. The prevalent use of these terms proves that Eldem's classificatory concepts have been agreed upon by instructors and architects. Eldem concentrated neither on the stylistic aspects nor on a single house type; he was interested in the architectural logic of the Turkish dwelling. Never before had so many houses been shown on the same scale as in Eldem's *Plan Types*.

However, Eldem's intention in preparing this classificatory work was not only to produce a scientific survey on the plan types of the "Turkish House". In fact, this thesis argues that Eldem's main concern was to derive the compositional logic of the planimetric organizations of the "Turkish House" with the aim to achieve a basis for a sound design approach through a re-interpretative process. The notion of an uninterrupted view (transparency) across the house provided by the house type with an inner *sofa*, for example, is one of the major themes in Eldem's designs (which will be elaborated in the next chapter). Although these four categories of plan types embody some different formal qualities, the compositional principles are almost always the same. The geometrically shaped spaces are mainly formed of rectangles (except for the Baroque oval *sofa*), and the

sofa is always the integrating center, unifying the various elements within the house. Thus, "type" in Eldem's perception becomes an operative device –a compositional and methodological tool prescribing the design process.

3.3 A THEORY OF EVOLUTION OF TYPES

3.3.1 A Brief Insight On The Birth and Transformation of the Ottoman House

As Gerhardt Bartsch claims, the Ottoman House began dominating the urban stage starting from the 18th century (Bartsch quoted in Cerasi, 1999:181), and it can be claimed that the single-storey, old Anatolian house type and the Ottoman timber-frame house with a pitched roof have coexisted for centuries. However, the domination of the usage of the pitched roof and the timber-frame structure throughout Anatolia was not until the late 19th century. Yannis Kizis identifies dwelling as "...the compound product of cultural and socio-economical factors." (Kizis, 1995:134) Accordingly, the traditional Ottoman dwelling architecture has been developed on its own terms within traditional structural forms closely linked to domestic life styles and regional attributes; thus, alterations within these two circumstances, such as an attempt to improve living standards, caused transformations in the plan types, which will be explained and exemplified later in this chapter. However, despite these variations, the Ottoman House conforms to a general scheme with respect to the distribution of uses, and establishes similar relations with its environment. Kuban argues that the structural properties and the position of the family in the society affect the

architecture of the dwelling: "Turkish family structure, the position of the family within the society, the general characteristics of daily life must have caused similar tendencies in the designs of the various types." (Kuban, 1982:197)

On the theoretical basis, the plan of the "Turkish House" is developed from a formal core that embodies the afore-mentioned four elements: the room, the *eyvan*, the *sofa* or the courtyard, and the staircase. However, before going into details of the evolution of the plan types, it should be noted that these characteristic traditional plans are valid only for the upper floors since this part of the house is defined by Eldem as: "...the main living and reception floor which is always located on the upper storey" (Eldem, 1968:217).

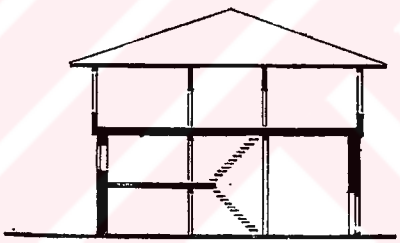


Fig.3.21 Cross-section of an ideal "Turkish House".
Source: Eldem (1954).

In fact, the Anatolian house is usually a single-storey house and the number of its stories does not generally exceed two. The upper floor, which "...corresponds to the 'Piano Nobile' of the Western architecture" (Kuban, 1982:200), is of foremost importance in the plan, and it is the main living area. The house is organized around a central space: the *sofa*. The ground floor – generally built up of stone– embodies the service spaces, storage areas and stables, thus has a few openings. The upper storey, on the other hand, with its

repetitively pierced façades, light timber-frame structure, timber veneered surfaces, projecting masses and the orderly geometrical rooms, exhibits a bewildering opposition to the ground floor.

Eldem insists on the idea that the houses have to be classified according to their plans and compositions rather than following a chronological order –though there exists an evolutionary process in time. He wrote: "These types cannot be attributed to certain periods or certain regions, being independent of time and place." (Eldem, 1968:220)

Fig.3.22 Kahraman Maraş, South-eastern Turkey.
Source: Yenal (1987).

The planimetric scheme and architectural composition of the house are rarely peculiar to a specific city or region. What renders the typology of a region special is the ability of the master craftsmen to adapt the rich schemes and styles that they have interpreted through their own experiments within accepted combinations (Cerasi, 1999:166).

The typical "Turkish House" –in the sense that Eldem uses it– neither emerged suddenly with all its variations nor did it acquire all its major

characteristics at once. Changes in the basic concept of house took shape gradually and the typological concept of the house did not change at once but accumulated differential factors until each type was transformed completely. Eldem believes that the "Turkish House" crossed frontiers and enlarged its scopes as the result of a refined domestic culture situated between Europe and Asia. He accepts the fact that the "Turkish House" evolved by integrating the influences of other cultures. The combination of different factors gave way to new syntheses of type and language, which still contained many elements from each influence. During the evolution of the traditional "Turkish House", a similar process of synthesis is observed. One of the factors affecting the evolution of the Ottoman House, as Eldem mentions, was its early contact with Europe: "Structurally, western techniques did affect Turkish building styles, as wee see from wall bonding, brickwork vaults and wooden timber structures." (Eldem, 1984a:21)

3.3.2 Eldem's Evolution Theory of the "Turkish House"

In this section, the most important changes that the "Turkish House" had undergone over time, mainly in terms of major planimetric typologies, façade compositions and architectural language will be discussed. In this connection, Eldem's schematic documentation of the traditional "Turkish House" is taken as a guideline.

According to Eldem's theory, the evolution of the "Turkish House" is analyzed in three periods, in which there is a continuous development from the

most primitive to the most mature –both in the planimetric and volumetric terms. Eldem argues that the development of the *sofa* is the first step in the evolution of plan types of the "Turkish House". Originally it was an open gallery with pillars at one side connecting the rooms with one another. In Eldem's evolution theory, this type was then improved, and the open gallery (the *sofa*) was closed with glass panes, which were later during the 19th century replaced by large windows; finally the *sofa* was placed within the house (Eldem, 1954:31). In summary, through his typological analysis, Eldem tried to prove that the open *sofa* or *hayat* was gradually transformed into an enclosed *sofa* in time, conforming more to the urban context. It can be argued that this transformation is an indication of an increasing search for comfort. Eldem labels this transformed type as the *First Period Houses*.

Fig.3.23 House in Birgi, in Western-Anatolia. View from the interior.
Source: Cerasi (1999).

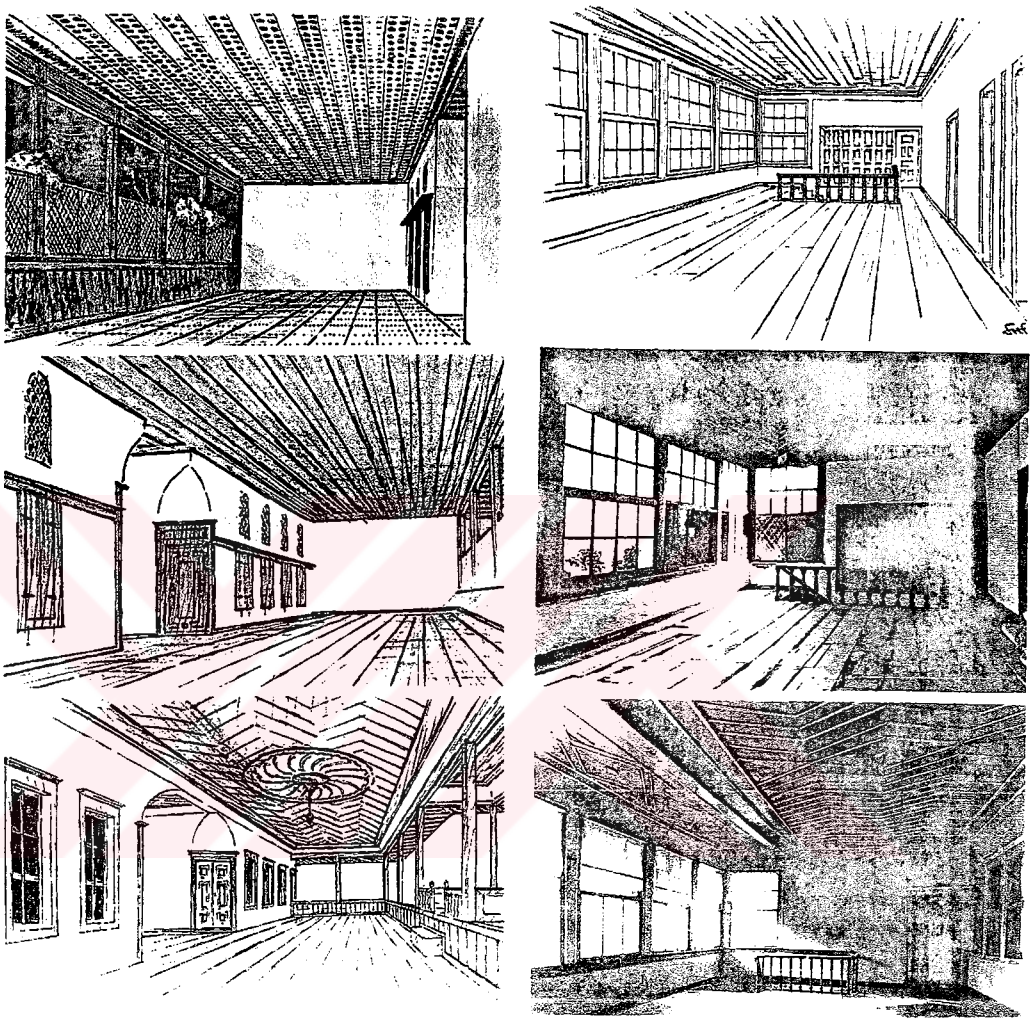


Fig.3.24 Typical examples of the open or glass covered *sofa* type. Pictures show interiors of the 19th century houses in various neighborhoods of Bursa.
Source: Eldem (1987).

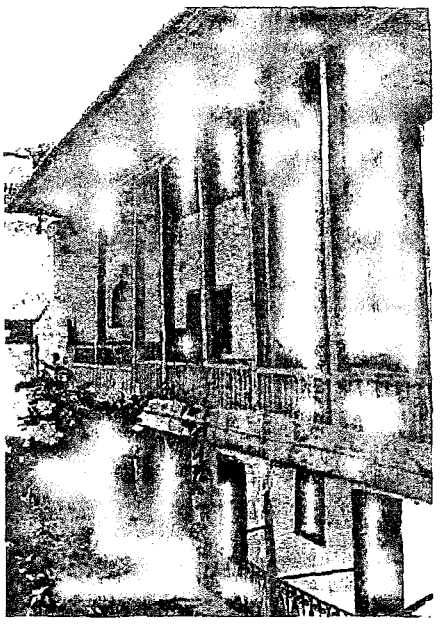


Fig.3.25a Malike House, Tire, 17th Century. The view of the outer *sofa* from the garden –a simple covered gallery (*hayat*) in front of the rooms. Source: Eldem (1984a).

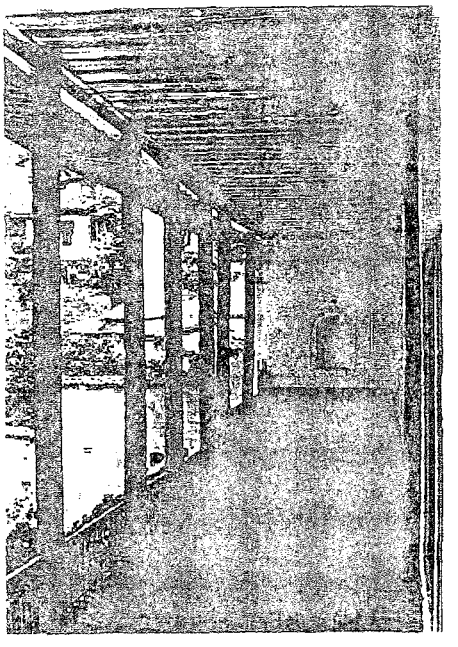


Fig.3.25b Malike House –view of the pillared outer *sofa* taken from the stairs. The high *sofa* provides a wider view of the garden and *hayat*. Source: Eldem (1984a).

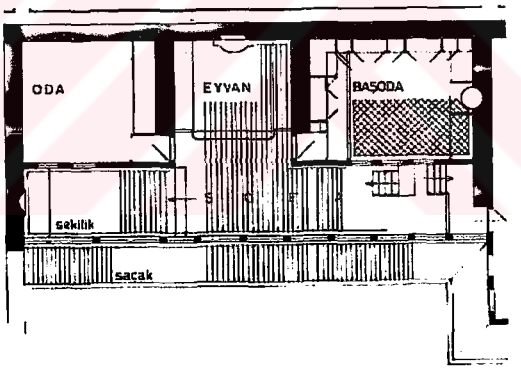


Fig.3.25c The top floor plan of the Malike house. Source: Eldem (1984a).

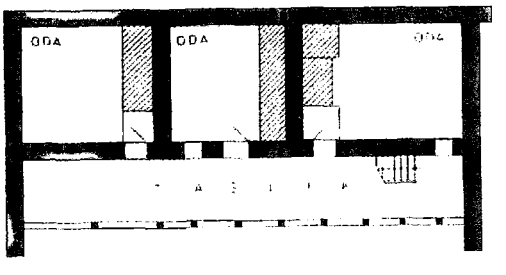


Fig.3.25d The ground floor plan of the Malike house. Source: Eldem (1984a).

Eldem's theory of evolution is a framework that is meant to explain the typological development of the "Turkish House". Throughout this evolution, the outer *sofa* started to gain a symmetrical disposition with beveled corners on two sides and a room and an *eyvan* on the other equivalent sides. After the enclosure of the outer *sofa* with windows, the "Turkish House" underwent a typological process and gave way to the inner *sofa* type (*karnıyarık*). In Eldem's idea, this type, with the addition of *eyvans* to the plan, was applied for a long time (Eldem, 1984a:157). Beginning from the late 17th and early 18th century, the "Turkish House" began to acquire new characteristics, which Eldem labels as the *Second Period Houses* with extensions resting on big props, high upper course windows, and beams bonded to each other with small concave arch motifs (Eldem, 1984a:147). In this new type, the outer and inner *sofas* transformed into central *sofas* with inner doors hidden in beveled corners. The windows of the *sofa* and of the rooms are different in character, the first being larger than the latter (Eldem, 1984a:157). As Eldem points out, the application of windows in their classical sense began on the first storey –the main floor of the house–; only after the 19th century ordinary windows were introduced to the lower storey (Eldem, 1984a:285). This was an extremely important evolution, because for the first time, the "Turkish House" facing the street/sea gained open façades. Eldem claims that due to the numerous windows and their wooden shutters, houses began resembling "birdcages" (Eldem, 1984a:286).

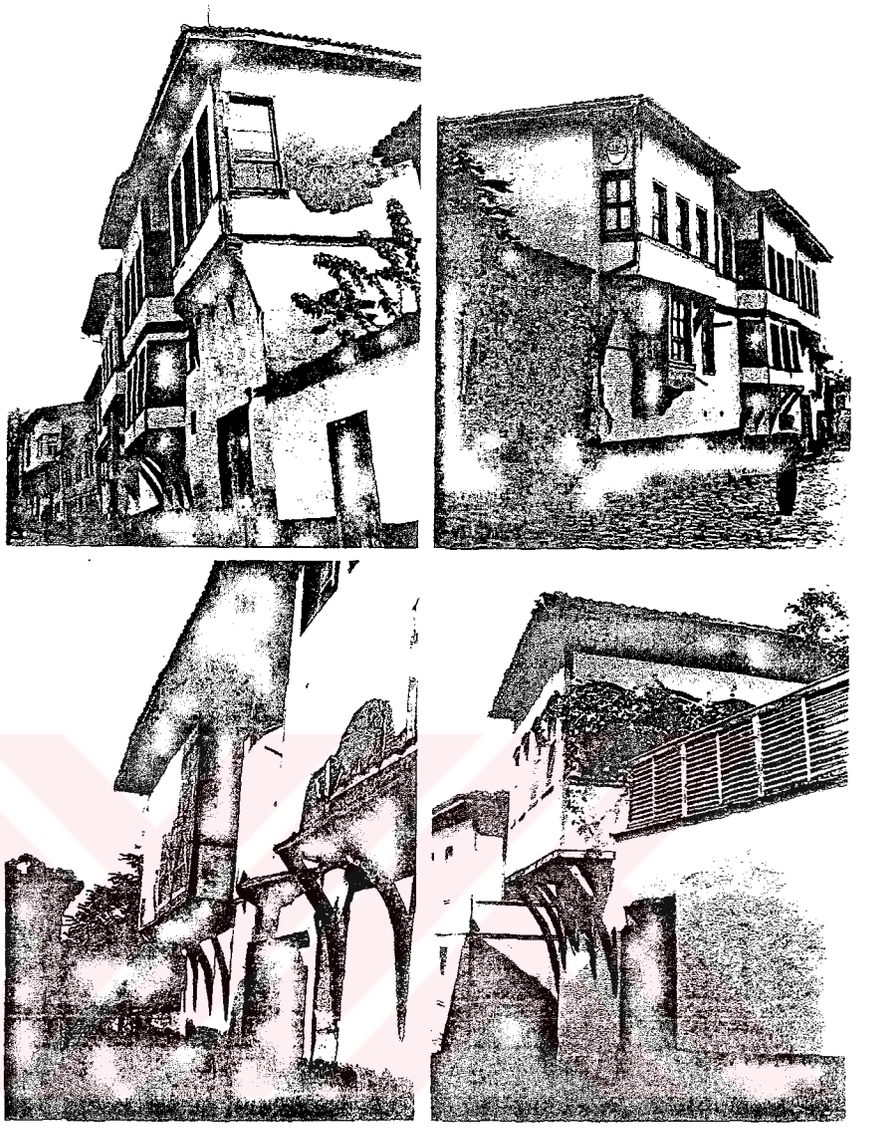


Fig.3.26 Various examples of the Second Period Houses in Bursa.
Source: Eldem (1987).

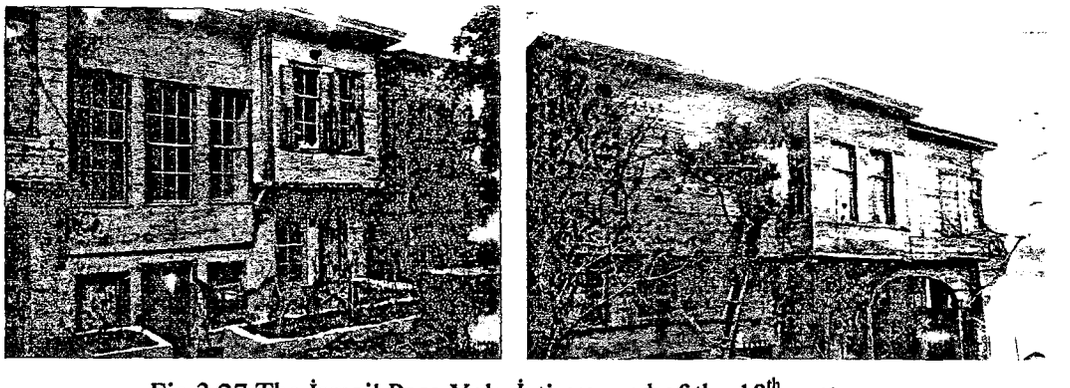


Fig.3.27 The İsmail Paşa Yalı, İstinye, end of the 18th century.
Source: Eldem (1987).

Towards the mid-19th century, the house with a central *sofa* loses its importance to the oval *sofa* type, which is a result of the Baroque influence. It is important to note that the oval *sofa* is only applied on the top floor. The reason lying behind this fact is explained by Eldem: "The top floor was the most important floor, and it also made it possible to cover the *sofa* with a dome." (Eldem, 1984a:221) The curved surfaces of the Baroque-Rococo style –evident both in the inner/external planimetric and volumetric compositions– emphasize the continuation and the fluidity of the space (Cerasi, 1999:265). This kind of house –the *Third Period House*, as Eldem names it– with all its variations, became a classical type during the 19th century.

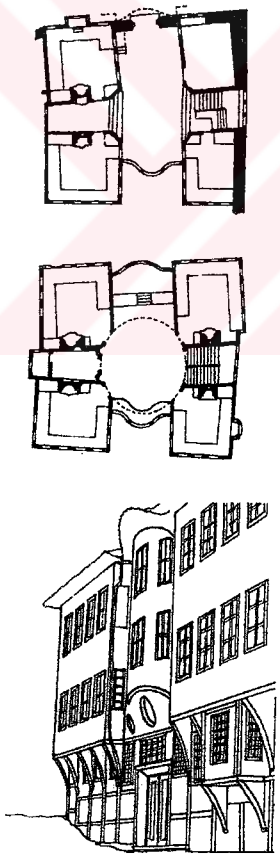


Fig.3.28a The plans and perspective view of the Gheorghiadis House. Source: Cerasi (1999).

Fig.3.28b The street view of the Gheorghiadis House in Filibe-Plovdiv. Source: Cerasi (1999).

The frequent use of windows on the façades in the old types is based on a modular arrangement: especially the two main façades –looking into the garden or over the water in the case of *yalıs*– are pierced with identical rows of windows. Eldem claims that until the 19th century, building materials depended largely on what was available in the region; however, as means of transportation improved during the 19th century, regional differences were minimized; as a result, the pitched roofs with tiles began replacing the Central Anatolian earth roofs (Eldem, 1984a:182). At this point, it should be underlined that the emergence of a new type does not necessarily render the previous one(s) obsolete, and that there is no such condition as one type ending and another starting. The evolution is a long and slow process in which different types may coexist. Formal properties within types may change due to social needs and altered aesthetical appreciations; yet, similar compositional principles are applied in the organization of plans and masses.

According to Eldem, the "Turkish House" could resist strong influences for centuries. He explains the reason underlying this fact as:

> These plans were due less to the creative ability of certain architects than to an essentially deep-rooted and strongly pronounced tradition manifesting itself (Eldem, 1968:224).

The plan types and the original variations within them also influenced the composition of the façades of houses. Its interior space being in unity with the furniture and decoration, the uninterrupted relation between its exterior and interior, its impressive façades, its rich planimetric compositions and the strong relationship between the space organizations and their usage render the "Turkish House" an impressive unified entity. Kuban, who defines the "Turkish House" as

a "natural" aesthetical object, agrees with this point: "During the formal creations, the limits of the materials, the technical possibilities and the functions are not forced." (Kuban, 1982:208) Though it has lost its strong character to a certain degree during the 19th century due to the fast changing conditions, the "Turkish House", with its characteristic features, continues to address to the modern sensitivity.

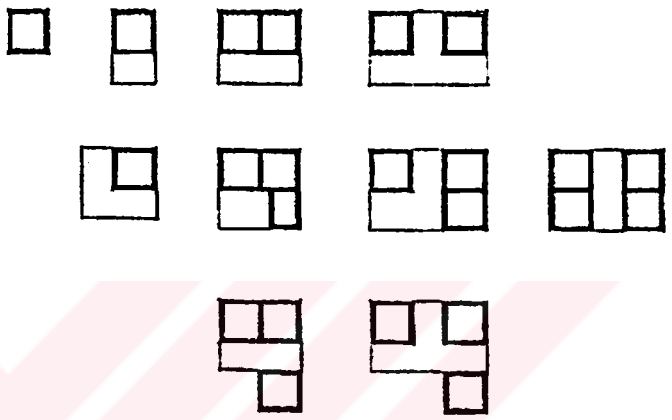


Fig.3.29 Evolution of planimetric typologies of the Thessalian House.
Source: Kizis (1999).

After Eldem, other researchers have also been preoccupied with the evolution of the Ottoman house. Though Eldem's drawings on the evolution of the plan types of the "Turkish House" through the variations in combinations (Fig. 3.30, 3.31, 3.32) are not as schematic as Kizis' figures, Eldem's main intention was to demonstrate the abstract organizational patterns inherent in each type. Eldem's planimetric schemes indicate that the plan types (together with their variations) enabled a variety of dispositions, and they emerge as abstract, schematic demonstrations of compositional principles. However, it should be re-stated that the widely used terms in the categorization of the evolution of plan types are of Eldem's own vocabulary, and without these concepts, it would be

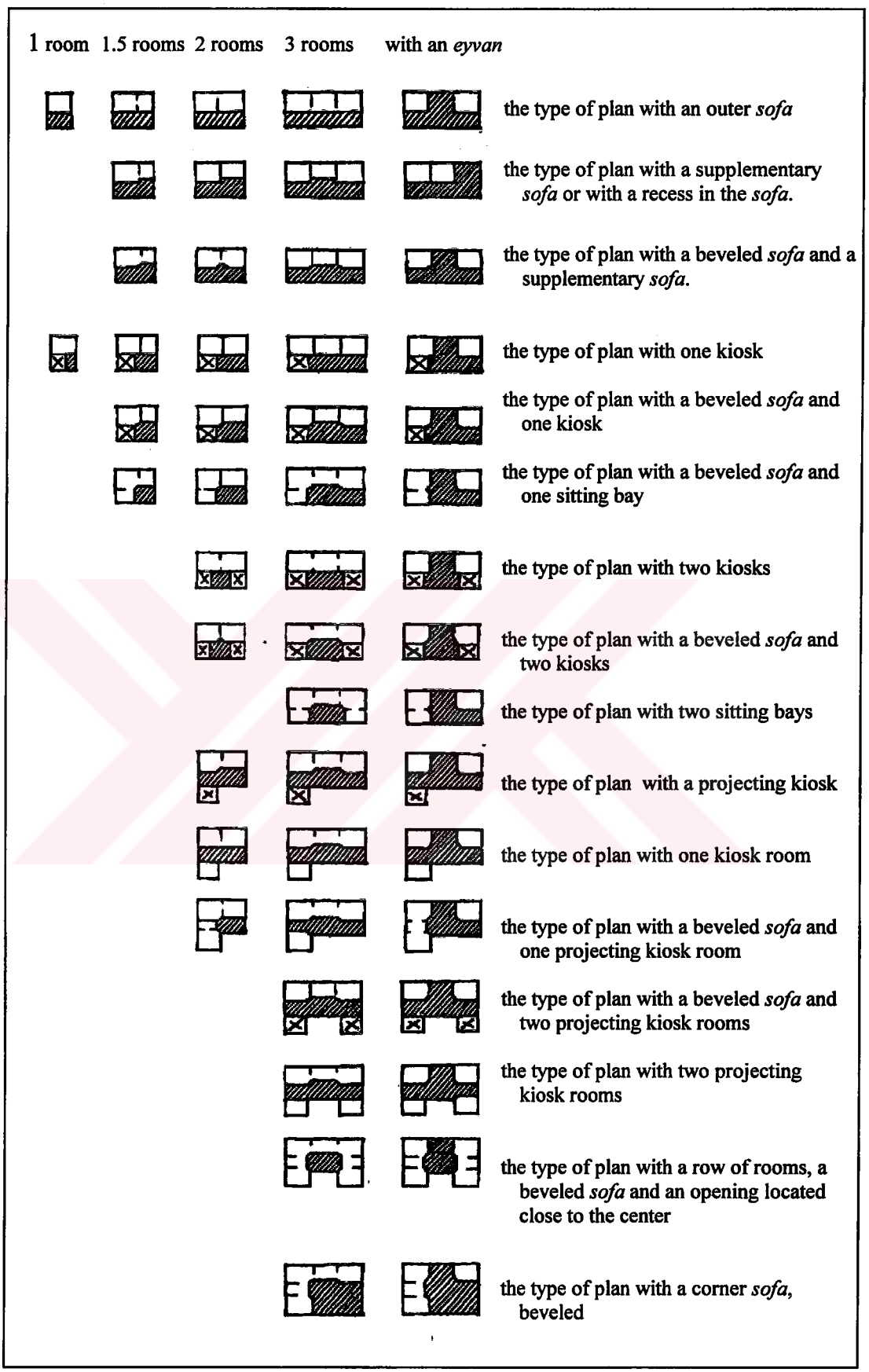


Fig.3.30 The evolutionary schemes of the type with an outer *sofa* (through variations in combinations). Source: Eldem (1984a).

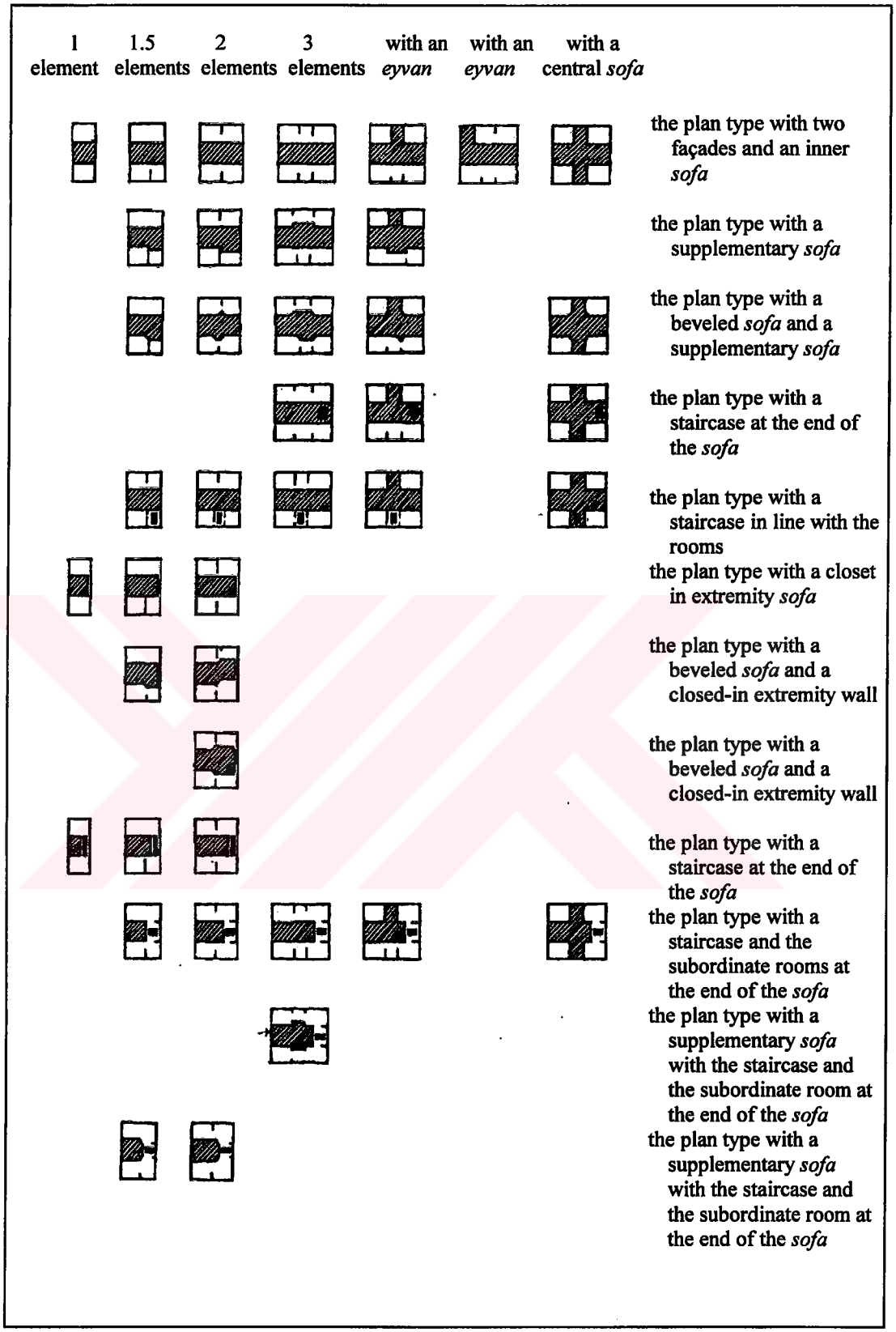


Fig.3.31 The evolutionary schemes of the type with an inner *sofa* (through variations in combinations). Source: Eldem (1984a).

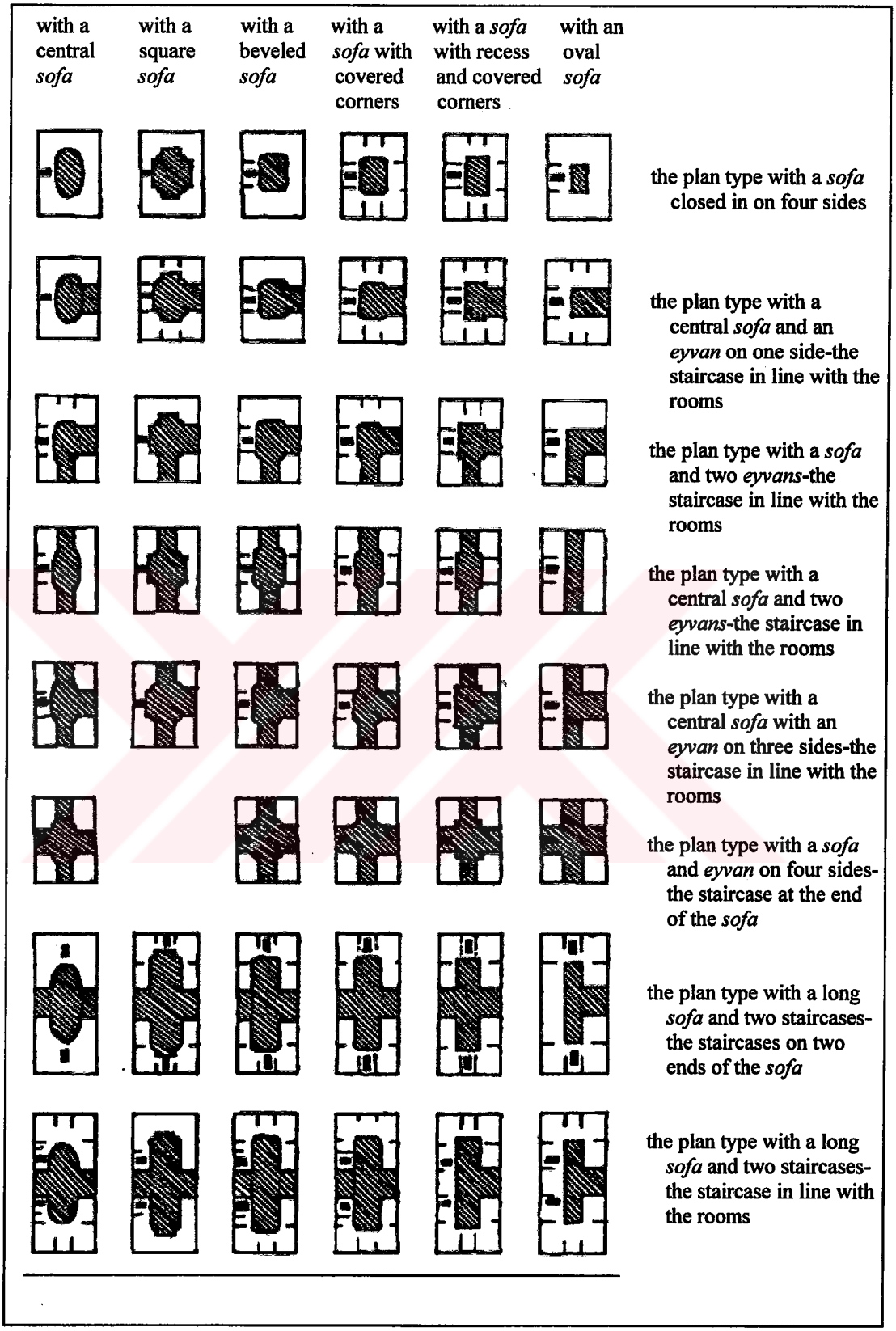


Fig.3.32 The evolutionary schemes of the type with a central *sofa* (through variations in combinations). Source: Eldem (1984a).

impossible to place the various house plans into such categories. It is actually quite normal for a person uninformed of Eldem's vocabulary not to be able to perceive any link between two variations of the same plan type.

In contrast to Eldem's evolution theory, which conceives the development of the *sofa* as the common denominator for the production of new plan types, Kuban suggests that these types and all their variations are produced by placing the two units –the rooms and the *sofas*– within the spaces formed by two intersecting axes (Kuban, 1982:200). With the modular repetition of these elements along two axes perpendicular to one another, larger and more complicated plan types are derived. As the number of repetitions increase, the length of the *sofa* as well as the number of *eyvans* and pavilions may increase, giving way to infinite varieties of basic plan types.

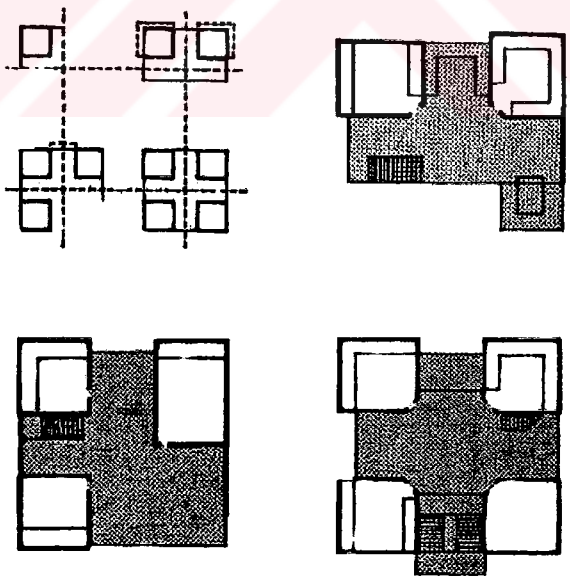


Fig.3.33 The reproduction system of the planimetric typologies of the "Turkish House" according to Kuban. Source: Kuban (1982).

However, Kuban contradicts his own evolution theory –which perceives the planimetric evolution of the "Turkish House" as the reproduction of elements along axes– when he states: "As opposed to their widespread application in Western architecture and even in the architecture of Iraq, the axial compositions are not prevalent in the traditional Turkish dwelling architecture (Kuban, 1982:206). Kuban supports his argument by claiming that the staircase, for example, is treated as an independent element, not being placed along the axes, and in some types, the rooms are organized in a rather free layout according to the requirement of their usage, rather than lining up along certain axes. It is a correct observation that the staircase is treated as an independent element in the composition of the "Turkish House" and rooms are organized freely in some variations; yet, these do not render the "Turkish House" free of axial systems. In fact, it is legible from Eldem's, Kizis' and Kuban's schemes that the "Turkish House" is strongly organized on axial compositions.

In any case, it can be argued that the transformation of the *sofa* and the reorganization of the rooms through a variety of dispositions in relation with the *sofa* are the determining themes in the evolution of new types. "Type" in Eldem's theory is used to indicate that the difference between primitive and mature stages of the type is the result not of nature (though climatic conditions play a significant role in the evolution of the *sofa* to an extent) but of an idea; an act of self-conscious creation. For Eldem, the relationship between primitive and developed architecture illustrates the process of transformation of type, which is a conceptual metamorphosis. However, Eldem's evolution theory is not concerned with the sources of these conceptual or self-conscious phenomena. Rather, his theory is based on the evolution of the plan along with the transformation of basic

components (windows, doors, porticos, etc.). He is not particularly interested in the evolution of stylistic qualities or the decorative elements; they are secondary for his theory. His main aim is to translate the structural rules inherent in these types into operative means of design. It can be argued that Eldem's evolution theory reflects his vision on the history of architecture, showing continuity through development and progress, from the simple to the complex, from ancient to modern. This can also be conceived as the most important reason underlying Eldem's choice of paying much attention to typological studies: both to provide continuity throughout his own design process and to establish links between the past and the contemporary architecture.

3.4 PRINCIPLES OF COMPOSITION

3.4.1 Structure

An element is the smallest component of a structure. Strappa defines structure as:

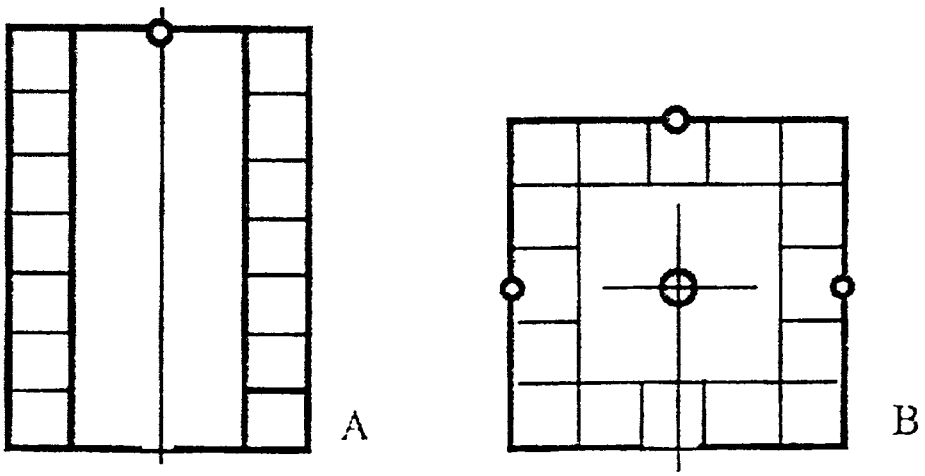
> Structure is the rule linking elements together in a recognizable form generally behaving according to a geometric order. This rule determines the relationship among elements, informing the character of their aggregations (Strappa, 1995:93).

In this section, the structure of the "Turkish House" –in terms of both a general rule determining the constructional technique of the building and its syntactic qualities lying behind the arrangement of the architectural elements within a whole– is aimed to be analyzed.

3.4.1.1 Serial Structure

The composition of the "Turkish House" displays structures formed by the serial use of an element or a group of elements. In his article *The Notion of Enclosure in the Formation of Special Building Type*, Giuseppe Strappa defines the serial structure as "...an ensemble in which one element can be replaced without causing substantial changes to it." (Strappa, 1995:93) It should be emphasized that the character of the structure is strictly related to the character of its elements. There exist two types of components in the structural organizations of the "Turkish House", the combinations of which determine its typological process: the repeatable series of elements (rooms, *eyvans*, regular spans) and an interior space (*hayat, sofa*, courtyard) dominating the spatial hierarchy.

3.4.1.2 Nodal and Polar Types



A- Nodal type

B- Polar type

Fig.3.34 Source: Strappa (1995).

Two plan types that Eldem stresses the most –the house type with an inner s*ofa* and the house type with a central *sofa*– seem to correspond to the two types defined by Strappa as the "nodal type and "the polar type" respectively. Strappa explains the notion of nodality as expressing the connection between the components of a building, which is not necessarily identified by a point but by axes and their intersections: the intersection of two continua (Strappa, 1995:94). According to Strappa, nodes originate from the everyday use of an enclosed space, thus usually from those routes that were geometrized to structure the whole architectural space. Polarization, on the other hand, as Strappa mentions, indicates "...a sublimation of the term node, determined by the presence of various continua, not so much intersecting but rather terminating or starting from one point." (Strappa, 1995:95) Even if one of the serially organized elements is eliminated, the nature of the nodal composition is not disturbed. On the other hand, the elimination of any element from the polar organization (and from the central *sofa* type) would destroy the unity of the composition.

These two basic types of structural arrangement of the "Turkish House" are mediated by complementary structures (open or public spaces such as the garden, the street, etc.). In any case –be it the nodal or polar type– the major compositional principle of the "Turkish House" is the assemblage of geometrical and clearly defined interior elements on top of a stonewall following the lines of an irregular lot. The courtyard and the rooms, combined with each other around the *sofa*, produce two clear zones of demarcation. The inside (of rooms) is private; the outside is for common uses; and importantly the space in-between the two zones is architectural: its spatial value is determined by 'social perception'. In the "Turkish House", the roof is arranged according to the geometry of the

rooms on the upper floor. In other words, the roof of the house –like the plan of the main floor– is formed by the assemblage of the individual roofs enclosing the spaces of the upper storey. Just like the façades, which are arranged in conformity with the spatial compositions of the main spaces, the roof, too, reflects the internal distribution of the inner spaces. The roof and the planimetric composition of the upper floor constitute an organic unity.

3.4.1.3 Axiality

The spatial structure of traditional houses is strongly developed along axes organized by grid system and modular logic. Strappa defines the axis as:

> The axis (from the Latin axis –pivot, wheel axle), is formed through the progressive geometrization of the routes within the elementary architectural organism, and is often generated by the consolidation of ritual actions (Strappa, 1995:95).

Each room specializes itself by establishing its own central axis and is treated as a special unit in itself. The building's spatial structure is legible from outside as the location of rectangular masses (referring to the rooms) around a central volume –the *sofa*– is drawn in or projected. The side façades maintain their original aspect indicating the serial layout of rooms and the recurrence of the modular units along the axes through the windows' modular arrangements.

Strappa defines nodal axis as the unifying element:

> The nodal axis, along which the main fluxes of movement occur, individuates the center of the overall geometry that unifies structure and function into one constructive action. Along its predominant direction, the axis establishes a sequence of elementary structures, simultaneously orienting and reinforcing the direction of movement from the initial structures to the final one (Strappa, 1995:95).

Fig.3.35 Safranbolu House, North-west Turkey. Source: Yenal (1987).

In the "Turkish House", the main flux of movement on the nodal axis is oriented from the most segregated spaces (the entrance door, the garden, the courtyard or the staircase) towards the most integrated spaces (the *eyvans*, the *sofa*, kiosks, and the rooms). This observation implies that the arrangement of the sequence of spaces within the house is not due to mere geometrical rules, but is rooted in the ways in which the inhibitors of the house use and perceive space, and in time in which functional process evolves.

The house type with two circulatory axes:

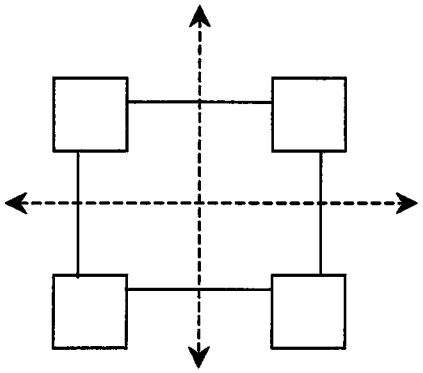


Fig.3.36a The circulatory axes of the type with a central *sofa.*

The house types with a single circulatory axis:

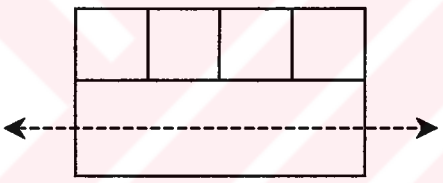


Fig.3.36b The circulatory axis of the type with an outer *sofa.*

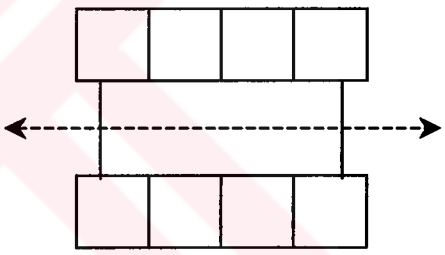


Fig.3.36c The circulatory axis of the type with an inner *sofa.*

In the planimetric schemes of the "Turkish House" there exist either a single or two circulatory axes intersecting with each other at right angles. Along the predominant direction of these axes the modular cells are serially organized, however, in a free layout rather than in a rigid order. The main circulatory axis can be defined as a linear route consisting of an open space between other spaces, serving for various functions. In the house type with an inner *sofa*, the main

circulatory axis is emphasized by the presence of a typical-inter axis, emphasized by the openings on both ends of the *sofa*.

3.4.1.4 The Constructional Structure of the "Turkish House"

According to Eldem's typological survey, the constructional logic of the "Turkish House" does not alter much from the 17th century up to the 19th century: it is two-storey high and timber-framed. Eldem points out that before the development of timber-frame houses, the houses were of load-bearing mud brick walls (Eldem, 1984a:5).

Light and Lightness

Each space within the house can be perceived as a light framework to which light and view passing through the large glazed and amply repetitive windows is attached. Rosalind E. Krauss conceives of the window: "As a transparent vehicle, the window is that which admits light –or spirit– into the initial darkness of the room." (Krauss, 1985:16) The originality and the impressive aesthetical expression of the "Turkish House" resides in the fact that it is composed of light fragments –that is of wooden framework– and of serially arranged windows providing transparency and openness. These two qualities of the "Turkish House" are actually the features that Eldem emphasizes as modern.

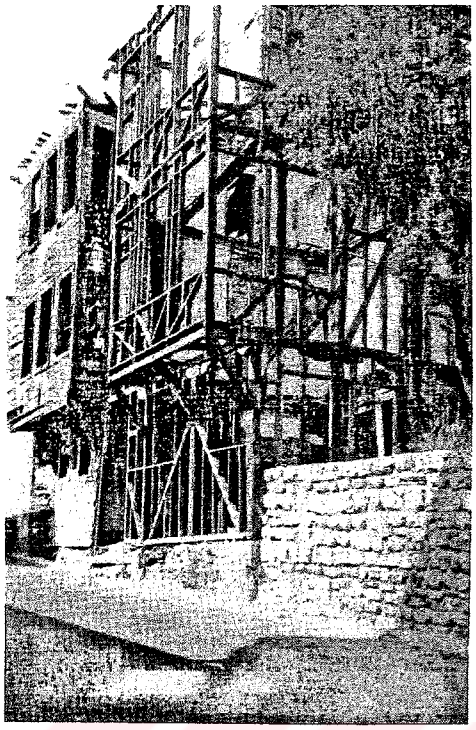


Fig.3.37 The timber-frame skeleton of a house in İstanbul.
Source: Cerasi (1999).

After the wooden closets are taken out, what remains of the house is an abstract, modular framework. The timber framework includes the orderly arranged vertical elements and the horizontal frequent beams on which the props are attached. The wood paneling and the use of timber-frame as structural system make it a lightweight, easy and fast construction. Cerasi argues that via the timber technology, the "rapid settlement" and "re-settlement" process that are part of the Ottoman urban system were rendered possible (Cerasi, 1999:160). The timber-frame construction lent the "Turkish House" certain structural properties that enabled the continuation of the "traditional dwelling" type.

According to Eldem, these qualities of lightness and openness of the "Turkish House", enabled by its structural system, are the basic qualities that render it modern:

> Although the main structural elements in the Turkish House are vertical, the lateral arrangement of the windows produces a horizontal effect consonant with Le Corbusier's statement on their relationship with nature. Visually, nature has been brought into the dwellings and a horizontal plane has been formed. Vertical structural elements are preserved in this panorama, achieving a rhythmic movement. As a system of structure, the Turkish House presents a tradition for contemporary architecture (Eldem, 1981:50).

3.5 MODULATION

3.5.1. Modular Structural Elements

The timber-frame serves as the basic measurement unit for the spatial composition as well. The building elements are arranged within a modular system derived from this measurement. The modules dimensioned in certain scales are applied easily and frequently on the wooden house's façades, serving as a tool to arrange their proportional relations and their composition as well as their structural system. The prevalence of the glazed surfaces strongly emphasizes the modular logic of the timber-frame and the structural harmony of its vertical elements. However, the modular logic of the anonymous "Turkish House" is not limited to the façade arrangements only; a strong modulation is also evident in the plans. This argument is supported by Eldem's assertion that architectural plans of the Ottoman/Turkish House were sketched in unit squares on a cubic grid illustrating the wall thickness and the location of the various openings (Eldem, 1987:135).

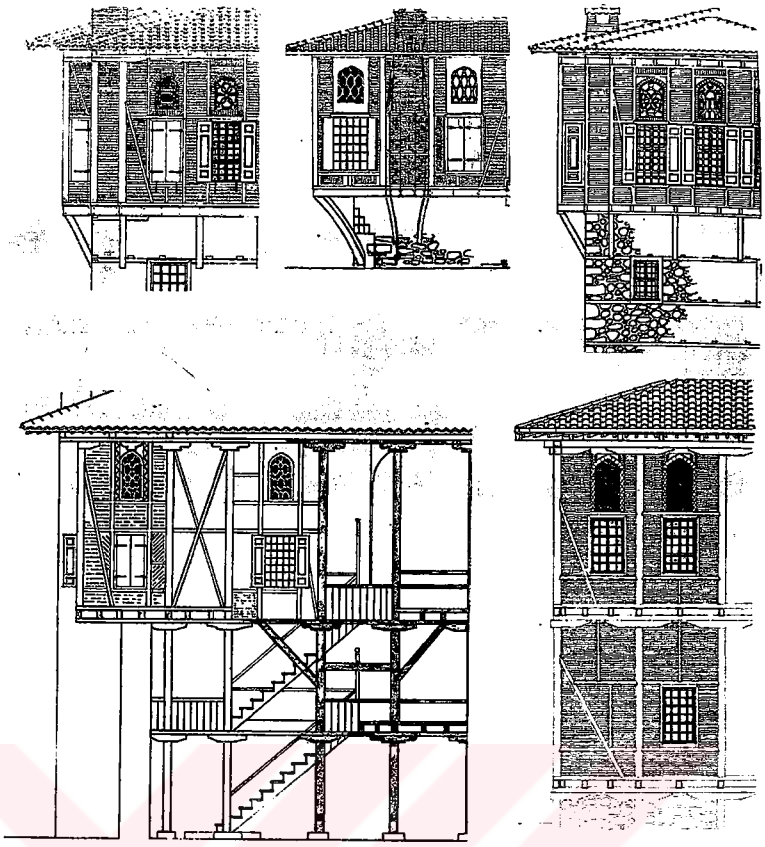


Fig.3.38 The modular structure of the "Turkish House". Source: Eldem (1987).

3.5.2 Grid

The origins of the use of the grid in architectural design go back to the early 16th century according to the evidences at hand. Pèrez-Gòmez points out that:

> In Cesarino's edition of Vitruvius (1521), the famous Vitruvian man was superimposed on a grid, and later Philibert de l'Orme used it in his system of Divine Proportion (Pèrez-Gòmez, 1983:308-309).

The refinement of grid into architectural designs is also present in the projects of the *Ecole des Beaux-Arts* and the *Ecole Polytechnique*. Collins echoes

this argument: "Most of the surviving drawings at the Ecole Polytechnique are on paper on which a grid is printed." (Collins, 1962:159)

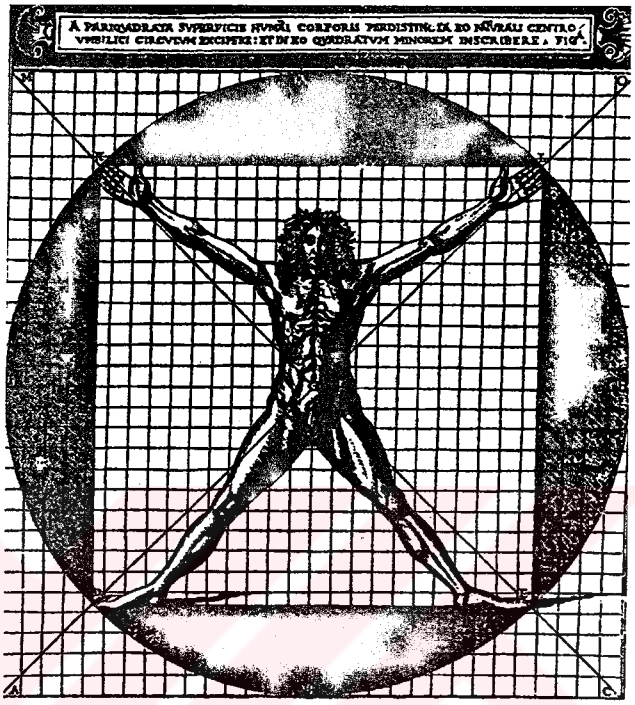


Fig.3.39 Vitruvian man superimposed on a grid, from Cesarino's edition of the *Ten Books* (1521). Source: Pèrez-Gòmez (1983).

The grid functions as an instrument to be used in design process and to insert order as well. By laying out the plans on a grid system, the fundamental problem of disposition and arrangement of the elements in plan is intended to be solved. The solution of the volumetric composition of the house was secondary to that of the plan; however, the application of the module to façades and to general volumetric studies was also practiced. Pèrez-Gòmez argues that in Durand's *mécanisme de la composition*, the grid represents lived space transformed into a concept (Pèrez-Gòmez, 1983:308).

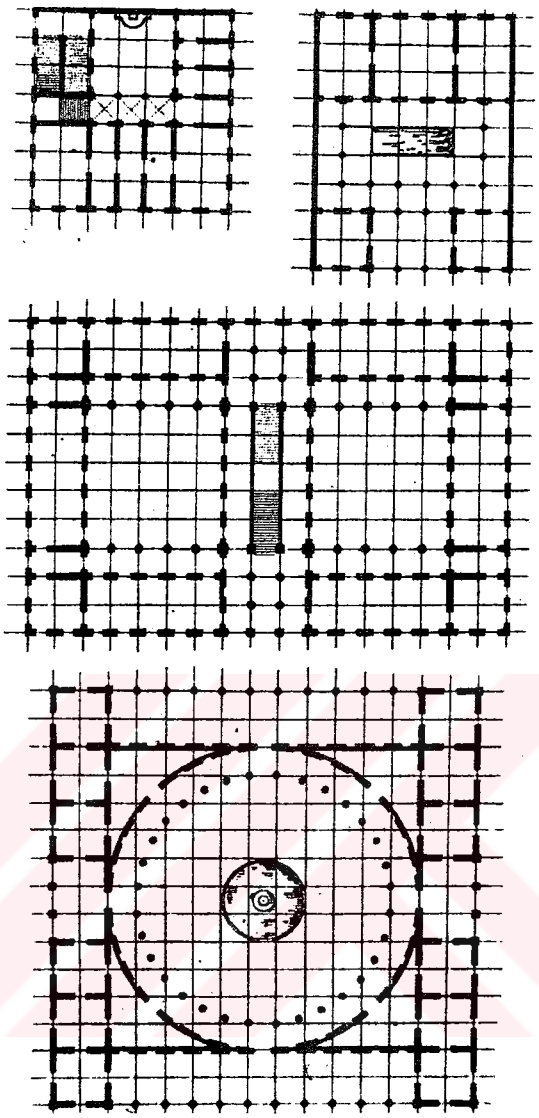


Fig.3.40 Detail of a plate showing the *mécanisme de la composition*, from Durand's *Précis.* Source: Pèrez-Gòmez (1983).

The grid system drawn as a two-dimensional plane in the planimetric schemes can also determine the relations and hierarchical sequences of volumes through its orders –that of pure relationship. Here, the notion of two-dimensional grid is transcended by three-dimensional grid conceived as a theoretical model of architectural space. The organization of the grid represents an overall regularity. Its success may be claimed to have been due to its simplicity and complexity simultaneously. The origin of the grid lies precisely in the historical grounds. The

Ottoman architect/master craftsman used to lay out the architectural plans on a grid system, as Eldem claims (Eldem, 1987:135); and the application of modular units was derived from this grid system, which is evident in the planimetric compositions of the "Turkish House".

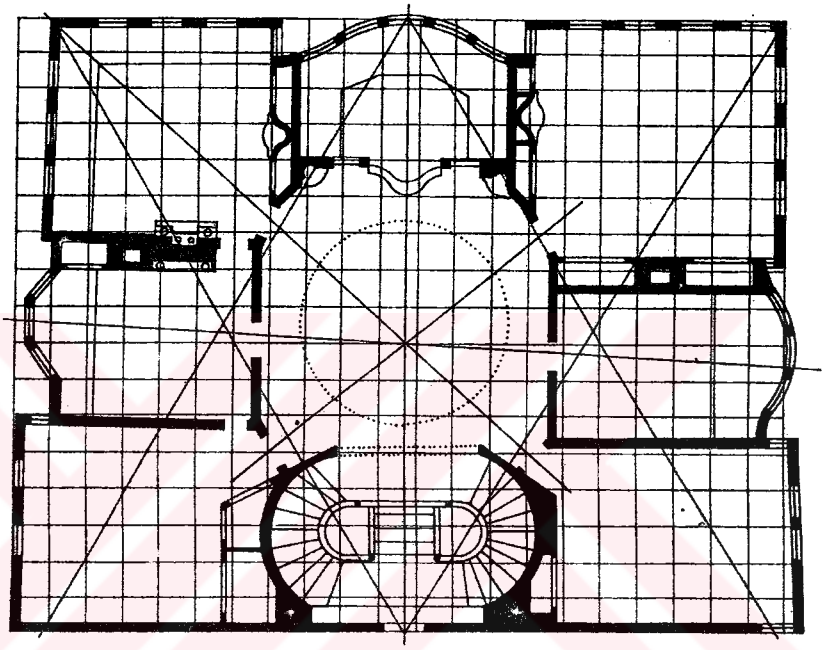


Fig.3.41 The modulation and proportions of a timber-frame structured house in Koprivstitza –redrawn by Cerasi. Source: Cerasi (1999).

The grid demonstrates the interaction of various elements of the house. Thus, the "Turkish House" is composed of the modular and repetitive structure of the grid. The grid is not used only in the planimetric schemes; it also appears on the façades in the arrangement of windows. The rhythm of the windows of the "Turkish House" is based on modular units. The representation of the "Turkish House" on a grid system makes it a modular, repetitive and regularized composition.

3.6 FORMAL EXPRESSION

3.6.1 Repetition

The formal expression of the "Turkish House" is based on the repetition of elements, its proportion system, its strong geometry and the types of openings. In the composition of the "Turkish House" the basic principle is the serial use of an architectural element or a group of elements. In fact, the dominant feature of the house is the repetition of the elements rather than their plasticity. The traditional house is formed of geometrically defined, repetitive elements. These elements of the house can be categorized under very simple archetypes: rooms, *sofa*, *cumbas*, façade modules, windows, eaves, etc., and these elements can be assembled in an infinite number of variations. The lateral arrangement of the architectural elements creates a horizontal geometry.

3.6.2 Symmetry

Symmetry is produced with the arrangement of serial elements around an axis. Symmetry, distinguished in the composition of the whole house or its single parts, does not only serve as a tool to arrange the façades but also acts as a rule to establish the compositional logic and clarity of the interior spaces or the structures spreading out in the forms of pavilions. The embryo of the symmetry principle resides in the ensemble of two rows of serial rooms and a distribution space in-between (as in the case of the inner *sofa* type) or rooms located on four

sides of the core (as in the case of the central *sofa* type). This central space – when folded up on itself on the vertical axes passing through the *sofa* in the first case, and on two perpendicular axes in the latter– determines the center of the plan.

Symmetrical arrangement in the "Turkish House" is widely established in the planimetric compositions of both the inner *sofa* type and central *sofa* type. Symmetry in the type with an inner *sofa* is a natural outcome of the everyday use of an interior space between rooms. In this type, one or more rooms may be subtracted or replaced with an *eyvan*, thus destroying the perfect symmetry. On the other hand, in the type with a central *sofa*, symmetry becomes a governing rule of planimetric composition. The planimetric arrangement of this type represents rather a formalist expression.

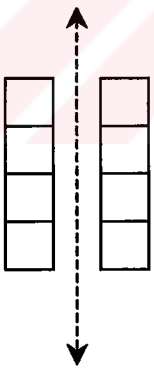


Fig.3.42a Symmetry axis of the type with an inner *sofa*.

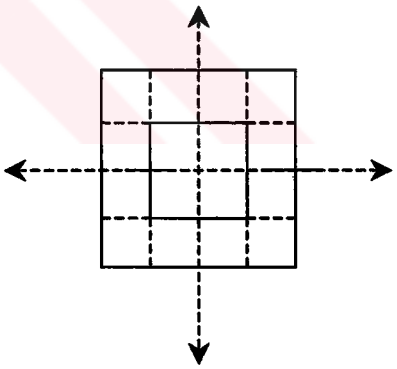


Fig.3.42b Symmetry axes of the type with a central *sofa*.

3.6.3 Proportion

The proportional system of the traditional Turkish dwelling architecture is based on a modular logic and simple arithmetical relations –evident in the overall

composition of the house. According to Cerasi, this proportional system is the basic tool in the design of the plan (Cerasi, 1999:257). The proportional system of the "Turkish House" determines the rhythmic and distinctive façade arrangement: the vertical 1:2 proportion of windows and their lateral arrangement are emphasized. The modular logic of the timber frame and the grid composition are two factors *a priori* to the achievement of balanced proportions in the "Turkish House".

3.6.4 Geometry

Geometry is one of the basic *a priori* of the compositional principles of the Turkish dwelling architecture; the geometric clarity reduces even the most complicated divisions of space into simple figures. Both the planimetric and volumetric compositions of the house can be simplified to schematic, regular geometric forms. The use of modulation naturally contributes to the formation of strong geometry. The "Turkish House" may be read as the assemblage of rectangular units in a free order. Eldem wrote of the usage of the rectangular geometry in the composition of the "Turkish House":

> The rooms are basically rectangular, all fitments are integrated into the spatial concept of the rectangular unit so that a bay, for example, is blended intrinsically with the rectangularity of the room or acts as an extension of it (Eldem, 1987:17).

In his book *La Città del Levante*, Maurice Cerasi argues that the house types depend on the spatial, geometric and stylistic autonomy of each room and that all the other elements are the bounding organisms (Cerasi, 1999:158). On the

contrary, S. H. Eldem perceives the *sofa* as the dominator of the house typologies, whose geometrical composition and location within the plani-volumetric mass determine the type of the house. In Eldem's point of view, all the other elements –including the rooms– are secondary to the *sofa* in the composition of the house.

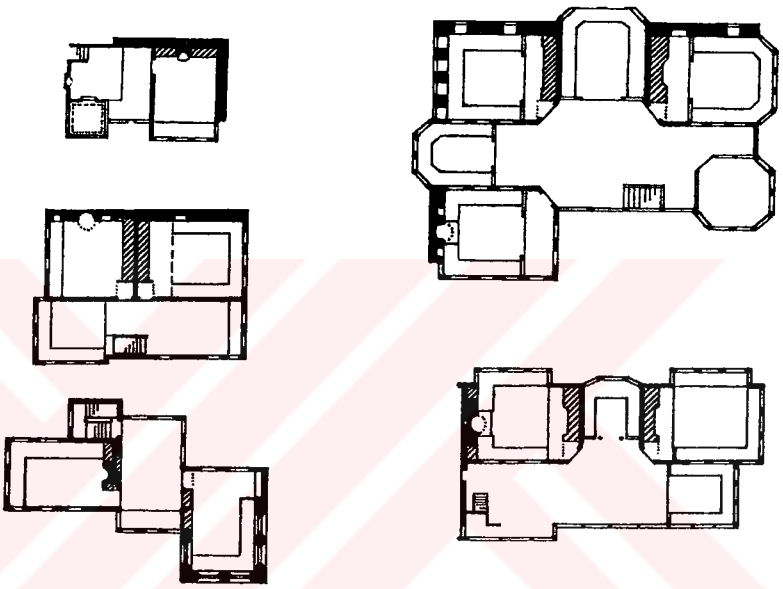


Fig.3.43 The development of house plans constituting of regularly geometricized rooms and their freely- distributive arrangements. Source: Cerasi (1999).

3.6.5 Types of Openings

In his classificatory book *Türk Evi Osmanlı Dönemi (Volume III),* Eldem includes windows and doors within his typological analyses of the architectural elements. This section on types of openings in the "Turkish House" is mostly based on Eldem's studies. Eldem's approach to these two elements is not stylistic; rather he examines their evolution from the most simple to the most

complex. Instead of their decorative qualities, Eldem is concerned with the compositional and structural principles inherent in their organizations.

3.6.5.1 Windows

Windows occupy a significant part of the façade and play a major role in the structure of the "Turkish House". Eldem argues that windows were based on *a priori* rules, and that they were not used as tools to represent the architect's individual intentions:

> Windows were never considered as individual elements or as features which may vary according to the choice of the architect, but as units in a rigid system, the height, form and type of frame of which were established according to standard principles (Eldem, 1987:89).

Windows are the dominating elements of the façade: large, horizontal surfaces pierced through repetitive, large, glazed windows enable a sense of continuation and fluency throughout the urban space. Through their spatial effects and their play of light, these fragments of the façade determine series composed of homogenous elements. The emphasis is laid upon the fact that the windows are all in the same size and organized within the same compositional logic. Thus, the street is defined by the pierced surfaces of the houses. This repetitive organization of the window module renders it possible to identify and read each part of the house as a separate unit. Yenal argues that the organization of sash-windows dominate the structural essence of the "Turkish House":

> The structural formation of the Turkish House follows the plan of sash-windows...In this system the windows are separated from the structural elements and aligned in a row (Yenal, 1987:169).

This distinction of the façade elements from the skeletal framework provides structural clarity to the "Turkish House" –a feature highly praised by Modern architecture.

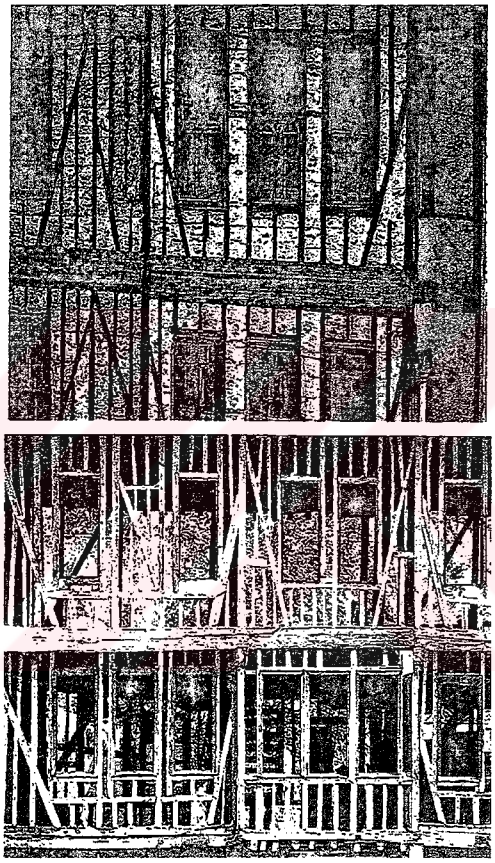


Fig.3.44 The structural framework of windows. Source: Yenal (1987).

As seen throughout the numerous examples illustrated in Eldem's book, shutters are a complementary part of the windows. When the shutters are closed, they are flush with the façade. Hence, the appearance of holes and voids within the façade created by the repetitive windows is superseded by a view of plain, large and continuous surface along the street. Eldem argues forcefully that the structural

principles of the organization of windows were the initiators of the rules of architectural composition of the "Turkish House":

> In big cities the 19th century residential architecture has been closely attached to almost dogmatic principle of the repetitive rhythm of vertical windows of 1:2 proportion. Architectural compositions started from this unit and were practiced by the so-called *Kalfa* (master craftsman) who controlled almost all building activities (Eldem, 1974:10).

The windows dominate the composition and affect the appearance of the façade. The rooms on the upper floors are expressed with numerous windows in contrast with the little perforated ground floor. The large glazed exterior surfaces lend the house an extremely light latticed appearance forming a transparent image. In certain planimetric variations of the "Turkish House", rooms get sunlight from the *sofa* as well as the openings on their exterior façades, which enables an interaction between the upper floor, courtyard and the *sofa*. This provision of an uninterrupted, natural continuity between the interior and exterior of the house has always been a desired quality in the contemporary architecture. In the organization of the plan schemes of the traditional "Turkish House", all the spaces exhibit a continuous formal and functional interaction. It is these "modern" features of the "Turkish House" that Eldem is referring to in his designs.

3.6.5.2 Doors

The main door of the house –giving way to the courtyard– is always large and double-winged. It is usually of timber board. The entrance door was

perceived as a representation of an ideological phenomenon as explained by Eldem:

> The door was the symbol of the hospitality of the household. Turkish colloquial expression illustrates this fact clearly. The gate of the local aristocracy –the great house– bore a symbolic importance for every district. The vizier's gate, for example, represented the authority of the city and the region, and the royal gates and those of his pashas represented their authority over the entire country (Eldem, 1987:81).

That is why the entrance door was always conspicuous in the "good" sense – meaning grand and noticeable but in a humble way, not in an exaggerated form.

In the interior, each room opens onto the *sofa* through a separate door. In the traditional house types, the rooms never have more than one entrance. The door of the room is on a small scale –as opposed to the main door–, and, as Eldem claims, it is always placed so that it offers no obstacle to the seclusion and privacy of the interior (Eldem, 1987:81). Doors are almost always located at the corner of the room to screen off the inside of the room from the *sofa*.

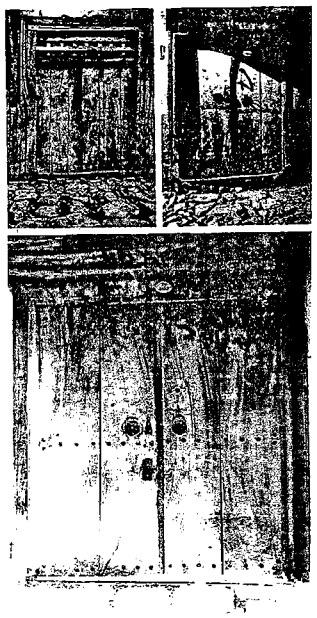


Fig.3.45 Various entrance doors of the "Turkish House". Source: Eldem (1987).

3.6.6 The Volumetric Composition

In the volumetric composition of the "Turkish House", equilibrium is achieved between the voids and the solids. The variety and juxtaposition of open and closed spaces lend the house a distinctive image: parts of the projections and the *sofa* are closed by timber-framed walls pierced by a series of windows; other sections are open, useful for life in summer. But more important to the total effect is the skillful disposition of the clearly defined voids in the three-dimensional composition: voids which include repetitive windows of the same height, kiosks, the serial arrangement of pavilions in the courtyard and the lateral organization of pillars along the open *sofa (hayat)*. The incorporation of voids into the architectural composition of the "Turkish House" is a characteristic principle of volumetric organization in all types together with other compositional rules: the insistent repetition of geometrically shaped elements –both horizontally and vertically–, and the modular logic of the planimetric organizations and façade treatments.

In fact, depending on the qualities of the "Turkish House", such as the structural clarity, lightness, transparency and modulation, and axiality, Eldem found the traditional dwelling architecture as capable to be appropriated within a modern framework.

CHAPTER 4.

TYPOLOGICAL METHOD IN SEDAD HAKKI ELDEM'S DESIGN APPROACH

4.1 MODERN TURKISH ARCHITECTURE: Eldem's Search For Continuity With Tradition

Much has been written and claimed on Eldem's architecture. Some praised his works highly; some criticized them harshly. Both counterarguments and their various assertions may have their true and logical points of view. However, they all lead to a common proof: Eldem is one of the most important figures in the Turkish Architecture. As N. Erdal Özyurt, a former student of Eldem, points out: "He is the only Turkish architect who has a unique architectural style of his own – be it successful or not. This identity alone suffices to label him as the greatest Turkish architect of our era." (Özyurt quoted in İncesu, 1990:90) Eldem's professional life can be summarized as an inexhaustible will in search of an equilibrium between two concepts –the national and the contemporary–, deriving authority from the traditional types. In his opinion, the new Turkish architecture would be realized with contemporary Western techniques, but still be specific to the Turkish culture. For Eldem, Japanese's manner of conduct illustrates a successful example in this context, and he believes that their way of coping with

this problem –the dilemma between "national" and "international"– should serve as a role model for the Turkish architects.

> Japanese succeeded rendering their traditional architecture with the use of modern techniques. Their talented architects have always followed the same route and they never became slaves of the Western World (Eldem, 1984:58).

And the only way to overcome this dilemma passes through carrying out a consistent architectural approach, one that is bound on a discipline. According to Yenal, Eldem defends that in order to create a specific architectural style, architecture should be neither national nor international but be coherent i.e. it should not contradict itself (Yenal, 1998:43). This advice gains greater importance especially for the Third World countries where pluralism has gone astray.

Applying certain etiquettes like "native", "nationalist" or "regionalist", "eclectic", "historicist", etc. to an architect may cause certain confusions and give way to misleading conclusions about his works. Rather than dividing Eldem's architectural developments into periods and labeling them with one of the above adjectives, in this section the various approaches he has adopted in his architectural discourse are intended to be exposed in order to show how different concepts existed side by side in his architectural attitude.

4.1.1 National Architecture vs. International Architecture

After graduating from the Academy of Fine Arts (*Güzel Sanatlar Akademisi*) in 1928, Eldem studied in France, England and Germany for a total of three years. During his post-graduate study in Europe, he got to know certain

important architects like Auguste Perret, Le Corbusier and Hans Poelzig. In addition, Kuban claims that: "His experience in the feverish atmosphere of the Bauhaus in Berlin has affected his architectural approach." (Kuban, 1983:25) In 1932 S. H. Eldem became the assistant of Ernst Egli. Egli's teaching in the Academy was mainly in the direction of functional and rational architecture. The first architects –like S. H. Eldem, Seyfi Arkan and Emin Onat–, who were educated in the early Republican era, followed Atatürk's ideology, which demanded keeping up with the universal culture, i.e. to produce within a Western comprehension. Thus, in his early periods, Eldem designed in a pure functional approach in conformity with the International Style of the era.

According to Uğur Tanyeli, Eldem's design of the Termal Hotel in Yalova (1934-1937) is the first notable design to unite modernism and tradition in Turkey (Tanyeli, 2001:28).

Fig.4.1 Termal Hotel –view from the balconies of the patient rooms.
Source: Tanyeli (2001).

In the words of Eldem: "The architectural qualities and details of the Hotel carry the characteristics of a *heim* –a residential unit constructed in Germany or California at those years." (Eldem quoted in Yenal, 1998:43) In contrast, the hotel can be claimed to be one of Eldem's first designs, which –via its compositional organization and exterior details– carries traits of traditional Turkish dwelling architecture. The Hotel demonstrates its architect's concern of a native architecture with its wide projecting eaves, modular projections of balconies and repetitive windows. However, Eldem states his opinion on the notion of "nationalism" in the design of the Hotel in the following words:

> Here, the concept of 'native' is realized as a kind of internationalism embodying more local materials. Thus, it provides an 'intimate' character. Although some elements of the Turkish ***köşk*** were inserted into the plans, the native architectural traits were tried to be discarded as much as possible (Eldem quoted in Yenal, 1998:43-44).

Though designed on an international basis, the Hotel reflects a "native taste" as well, and can be conceived as a leading model for the unification of international and national tastes. The Termal Hotel is designated by Eldem himself as "...the first product of the National Architecture Movement." (Eldem, 1984:58) Though demolished, the Hotel takes its place in the historical discourse as one of the first functionalist/internationalist buildings of Turkey. It would be quite interesting to note Eldem's observations on the reactions of the foreign architects against this new tendency:

> At those times, the foreign representatives of the 'cubic ecoles' were severely opposed to the direction of our architecture's ongoing development, but great masters like Taut and Bonatz did not hesitate to take part in this voyage. For example, the designs of Saraçoğlu District and Faculty of History and Letters were highly influenced by the Turkish architecture (Eldem, 1984:57).

Creating pure modern buildings, like Bayan Firdevs House and SATIE Building (Bozdoğan, 1987:56) –referring to the purist approach of 1930s– at a time when he started his explorations on the "Turkish House" may be seen as a deviation from his intensive search on the traditional Turkish architecture. As Doğan Kuban states (Kuban, 1983:5), "In this period, S.H.Eldem, with his SATIE Building (*Elektrik İdaresi Deposu*) constructed in 1934, gave a clear functionalist impression, as if he were an architect from the school of Le Corbusier." With large-glazed, horizontal band windows, a main block of offices in the form of a prism raising on free columns, simple and rational façade treatments, and the elimination of all references to the local architecture, this building is an example illustrating both the widening impact of the International Style and Eldem's concern with this style. These two buildings together with Akbank General Directorate (1967-1968) and Alarko Office Blocks (1976-1979) were severely criticized by some architects who pointed out that these works diverged from Eldem's architectural scope; accordingly Eldem was condemned to exhibit an inconsistent architectural manner (one of these architects is Söylemezoğlu quoted in İncesu, 1990:90). However, within a professional career exceeding half a century, these works can be interpreted as attempts in search of a contemporary language.

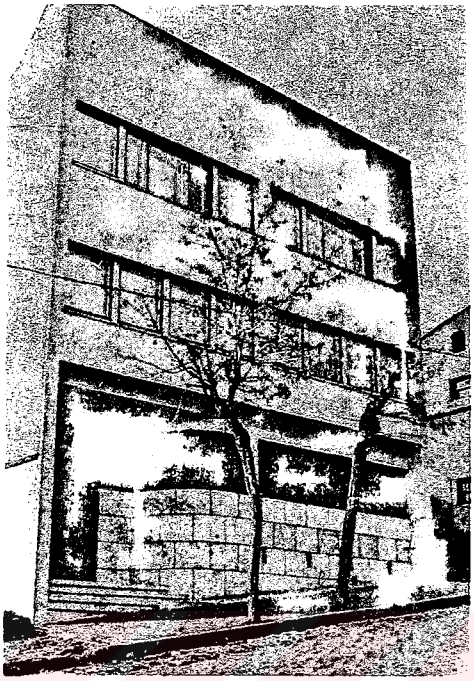


Fig.4.2 Bayan Firdevs House, Maçka, 1934.
Source: Bozdoğan (1987).

Fig.4.3 Alarko Office Blocks,
Ayazağa, İstanbul.
Source: Bozdoğan (1987).

Fig.4.4 SATIE Building, Fındıklı, 1934.
Source: Bozdoğan (1987).

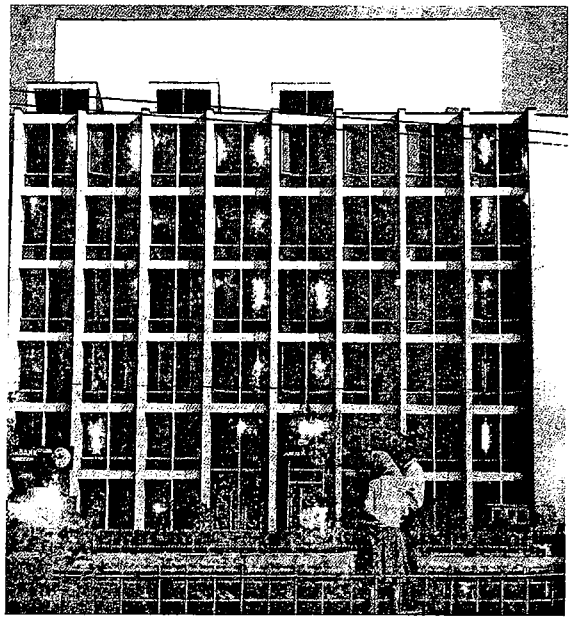


Fig.4.5 Akbank General Directorate, Fındıklı, İstanbul.
Source: Bozdoğan (1987).

After the mid 30s, certain social and political events played their roles in marking the beginning of a new nationalistic period. The predominant political factor enabling the prevalence of the nationalistic ideas in this period is related by Üstün Alsaç to the conjuncture of conditions before the Second World War (Alsaç, 1991:42). Though Turkey did not take part in the Second World War, due to its close relations with Germany, the intellectual milieu in Turkey was influenced by the nationalistic ideas coming from Germany. Within such an intellectual climate, S. H. Eldem, together with Emin Onat, chose to construct their architecture on a regional-national basis. Eldem has been totally identified with the Second National Architectural Style and is known as the leading theoretician of the period. His establishment of the "National Architecture Seminar" at the Academy in 1934 (Yenal, 1987:164) was a pioneering attempt in maintaining nationalistic ideas within the architectural discourse in Turkey. Alsaç argues that Eldem's Turkish Pavilion constructed in 1939 for the New York

International Exposition and two articles by Eldem –"The Question of National Architecture" and "Towards a Native Architecture" published in *Arkitekt* in 1939 and 1940 respectively– can be seen as the initiators of the Second National Architectural Period (Alsaç, 1991:43). In these articles Eldem formulated his ideal regarding national architecture in three basic points. First, "national architecture" is not a merchandise to be imported, and such a national architecture can only be established in conformity with the native social values of a nation. Secondly, it should only be realized by domestic technicians and workers; foreigners can only be referred to during the education process. And thirdly, the local context (topography, climate, materials) is the only true invariable of national architecture. In other words, the basic principles of native architecture are in conformity with the people, labor force and land of the country. Eldem defended that:

> Every country embodies its own unique architectural style, and the application of a style throughout the country/world regardless of the specific implications of the site would inevitably cause harmful consequences. Thus, possessing a native style is an important provision (Eldem, 1940:69).

Eldem's rationalist and functionalist approach to architecture in the 30s shifted towards nationalistic ideas starting from the early 40s. Eldem's main concern was to create a distinctive architectural expression of contemporary Turkish architecture that has integrity and self-esteem. However, in those years, Eldem's pursuit of monumentality and austerity, and the unavailability of reinforced concrete during wartime, as well, led Eldem away from the modern structural qualities of the "Turkish House", namely transparency, lightness and openness. In this rather formalist nationalist attitude, Eldem designed İstanbul

Faculty of Sciences and Letters (1942-44) and Ankara Faculty of Sciences and Letters (1943-45) in cooperation with Emin Onat (Bozdoğan, 1987:149-150). Through the massive effect of stone and the allusions to Seljuk and Ottoman archetypes –elements like wide eaves, porticos, etc.–, strong emphasis on monumentality and collective memory is placed in both examples.

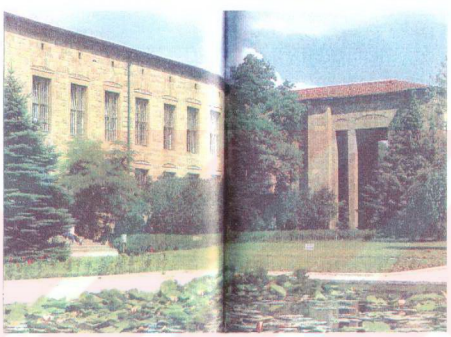


Fig.4.6 Ankara Faculty of Sciences and Letters (1943-45). Source: Tanyeli (2001).

Fig.4.7 İstanbul Faculty of Sciences and Letters, (1942-44). Source: Bozdoğan (1987).

A few years after these two buildings, Eldem produced Taşlık Coffee House (1947-1948) (Tanyeli, 2001:73) illustrating his quest for a native/national architecture based on the "Turkish House". Many critics of architecture severely

criticized the building and claimed that by imitating the old, Eldem has regressed (as criticized by Ali Handan in an interview quoted in İncesu, 1990:84) The Coffee House –especially its plan– is a replica of Amcazade Köprülü Hüseyin Paşa *yalı* constructed in 1699; however; it was a deliberate choice of the architect in order to demonstrate the essentially modern traits of the Turkish civil architecture. In an interview with Engin Yenal, Eldem answers the criticisms related to his design approach in Taşlık Coffee House:

> My intention in adopting an old Turkish köşk –with both its planimetric and volumetric traits– was to make explicit that the 300-years old Turkish dwelling architecture was very close to the notion of modern architecture, and that it had the potentiality of being adopted to contemporary functions through certain alterations. I don't mean ornamentation, stylistic features, etc. by the word "alteration". The design of this building is also an architectural pretension and a gesture towards architects and architectural authorities (Eldem quoted in Yenal, 1998:44).

The architect's concern was to demonstrate how the collective creativity and culture embedded in the traditional "Turkish House" could be interpreted in a new way.

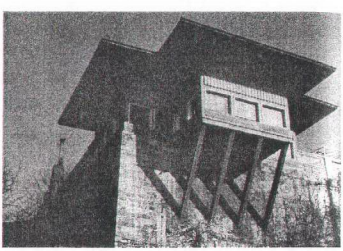


Fig.4.8 Taşlık Coffee House (1947-1948). Source: Bozdoğan (1987).

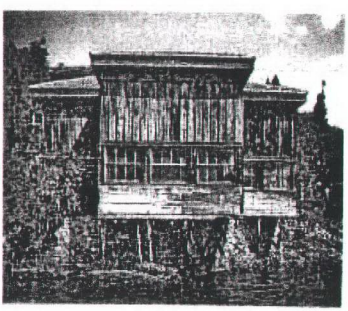


Fig.4.9 Amcazade Köprülü Hüseyin Paşa Yalı (17th century). Source: Yenal (1987).

1950s and 1960s constitute the era when liberalism began to prevail in Turkey. Mete Tapan asserts that via the close ties with the West, new construction methods and International stylistic and formal concepts became more accessible; due to this exposure, Turkish architects developed an eclectic approach (Tapan, 1984:106). Eclecticism is an unavoidable consequence in an age of communication, and it should not be despised. As Bülent Özer emphasizes, eclecticism can serve as a positive purpose only if its premises are adapted properly to local conditions (Özer, 1964:74). İstanbul Palace of Justice (1949) by S. H. Eldem (Bozdoğan, 1987:78) is a successful example, reflecting these tendencies. The designation of the building as a forerunner of the International Style by Mete Tapan (Tapan, 1984:109) is opposed forcefully by Sibel Bozdoğan:

> Instead Eldem's clearly legible reinforced concrete skeleton draws him once more closer to a version of Italian rationalism epitomized in the 1930s by Guiseppe Terragni, the Casa del Fascio in particular with its skeletal aesthetic (Bozdoğan, 1987:77).

Despite the fact that the character of the building displays a logic of a clear manifestation of a skeleton structure, İstanbul Palace of Justice cannot be considered to have been designed in "International Style" since International Style is generally associated with the image of a light-glass enclosure. In fact, the stone building with its monumental effect can be claimed to be not very far from the scope of the Second National Architectural Style of the 1940s.

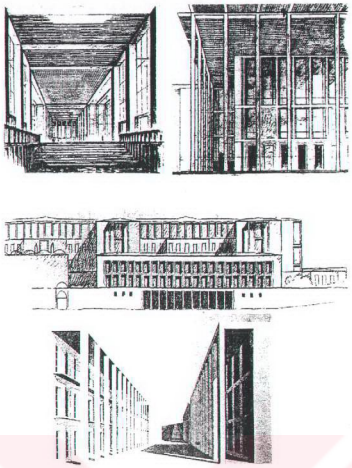


Fig.4.10 Initial studies for the competition of İstanbul Palace of Justice, 1948 (on top). Student dormitories in Chieti, Italy (at the bottom). Source: Bozdoğan (1987).

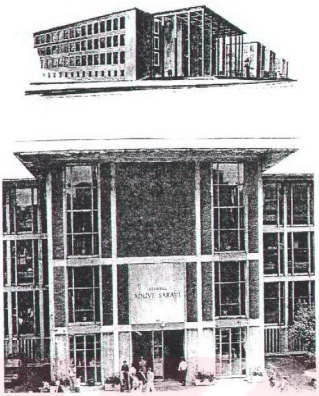


Fig.4.11 Perspective sketch of the elevation and view from the entrance. Source: Bozdoğan (1987).

In addition to this rationalist approach, the repeated use of vertical architectural elements and the wide projecting eaves illustrate Eldem's ongoing search for a native architecture. Throughout the 1950s, Eldem's designs followed an international-functionalist style, in conformity with the contemporary Western architecture. The design of the Hilton Hotel, constructed in cooperation with Skidmore, Owings and Merrill in 1952 (Bozdoğan, 1987:151), illustrates an international functionalist approach. Though this design, too, lacks the presence of a glass skin stretched over the structural framework, Tapan argues that through the simple and rational façade treatments, prismatic solutions of plans and forms, the predominance of functional geometric elements (rectangles and squares) in the

site plan and the extensive use of grid system on the façades, the building closely follows the ideas of the International Style (Tapan, 1984:107).

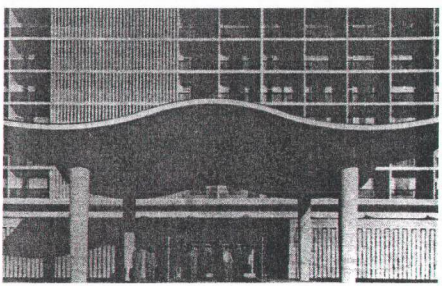


Fig.4.12a Eldem's design for the entrance canopy.
Source: Tanyeli (2001).

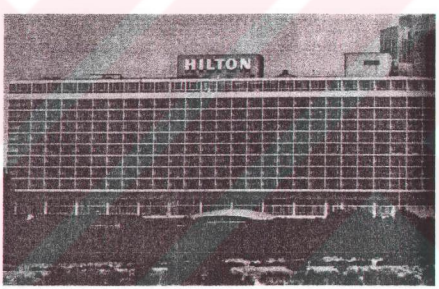


Fig.4.12b The İstanbul Hilton Hotel (1952).
Source: Tanyeli (2001).

The building can be claimed to be the most influential example of the International Style in Turkey, in which the functional necessities set up the design criteria. However, it is interesting to note that the architect himself criticized the devastating effect of this internationalist building on the Turkish architecture by claiming that the Anatolian cities were unable to resist the disturbance of the glass and tinplate boxes introduced to the Turkish architecture by the design of the

Hilton Hotel (Eldem, 1973:11). In an interview with Ayşe Hasol, S. H. Eldem expresses his negative thoughts on modern architecture:

> Modern architecture proved to be not functional. The real conflict occurs between the architect and the users. If the architect designs an architectural construction without considering its users, no matter how skilled the outer covering is, it can be claimed that the result is unsuccessful. Architecture means being feasible and keeping in touch with the earth at the same time. All the products of the earth -brick, timber, and etc.- should be realized perfectly. Constructing a glass box in a desert is not architecture, I believe (Eldem quoted in Hasol, 1986:34-38).

Eldem's regionalistic approach and the attention he paid to local materials are once more evident in this statement. It is notable to remark that instead of the SATIE Building or Bayan Firdevs House, it was the State Monopolies General Directorate in Ankara (1934-1937) which was designated by Eldem as "...the first modern building in Turkey." (Eldem, 1974:10) Even though the building embodies national characteristics, Eldem does not perceive these features as excluding the building from being "modern". It is a deliberate choice that proves his search for an architectural discourse fusing the national and the contemporary.

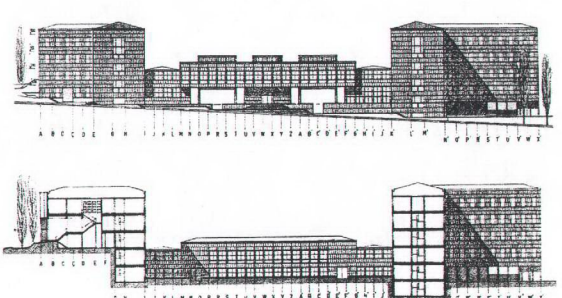


Fig.4.13a State Monopolies General Directorate –section and elevation.
Source: Bozdoğan (1987).

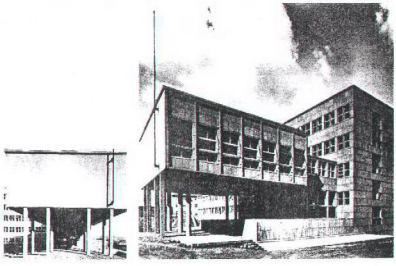


Fig.4.13b State Monopolies General Directorate –views of the front block.
Source: Bozdoğan (1987).

4.1.2 Regionalism and Eldem's interpretation of the "Turkish House" typology

From late 1960s, the "rootlessness" of international style, caused by the neglect of context started to be criticized; and the world architecture began seeking new solutions to substitute for the barren, inhumane, rootless architecture (Bozdoğan, 1987:91). After 1960s, the debates on "regionalism" began to take place in Turkey. Kuban comments on the validity of regionalism:

> In Turkey, as in many other countries, the question of regionalism in architecture provides us with the opportunity to examine the relationship between buildings themselves and their cultural environment (Kuban, 1961:14-15).

Thus, Eldem's Social Security Agency Complex in Zeyrek (1962-64), winner of a Aga Khan Award for architecture (Bozdoğan, 1987:85), may be read as a provision of such an opportunity and the architect's life-long quest for the re-interpretation of the "Turkish House", here transcending to a larger unit: a traditional *mahalle*. There is an intensive regard for the old *mahalle* of Zeyrek in the whole design. The façades, articulated with the repetitive windows and

vertical slabs surrounding them, and the gradually sloping masses harmonize with the topography and the site. Bozdoğan explains Eldem's intention in the design of the complex in the following words:

> Though this contextual experiment is unique in Eldem's career, it displays the architect's ever-lasting concern to capture an equilibrium between the 'old' and the 'new', the 'traditional' and the 'modern' (Bozdoğan, 1987:86).

Fig.4.14 Social Security Agency Complex in Zeyrek (1962-1964).
Source: Bozdoğan (1987).

Özkan classifies Eldem's architecture in the category of "abstract regionalism" together with Raj Rewal and Charles Correa (Özkan, 1992:18-20). In the words of Özkan: "Eldem is a devoted regionalist in search of an architecture which is primarily Turkish, but the references he makes in his designs, (to what makes it Turkish), are abstract." (Özkan, 1987:14) Here, the word "abstract" can be taken to mean that though into some of his designs Eldem integrates certain forms of the "Turkish House", the way he interprets these forms is of abstract models rather than stylistic imitations. He is generally not interested in decorative or stylistic features of the precedent's works but in the universal compositional principles inherent in these products. Yücel defines S. H. Eldem's regionalism as a

synthesis of historical, regional and economic-nationalistic identities (Yücel, 1984a:124). However; Eldem's national attitude and so-called "regionalism" have been criticized by certain critics, who pointed out that the timber-frame "Turkish House" on which Eldem's architectural roots depend was only a particular house type in the vast category of the Ottoman Empire. Kuban criticizes the one-sidedness of Eldem's use of the notion of the "Turkish House":

> If national architecture is to be grounded in the past, which of these are you going to take as paradigm? Today there is the fashion of Turkish house, although a largely discursive category. Our model for this is the traditional timber-frame house type. What about the thousand years old tradition of mud-brick houses; of Erzurum houses, Rize houses, Bodrum houses and Urfa houses? Are these to remain outside what is national? (Kuban, 1984:8).

Meanwhile, the designation of S. H. Eldem as a "regionalist" as proposed by critics/historians, turns out to be merely confusing, since regionalism aims at providing meaning and content under specific local conditions, and searching how the architecture of particular region ought to be. However, Eldem does not have such an insistence. Instead, his architecture, based on the idea of a "national tradition", surpasses any type of regionalism. He makes use of the typological traits of the "Turkish House" extending from the rural house to the *yalı* in İstanbul. As Uğur Tanyeli states: "The Turkish House tradition denies the local dimension of the vernacular and discards the diversity stemming from the social differentiations of the dwelling architecture." (Tanyeli, 2001:22)

However, Eldem has a deep belief in regionalism and accepts it as the only worthy architectural approach:

> The various *-isms* attributed to architecture, such as functionalism, rationalism, modernism, etc. are nothing but reductive adjectives. Today there

> exists a new architectural tendency throughout the world: a regionalist approach (Eldem, 1980:96).

Though it is true to claim that he tried to base his architecture on the Turkish traditional patterns, it would be misleading to label Eldem as a regionalist. Yücel emphasizes this point in these words:

> Despite all these 'variations on vernacular themes', Eldem cannot be considered as an interpreter of regionalism in architecture. First, because he has almost exclusively built in the old and new capital cities: İstanbul and Ankara. But more particularly, because the Turkish House he refers to is an idealized type of this vernacular tradition: the highest examples of the tradition, generally the rich mansions of the imperial capital or the *yalıs* of Bosphorus (Yücel, 1983:60-61).

These words of Yücel draw him close to Kuban's criticism on Eldem's use of the term the "Turkish House". It is a special type idealized among the various types of traditional Turkish residences and it represents the elite. However, while getting entangled with a term, these criticisms miss an important point: what is crucial to the architectural discourse is not the meaning of the "Turkish House" that Eldem refers to; rather it is Eldem's mission in dealing with this notion. Eldem's life-long studies on the "Turkish House" led him to a rational architectonic interpretation of the traditional Turkish residential architecture.

The basic type remains unchanged while the use of new materials and the reapplication of basic archetypes through a different approach result in a new tectonic order. It is in this sense that Eldem's architecture is "classic". Yücel echoes this argument: "And these realizations –houses, *yalıs*, embassies– are classic, not only because of their forms or symmetry, but merely because they are, independently of their real size, monumental and atemporal." (Yücel, 1984a:147) It is important to note that rather than perceiving the building more as one element

within a larger context, Eldem –except in his Social Security Agency Complex in Zeyrek– refers to the single architectural object; his buildings are in fact architectural artifacts that have the potentiality of being transmittable in time. Peter Eisenmann defines "classic" as:

> That which is classic invokes the idea of ancient and exemplary and suggests 'authority and distinction'; it is a model of what is excellent or of the first rank. More importantly, it implies its own timelessness, the idea that it is first rank at any time (Eisenman, 1984:155).

Eldem's works deserve to be called "classic" since they are beyond any constraints of period or place. In summary, terms like "native", "international functionalist" and "regionalist" used to express Eldem's works are mere variations under a certain theme: "classic".

4.2 "TURKISH HOUSE" AS A TYPOLOGICAL REFERENCE FOR THE MODERN TURKISH ARCHITECTURE (Abstraction of the "Turkish House")

The main concern of Eldem's typological method of study on the "Turkish House" was his consistent search for creating an alternative to the dissolution of aesthetical and conceptual philosophies which took place under the banner of Modern architecture; and, as claimed by Eldem, "...to direct students of architecture away from the dominant, undisputed pivot of architectural development –Western architecture," (Eldem, 1984:11) toward a contemporary architecture maintaining the traditional and cultural continuity. Following the idea of type and typology, Eldem aimed to create a design methodology and a modern

vocabulary from the abstracted codes of the traditional and to adapt these extracted qualities to contemporary functions in order to reproduce a sound architecture. Throughout this "generative process", he did not adopt a historicist approach in establishing his own design criteria; rather, he went on generating significant architectural design concepts using the precedent as a source for appropriate ideas, and elaborating on the existing architectural forms, he re-composed new ones out of the abstracted ideas. This approach towards the use of the precedent is intoned by Henry Russell Hitchcock:

> When we re-examine or discover this or that aspect of earlier building production today, it is with no idea of repeating its forms, but rather in the expectation of feeling new sensibilities that are wholly the product of the present (Hitchcock, 1960:3).

Eldem aimed at prodding his students, the young architects of Turkey, to examine the typical invariables of the traditional Turkish dwelling architecture that have been culturally assimilated, and he sought to reinforce culturally-sponsored *a priori* notions that have been long forgotten under the influence of the Modernist dogma. This typological consciousness of Eldem brings him close to the more recent theoretical themes on architectural type, typology and its elements, which have been currently enlivened throughout some schools of architecture in Europe and the U.S. (as seen through the JAE, no:2, 1982), whose members are particularly critical to historical and theoretical discontinuities, such as the widespread lack of typological and morphological relationships. It can be claimed that Eldem perceived the historical precedent as a tool to provide a critical framework for the evaluation of architectural design, which can be analyzed in order to derive at a continuous communication of native values,

beliefs and aesthetical concerns through the manipulation of known archetypes. Bozdoğan explains the two ways in which type serves Eldem:

> On one hand, the idealized Turkish House, abstracted from hundreds of individual examples, draws Eldem close to a notion of 'type' as the logic of form derived from reason and use; at the same time 'type' becomes a compositional device (Bozdoğan, 1987:45).

As Bozdoğan explains, the concept of type in its first meaning constitutes Eldem's ideal architectural instrument for which he cared all through his career, and draws him close to a notion of logic deduced from the rationalist mind; type in the second sense serves as an *a priori* on which he can build up the basic vocabulary of his architectural discourse. His classificatory analysis of the "Turkish House" plan types –all possible variations with references to their *sofas* and combinations– provides the basis of his operational use of the type. In his lifelong struggle, Eldem displayed a continuous typological consciousness –not only in producing a matrix of plan types, but also in his analysis of other architectural elements like *cumba*, window, door, *sofa*, etc.– to refer to all aspects of the traditional "Turkish House". He always tried to emphasize the dialectic between the parts and the whole. This intention draws Eldem close to the French theoretician Durand who perceived design process as composing with predetermined elements:

> Before the composition one should know with which elements we compose, since the composition of the totality of building is nothing but the result of the assemblage of their parts, which are in their turn made by the elements of the building: the walls, the roof, etc. (Durand quoted in Gülgönen and Laisney, 1982:26).

These elements describe the pieces by which architecture is formed. These components embody a wide range of human themes –of values, problems and solutions. Archetypes are idealized forms that derive authority from the collective memory. Eldem's typological survey of the "Turkish House" is actually a tool to extract abstract codes from the archetypes of this assemblage.

Eldem's approach of dismantling the type into its archetypes and treating them as the "type" itself differs from the typological approach developed in Europe in the 50s and 60s. Cerasi criticizes the two schools of thought –namely the Italian School of Muratori– and the typo-morphological school –namely the Milanese-Venetian School of Aldo Rossi– by arguing that:

> They were reluctant to acknowledge the importance of archetypes...In other words, it was postulated that architects create or inherit typological solutions as deeply unitarian works of art, which cannot or should not be dismantled or used partially (Cerasi, 1995:1832-183).

According to Cerasi, this attitude was a misinterpretation of historical discourse, because he perceives the gradual transformation and separateness of levels as part of architecture's reality (Cerasi, 1995:182). Thus, it can be claimed that the typological approach in its classical sense seems to assume type as an organism, which is born, evolves in time and becomes extinct as a whole. The implication is that a type maintains its certain deterministic characteristics until it fades out or transforms completely. However, the individual work of architecture –the type– is composed of various fragments –archetypes–; and type, in a general sense, may stay the same and yet the archetypes may change. In this context, Eldem's typological approach can be deemed original: analyzing the typical architectural elements and the compositional invariables separately; modifying

them through abstractions; and integrating them into his designs. These abstractions of the unchanging results in changing design components bringing about an alteration in meaning and not only in style; and yet the spatial type does not change radically. This kind of a typological approach transcends the restrictive classical notion of type and might propose new methods in the analysis of typology and its use as a design methodology. This new vision of typology is introduced by Cerasi:

> This is no mere infatuation for a new style or trend. Nor is it the rejection of previous attitudes...It is above all, a long reflection on that which is important in architecture and that which is not, on that which can be changed and what should not...on that which can be separated (Cerasi, 1995:185).

Thus, Eldem's approach to typology that is deduced from a methodological analysis of the design process is quite promising and liberating in its success to free architecture from the restrictive mode of classical typological approach and dubious pursuits at the same time.

Eldem's generative process certainly gains importance in emphasizing the significance of typological studies –interpretative analyses rather than formal imitations– at a time when concepts such as type, *programme*, and composition were fading out under the pressure of the prevailing Modern architecture, and in proving the narrow-minded perception of the modern myth that, as Morris describes, "...views typology as limiting creativity, if not altogether eliminating it" (Morris, 1982:25) to be false. Throughout his professional and academic career, Eldem strongly believed in the establishment of a modern design vocabulary derived from the re-organization and transformation of the elements embedded in

existing schemes, adapting them to new circumstances. In his essay, *The Beauty of Shadows*, Jorge Silvetti identifies transformation as:

> ...operations performed on the elements of a given existent code which depart from the original, normative or canonical usage of the code by...altering it [the prior code] in such a way that it maintains its reference to the original while tending to produce a new meaning (Silvetti, 1977:44).

By making references to existent elements, such as the *sofa*, pavilion, portico or wide eaves, Eldem both clung to the main themes of the tradition and showed how these finite signs of the vernacular architecture could be synthesized in a new fashion of infinite variety. This synthesis is explained by Yenal: "The new design vocabulary could be characterized by both primary (traditional = dependent = unchanging) and secondary (contemporary = independent = changing) design components." (Yenal, 1987:171) The major values of the traditional residential architecture (overall compositional and spatial harmony, the structural clarity and lightness, strong modulation and transparency) were all manifested throughout his designs –a demonstration of the potential power residing in the "Turkish House" to cope with the contemporary. As Doğan Kuban emphasizes, the Western architecture was able to reach the plastic/formative artistry evident in the "Turkish House" only after great developments and abstractions (Kuban, 1982:208). Today, in the Turkish schools of architecture, a Westernized aesthetic of the contemporary architecture and its background in arriving at this high level of plasticity are being studied. However, the "Turkish House" has a lot to say. Eldem's realization of the significance of the "Turkish House" as a vital subject to be placed in the architectural curriculum, and his establishment of the "National Architecture Seminar" together with his students

render him an influential instructor. Eldem's most important contribution has certainly been his focusing on the continuous, evolutionary development of traditional dwelling architecture and his innovative search for generating a modern idiom from the cultural heritage. Eldem realized the idea of type as a purposeful application of the historical to modern design, which is defined by Morris as: "keeping one foot in the past so that we can recognize history and one in the present so that history is made vital." (Morris, 1082:25) Via the adoption of a typological approach, Sedad Hakkı Eldem remained sensitive to the study of historical types, linking his buildings with the historical tradition and never accepting the modernist premise that denies any connection with the past.

4.3 USE OF PLANIMETRIC TYPOLOGIES

The "Turkish House" was a starting point for Eldem's architectural doctrines and convictions. His motto has always been "Modernism based on the principles of the traditional in a convincing way". The "Turkish House" constituted the main source of Eldem's design approach. He used the archetypes of the "Turkish House", its spatial structures and principles of composition in his designs, adapting them to his own ideals; and while doing so, he emphasized the functional and aesthetical features of the anonymous "Turkish House" from foundation to the roof. His negotiation with the cultural heritage is reflected both in the planimetric schemes and the spatial compositions of his buildings. In this section, Eldem's use of the traditional planimetric typologies in his designs will be analyzed and exemplified.

Eldem continues his preoccupation with leitmotifs derived from the "Turkish House" in the planning of his edifices. In his designs, he mostly referred to the "Turkish House" plan types based on the *sofa*, which he searched thoroughly throughout his academic career. Among the various plan types of the Turkish dwelling architecture, Eldem most commonly refers to the central *sofa* type, which he believes to be the most elaborated plan type; however, there are a few examples in which Eldem applied the outer *sofa* and oval *sofa* types.

4.3.1 The outer *sofa*

The outer *sofa* of the traditional dwelling architecture is highly appreciated by Eldem because of its potentiality to enable the inhibitors to make use of the interior and exterior of the house simultaneously (Eldem quoted in Yenal, 1998:42). The Fethi Okyar House in Büyükada (1936) (Bozdoğan, 1987:53) possesses an outer *sofa* –though not applied in the traditional sense– which is defined by Bozdoğan as the result of the allusion to Japanese architecture (Bozdoğan, 1987:53). In this project, Eldem designed a wide balcony surrounding the periphery of the house. This round balcony that continues along the three façades of the house provides an uninterrupted view of the sea and Heybeliada. The windows and doors open onto this outer *sofa*/open gallery, providing the exterior and interior relationships. The continuous gallery rests on a multitude of wooden pillars extending up to the roof. The elliptical form of the hall is not merely due to stylistic concerns; it is a result of the architect's aim to supply a continuous view. The balcony acts as a place for common uses (sitting,

circulation); it provides access to the rooms, and unites the house and the garden with a wooden stair –as it is the case with the outer *sofa* type houses.

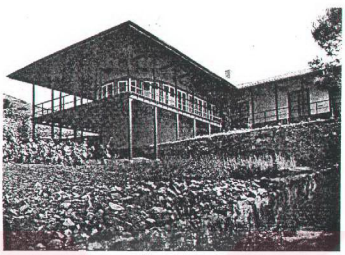


Fig.4.15a Fethi Okyar House, Büyükada, İstanbul, 1936.
Source: Eldem (1982).

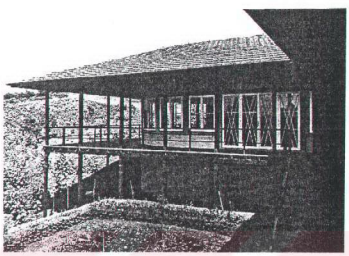


Fig.4.15b The wide balcony and the stair connecting the house to the garden.
Source: Eldem (1982).

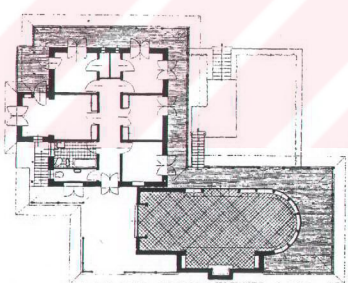


Fig.4.15c Plan of the house.
Source: Eldem (1982).

Fig.4.15d The house is integrated in nature.
Source: Eldem (1982).

Some critics of architecture argue that the Fethi Okyar House, surrounded by a continuous balcony resting on wooden columns, reflects an explicit reference to Japanese style; and some claim that its overall horizontal effect resembles Wright's *prairie* architecture; yet, its wooden terrace, pitched roof clad in tiles and its integration with natural environment draws the house close to a notion of traditional Turkish vineyard house.

> During my studies in Berlin, I have discovered many elements inherent within the "Turkish House" –elements regarding life styles. Houses rising on pillars, the garden continuing below the house, the tall shade-casting elements integrated into the house. (Eldem quoted in Yenal, 1998:42).

In these words, Eldem exactly summarizes his compositional concerns in the design of the Fethi Okyar House. Thus, it can be argued that the design of the house results from Eldem's interpretation of the traditional house type with an outer *sofa* within a contemporary approach. The house is modern in the sense that it has a light, transparent and clear image.

The project for Raif Meto House in Adana (1941) is another striking example displaying Eldem's continuous search for fusing the vernacular with the modern. In this project, the traditional type with the outer *sofa* is translated into a modern design. It is, as Bozdoğan describes, "...a modern house with a reinforced concrete front porch of tall slender columns" (Bozdoğan, 1987:54). In an interview on 4 March 1986, Eldem states: "Meto House is a variation on the 'outer *sofa*' type Anatolian house...The issue here is a two thousand years old Anatolian house type reinterpreted for contemporary requirements and with modern materials." (Bozdoğan, 1987:55)

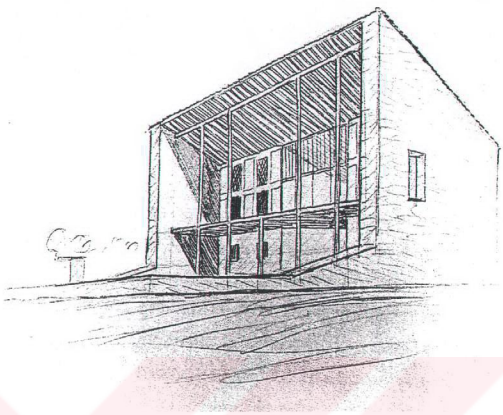


Fig.4.16a Project for Raif Meto House, Adana, 1941.
Source: Bozdoğan (1987).

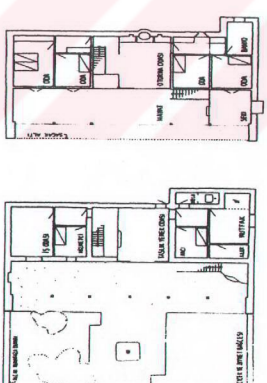


Fig.4.16b The plans of the house.
Source: Bozdoğan (1987).

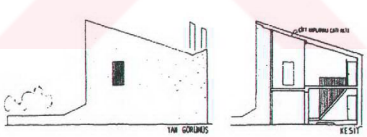


Fig.4.16c The elevation and section of the house.
Source: Bozdoğan (1987).

Here, it is not the stylistic search that dominates the house but the constructional logic clearly manifest in the sketch, plans and elevations. The outer *sofa* is placed between two load-bearing walls of reinforced concrete, covered by a single-pitch roof of timber structure clad in tiles (Bozdoğan, 1987:149). Eldem's devotion to reinforced concrete is once more evident in the structural logic of the house –via the reinforced concrete plane of the *sofa*, articulated by the tall columns and load-bearing walls on two sides. The overall mass can be read as a successful experiment of the reinterpretation of the traditional to accord with the modern. The rooms open onto an outer *sofa* (or *hayat*) above a *taşlık* on the ground floor, which is integrated into the garden surrounded by walls as in the traditional "Turkish House". Here, the outer *sofa*, besides being a space of distribution, is the unifying element of the composition.

4.3.2 The central *sofa*

The central *sofa* –be it round, rectangular, elongated or split-level in form– is applied in most of Eldem's houses, *yalıs* and villas remaining loyal to their traditional use in the vernacular dwelling architecture. The planimetric schemes of the Komili House (1978-1980) and the Suna Kıraç Yalı (1965) (Bozdoğan, 1987:103, 114) illustrate the interpretation of the central *sofa* type in Eldem's designs.

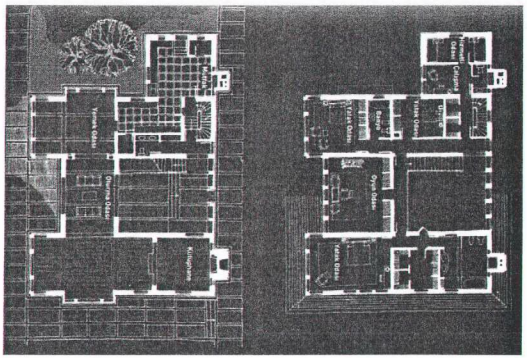


Fig.4.17 Suna Kıraç Yalı (1965) –floor plans. Source: Tanyeli (2001).

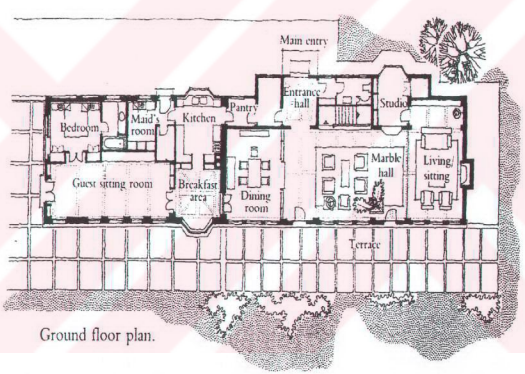


Fig.4.18 Komili House (1978-1980) –ground floor plan.
Source: Bozdoğan (1987).

In these two examples the idea of adapting the central *sofa* surpasses any act of imitation, and the *sofas* are designed in a typological interpretation. The two planimetric schemes are the results of Eldem's systematization of the proportions of this type, reducing all compositions to standardized, schematic diagrams. Certainly many of the most typical features of the original plan type survive in Eldem's realizations.

Through a process of deduction and abstraction, Eldem cultivates his own language in interpreting the central *sofa*: a two or three-storey high, spacious inner void sky-lit from above –dominating the overall composition of the building. Especially the designs of his mature phase illustrate the central *sofa* type of Eldem style. The high, spacious central *sofa* of the Rahmi Koç Villa (1975-1980) (Bozdoğan, 1987:138) sky-lit through the ceiling constitutes the unifying element and the core of the design, dominating the overall composition besides being the main circulatory space. The large-glazed openings at both ends of the *sofa* render the house transparent and provide an uninterrupted view across the house as well.

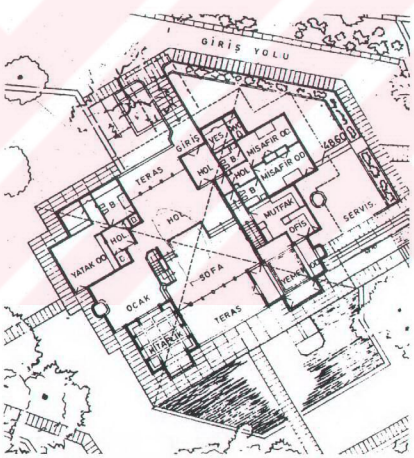


Fig.4.19a Rahmi Koç Villa –site plan.
Source: Eldem (1982).

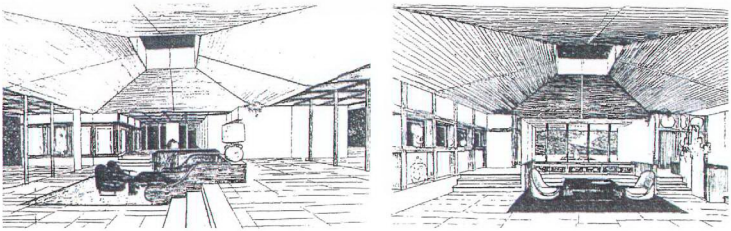


Fig.4.19b Rahmi Koç Villa –sketches of the central *sofa*.
Source: Eldem (1982).

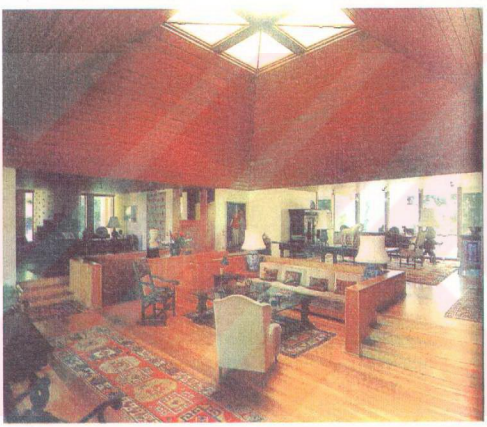


Fig.4.19c The central *sofa* of the Rahmi Koç Villa.
Source: Tanyeli (2001).

4.3.3 The oval *sofa*

The central *sofa* type is the dominant planimetric theme of Eldem's designs –adapted both in residential buildings and institutional edifices– applied at different scales. The central *sofa* type is defined by Eldem as the most mature and

developed phase of the evolution of the planimetric typologies (Eldem, 1968:223); thus, he perceives this central space as the main generator of the plan, structuring the overall composition of the building. Eldem generally interprets the traditional plan schemes while adopting them to his designs. The oval *sofa*, as explained in the previous chapter, is the last step at the evolution of the central *sofa* type –with beveled corners acquiring round forms both in the interior and exterior arrangements. The curved surfaces of the *karnıyarık sofa* of the Ilıcak *Yalı* clearly exhibit Eldem's adoption of this traditional archetype.

Fig.4.20a Ilıcak *Yalı* (1978-1980) –view from the Bosphorus.
Source: Tanyeli (2001).

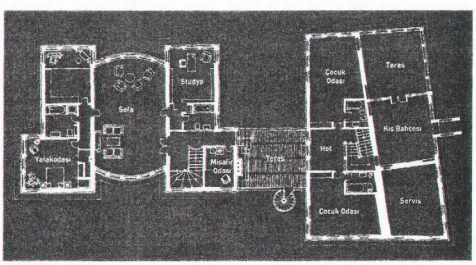


Fig.4.20b Ilıcak *Yalı* –first floor plan.
Source: Tanyeli (2001).

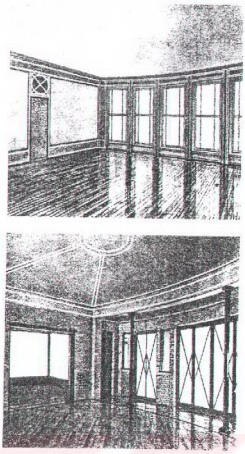


Fig.4.20c Ilıcak *Yalı* –sketches for the oval *sofa*.
Source: Bozdoğan (1987).

However, in this example, Eldem's inheritance of the oval *sofa* is out of the scope of typological abstraction; rather it is a formal "imitation". The only difference with the traditional house type with an oval *sofa* is that Eldem applies the *sofa* on both floors, whereas in the first one, it is only applied on the top floor. Yet the word "imitation" should not be confused with the term "copy". According to Quatremère de Quincy, there are two ways of imitation: one consists in imitating the style, the other in grasping the principles and spirit (Quincy quoted in Lavin, 1992:104). Imitation in its first sense acts as a mask veiling the imposture of the architect. Imitation in this meaning can be called "copying". On the other hand, imitation in the second type is only realized by the assimilation of its spirit and logic, deepening its compositional rules and developing its means. Thus, it can be argued that Eldem's adoption of certain traditional forms into his plans is imitation in the second sense, not resulting from the copying of styles but

from assimilating its structural essence and compositional logic deep enough to be able to integrate them into his designs. Hence, Eldem's act of imitation should be seen in terms of typological process rather than stylistic bias. In the case of the planimetric schemes of the Ilıcak *Yalı*, the imitated archetype is the oval *sofa*, but it should be read as Eldem's choice between "style" and "principles", revealing his preoccupation with proportions, rational principles and the character. This application of the oval *sofa* both provides a "native" character to Eldem's building (an image of the *Yalı* type) and donates it with the modern qualities in which Eldem is in the pursuit of: transparency and openness. It is a modest adaptation of the precedent's authority.

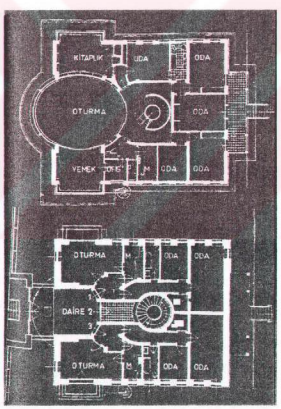


Fig.4.21a Floor plans of Ağaoğlu House (1936). Source: Tanyeli (2001).

Fig.4.21b Ağaoğlu House –front view and sketches for the oval *sofa*. Source: Bozdoğan (1987).

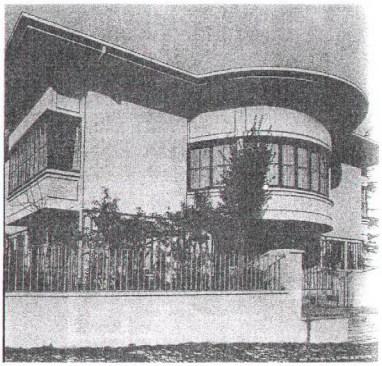


Fig.4.21c View of Ağaoğlu House from the entrance façade.
Source: Bozdoğan (1987).

On the other hand, the use of oval *sofa* as a formal element in the Ağaoğlu House (1936) stands out as a formalistic replica, stemming from Eldem's analyses of numerous traditional examples. However, the way he integrates it in this house differs from its traditional use. It is rather a free but formalistic interpretation of the oval *sofa*. İnci Aslanoğlu states her conviction on this oval *sofa* as:

> In the Turkish plan, the oval hall is a central *sofa* providing access to other rooms, whereas here, it is an oval living room away from the main circulation, thus remaining a mere formal gesture (Aslanoğlu, 1980:155).

Here, the adoption of the oval *sofa* is neither reinterpretation nor abstraction but merely "symptomatic imitation", a term used by Novalis to name the act of imitating the relationship among forms (Novalis quoted in Todorov, 1984:169). Eldem's integration of the oval *sofa* into his design may be reckoned as a search for reconciliation between the traditional and the contemporary, appointing a contemporary usage to the traditional *sofa*.

4.3.4 The T-plan

The T-plan, which is designated by Yenal as a stereotype for most of the traditional residences and royal pavilions (Yenal, 1987:168), was another element applied frequently in the planning of Eldem's buildings, mostly in the organization of living areas. According to Özer, the T-plan scheme enables the covering of large areas without the indispensability of using huge beams (Özer, 1966:15). Moreover, with the use of T-plan, the halls gain the opportunity of acquiring large openings on the elevations, offering a continuous view of the scenery.

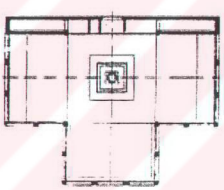


Fig.4.22 The T-plan structure.
Source: Özer (1966).

The adaptation of the T-plan in the planimetric organization of the Taşlık Coffee House (1947) (Bozdoğan, 1987:50) with explicit allusions to Amcazade Köprülü Hüseyin Paşa *Yalı* (17th century), and the characteristic T form of the living and dining rooms in the Uşaklıgil House (1956-1965) (Bozdoğan, 1987:111) are two examples illustrating Eldem's use of the T-plan type. Another virtue of applying T-plan to designs may be reckoned to be enabling both the separation of different functions (living room, dining room, library, etc.) and

relating them to one another via a unifying element: the central *sofa*. In Taşlık Coffee House, this is achieved by dispersing the tables in the sitting alcoves in the bays of the T form surrounding the pool placed in the central space. In the planimetric composition of Uşaklıgil House the same principle is applied; this time, the living and dining rooms are placed within the T forms united through a central *sofa* in the middle. The *sofa* type and the T-plan have been deliberately applied by Eldem as the unifying spatial unit within his plan compositions referring to the plan typologies of the "Turkish House".

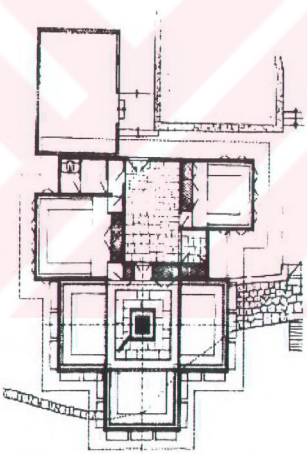


Fig.4.23 Köprülü Amcazade Hüseyin Paşa *Yalı*, 1699 –plan. Source: Yenal (1987).

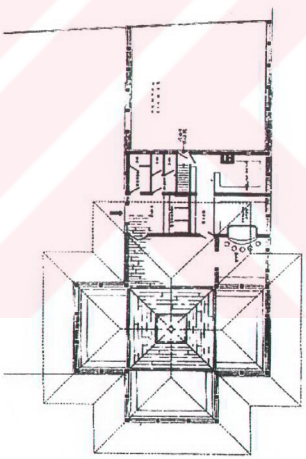


Fig.4.24 Taşlık Coffee House, 1947 –plan. Source: Özer (1966).

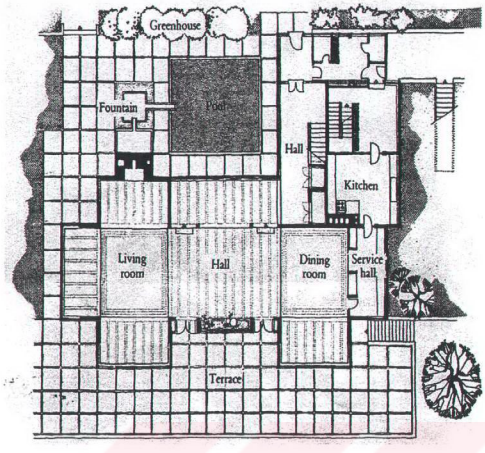


Fig.4.25 Uşaklıgil House –ground floor plan
Source: Bozdoğan (1987).

After his thorough search of the planimetric typologies of the traditional "Turkish House" and their evolutionary process, Eldem achieves his own conceptual framework. His effort to benefit from the traditional type is still continued when there is a shift of scale and character from the house or *yalı* to public edifices and governmental buildings. In some of his designs (mostly in his first phases), the *sofa* types are used in an imitative manner of conduct in an effort to maintain strong bonds with the vernacular dwelling architecture. However, the products of his mature phase illustrate Eldem's interpretative articulation of the same plan types into different functions and modes of aesthetics.

4.4 CENTRAL HALL AS THE GENERATOR OF THE VOLUMETRIC ORGANIZATION

Although Sedad Hakkı Eldem did not include any volumetric analyses in his studies on the "Turkish House", he was most probably well aware of the volumetric properties of the Ottoman residential architecture; his designs reflect the essential characteristics of the volumetric organization of the traditional house types. As explained in detail in the previous chapter, the common compositional theme of the traditional Turkish dwelling architecture is the central *sofa* that structures the configuration of different spaces within the house. The characteristics of the central space are discussed from three different viewpoints by Strappa (Strappa, 1995:106):

> -from the structural viewpoint, the part of the building to be supported, the load of which is partially born by the subordinate serial rooms;
> -from the spatial viewpoint, the "nodal room", the space where the builder's expressive and symbolic intention is fully expressed, and the character of which is enhanced by the serial spaces to its sides;
> -from the distributive viewpoint, the "served" room, while the serial spaces function as servers.

In addition to these three viewpoints, the central space also possesses the symbolic value of a unitary organism, integrating the different parts into a single architecture. This integration is a typical feature of the traditional house provided by the presence of a central space dominating the hierarchy in terms of organization, space and structure.

With the diminution of strong links with the traditional, the *sofa* gains a new meaning in Eldem's designs, and is transformed into a void ascending through the volumetric mass of the building. This expansion –both in height and

space– attaches a monumental effect to the central *sofa*. These inner atriums, generally sky-lit from above, are now rendered more spacious. This monumentality distinguishes the introverted spaces in Eldem's designs from the traditional *sofa* of the "Turkish House". Eldem's interpretation of the central space emerges as a synthesis of three main sources translated into a contemporary discourse:

a. Two and three-storey high central spaces of some parts of the Topkapı Palace are used as a spatial idea of organization. Yenal argues that the structural organization of certain traditional houses is the first step in the creation of the high central halls in the Topkapı Palace:

> The traditional, spatial formative principle, applied in the palatial scale, is actually a modified version of the vernacular tradition. The structural principle applied in both the Bursa and Manisa houses, to create the connective space of sofa, reappears in the Topkapı Palace in İstanbul to recreate the inner central space flanked with multi-level galleries (Yenal, 1987:168).

4.26 The Muradiye House, Bursa, 17th century. (on the right)
The Ayşekadın House, Manisa, 17th century. (on the left)
Source: Yenal (1987).

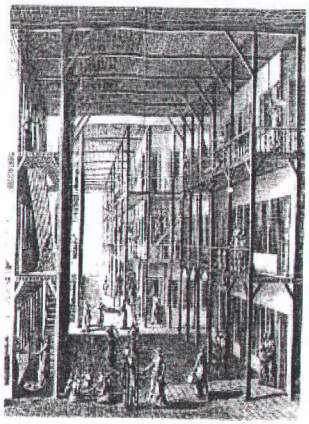


Fig.4.27 Harem Section of the Topkapı Palace, 1819.
Source: Yenal (1987).

b. The high inner spaces in Eldem's buildings can also be associated with the grand voids within the Islamic monuments –the *cami* (mosque). The formation of the high central spaces is common to even quite different cultural areas: extending from the Roman Palazzo to the Islamic mosque. Strappa shares this conviction:

> In Islamic typological processes (especially the ones pertaining to the madrasa and the mosque), the open space within the enclosure is progressively transformed into an organic vaulted space (Strappa, 1995:106).

The notion of "central space" can be claimed to be a prevalent archetype within the religious architecture, and it also constitutes a major spatial feature of the traditional dwelling architecture (this time not through the use of domes but through the planimetric schemes and volumetric organizations of spaces within the house). This major generic element of the Ottoman-Turkish architecture should have been studied by Eldem since his early years as a young architect,

though no explicit references can be traced in his written works. His project for a prototype Great Mosque, done in Berlin in 1930, can be read as an attempt to adapt the central domed mosque type through a modern approach via the use of reinforced concrete structure. This work is important in that it carries the impact of Eldem's classical education along the *Beaux-Arts* curriculum assembled with elements from Islamic and Ottoman-Turkish tradition.

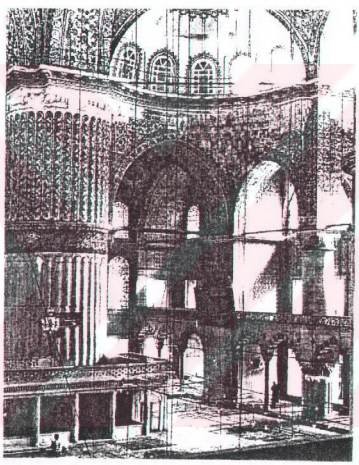


Fig.4.28 Sultan Ahmet Mosque. Interior.
Source: Goodwin (1971).

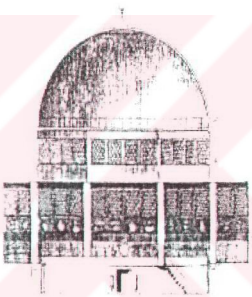
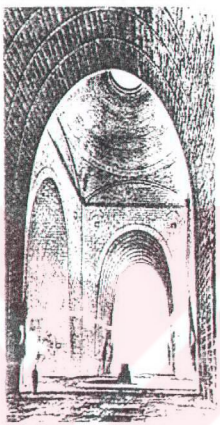


Fig.4.29 Project for a prototype Great Mosque, Berlin, 1930.
Source: Bozdoğan (1987).

His competition project for Atatürk's Mausoleum ("Anıtkabir") in 1942 at a monumental scale, and his proposal for Çanakkale War Memorial in the same year with a central void lit from above through the dome exploit the dome concept of the mosque, conveying a monumental effect of the high inner void. In fact, it would not be misleading to propose that Eldem combines the central *sofa* of the

"Turkish House" and the illumination of the spacious central space of the religious type, thus enhancing the volumetric significance and impressive quality of the central space in his designs.



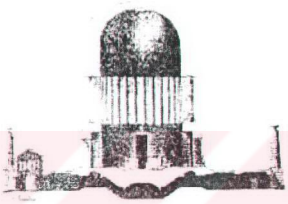


Fig.4.31 Proposal Project for Atatürk's Mausoleum/ "Anıtkabir", 1942.
Source: Bozodğan (1987).

Fig.4.30 Competition project for Çanakkale War Memorial, 1942.
Source: Bozdoğan (1987).

c. Another factor playing its role in the formation of monumental inner spaces throughout his designs is the monumental style of the "stone age" with its giant orders based on Seljuk and Ottoman sources. Eldem wrote of the "stone age":

> The Stone Age had begun, with both policy and the economy playing their part in this development. Policy demanded that buildings be built of stone, strong and durable unlike the frail Cubist buildings of Ankara. The National Style was therefore, solid and monumental (Eldem, 1980:92).

Due to the economic crisis and the unavailability of reinforced concrete during the Second World War years, the policy demanded that buildings be built of stone. "The powerful propaganda of the national architectures of Italy and Germany particularly appealing to a young generation of architects", as claimed by Bozdoğan (Bozdoğan, 1987:61), was also very influential on the emergence of the National Architecture in Turkey as well as on Eldem's career. The use of stone enabled Eldem to sustain the monumentality he desired through the application of giant orders –both in the exterior and the interior– and the dramatic effect of light and shade. The three-storey high inner halls flanked with high stone arches and the giant orders of the İstanbul University Faculty of Sciences and Letters, and the monumental porticos with high arches on the gateways of the Ankara University Faculty of Sciences are important examples illustrating Eldem's work in the "stone age". These giant orders and high-spacious inner halls lend the buildings a monumental and overwhelming effect, and impose control and power on spectators, presiding over the activity. There is also the presence of stillness in the quality of space created by these monumental masses.

In the grand central voids resides the representation of "power". By subscribing to these three sources of inspiration and assembling them with a new mode of expression, Eldem creates high, monumental, spacious inner spaces, reinterpreting the central *sofa* of the traditional "Turkish House". All these elements serve his aim to redefine the Ottoman-Turkish tradition through a critical framework.

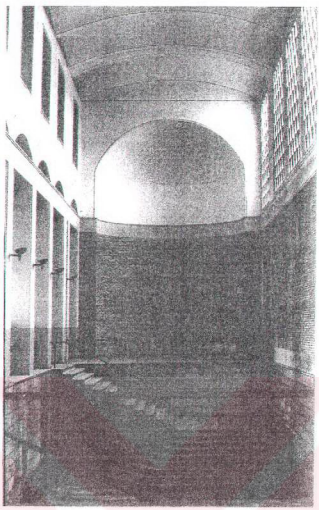


Fig.4.32 İstanbul University Faculty of Sciences and Letters. Central hall.
Source: Bozdoğan (1987).

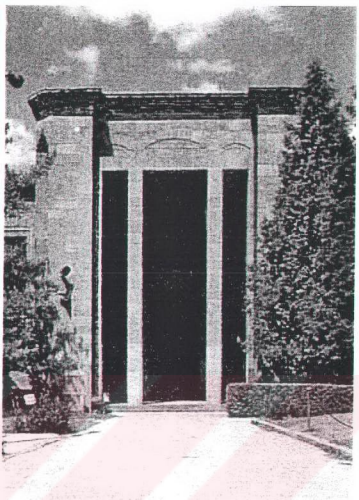


Fig.4.33 Ankara University Faculty of Sciences.
Entrance portico.
Source: Bozdoğan (1987).

After his synthesis of these three sources of spacious central volumes, Eldem produces his personal design concept of central spaces and integrates it into his designs, each time modifying it according to the task at hand. In an interview in 1986, Eldem explains his intentions in composing with *sofas*:

> I attempted to design *sofas* on grand scales...and I perceived them as elements providing architectural unity. Assembling the modern life around a large space is a compositional approach in conformity with the character of the "Turkish House". (Eldem quoted in Yenal, 1998:42).

Fig.4.34a Indian Embassy Building –three-storey high interior atrium.
Source: Bozdoğan (1987).

Fig.3.34b Indian Embassy Building –view of the stair.
Source: Bozdoğan (1987).

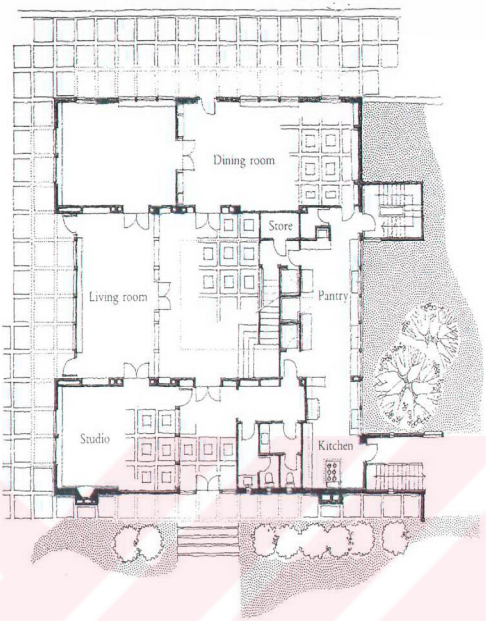


Fig.35a Dutch Embassy Residence –ground floor plan. Source: Bozdoğan (1987).

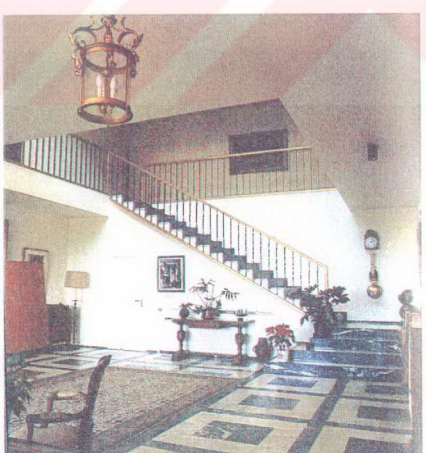


Fig.4.35b Dutch Embassy Residence –view from the central void. Source: Bozdoğan (1987).

In most of his embassy buildings and institutional edifices, the monumental introverted void is meant to express the organism's unity through one single space. The grand central space is placed at the intersection of the main circulatory routes and is reinforced by the symbolic shape of the roof. This central space constitutes the unifying core of the whole planimetric composition as in the traditional house type with a central *sofa*. However, it is also conceived as the core of the volumetric composition, which is not the case with the "Turkish House". Hence instead of the word *sofa*, it would be more appropriate to use the term "hall". The Indian Embassy Building (1965) and the Dutch Embassy Residence (1973-1977) (Bozdoğan, 1987:138) are both arranged around a two-storey and a three-storey high interior atrium respectively. In both buildings, there are galleries overlooking the atriums along which the offices are lined up in the first design and bedrooms are located in the latter. Both atriums are sky-lit from above through quadrangular extensions of the roof pierced with oculuses –the only way sunlight is let into the interior atriums.

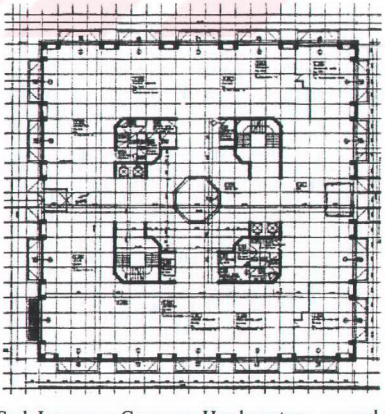


Fig.4.36a Şark Insurance Company Headquarters –ground floor plan.
Source: Özbil (2001).

Fig.4.36b Şark Insurance Company Headquarters –section through the central void. Source: Özbil (2001).

Fig.4.36c Şark Insurance Company Headquarters –chequered-marbled floor of the central *sofa*. Source: Özbil (2001).

In Şark Insurance Company Headquarters (1979), the three-storey high, octagonal central void is again the generator of the whole architectural composition. It dominates the overall composition of spaces and the main circulatory fluxes, enabling the heavy mass to breath. In this design the central hall constitutes the core of the building as well, embodying the service units. The offices lined up in an open, continuous space along the galleries overlooking the

inner atrium and the central hall produce two clear zones of circulation. The reduction of almost all the spaces to rectangles increases the ease with which they might be combined and manipulated. The central hall is reinforced by the semi-transparent roof illuminating the central void and the chequered marbles of the floor.

This new notion of central *sofa* is now transcended by a void rather than a volume at the center of his designs. The surrounding space is fragmented into many smaller parts none of which clearly dominates the composition. Rather, it is this void that is the dominant space of the planimetric and spatial composition. Predominance is given to the central space by suppressing the contiguous spaces. The central void is both the served room –the contiguous spaces function as servers– and the main circulatory room, serving other spaces. The central void in Eldem's compositions is almost always sky-lit from above, emphasizing the importance and dominance placed on this space. Via this central void, the outward-facing building also acquires an inward-facing character. By composing a spacious, high void at the center of his projects, Eldem permits his spaces to be linked together smoothly, to interpenetrate. Eldem was probably not the inventor of this compositional organization, but his rendition of the central space in his designs was exceptionally remarkable and successful.

As seen through these examples, Eldem's way of integrating the central *sofa* into his designs (especially of his mature phase) can be argued to result from both his planimetric reinterpretations and his formal abstractions of the architectural archetypes of the traditional "Turkish House" type with a central *sofa*. These planimetric schemes of Eldem express the relations between masses, which have been carefully made evident both inside and out. However abstract these plans

may be, the continuity with the past is still present, illustrating Eldem's relation to inherited tradition. His designs are in some ways closely connected to it; but in other respects he remodels it continuously to accord with his own ideals, both theoretical and compositional, based on "modern within traditional". The works of Eldem illustrate his ability to borrow traditional archetypes, to modify and to transpose their use and forms.

4.5 COURTYARD AS THE CENTRAL DISTRIBUTIVE SPACE (With Reference To Monumental Ottoman Buildings)

The other most significant and integrating space of the traditional "Turkish House" –other than the *sofa*– is the courtyard, or *taşlık* –the term used to define the courtyard in the traditional Turkish dwelling architecture. The courtyard plays a major role in structuring the relationships of the rooms and the exterior, and in forming an activity center for the house. The courtyard, an ingenious tool to fuse sequential spaces, is a major theme in Eldem's architecture.

This archetype was persistently applied beginning from his earliest projects. The composition of his design of the Turkish Pavilion for New York International Exposition (1939) is described by Bozdoğan as a temporary structure embodying two wings –'Sümerbank' and 'State Monopolies'– arranged around a circular sunken plaza. This circular space in-between can be perceived as an abstract courtyard theme.

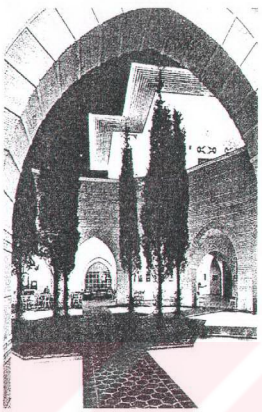


Fig.4.37 Turkish Pavilion –New York International Exposition (1939).
Source: Bozdoğan (1987).

The courtyard is the dominating feature of Eldem's institutional buildings. Meltem Ergüler argues that in the design of educational edifices, Eldem goes back to the *avlulu medrese* (colleges with a courtyard) plan types of the Ottoman architecture, reinterpreting them in a different manner (Ergüler, 1996:308). The İstanbul University Faculty of Sciences and Letters are composed of rectangular units arranged around four sides of a courtyard. However, the traditional courtyard is incorporated into the design under a different kind of perception: the courtyard forming a continuous completion with three-storey high inner central spaces surrounded by *revaks*.

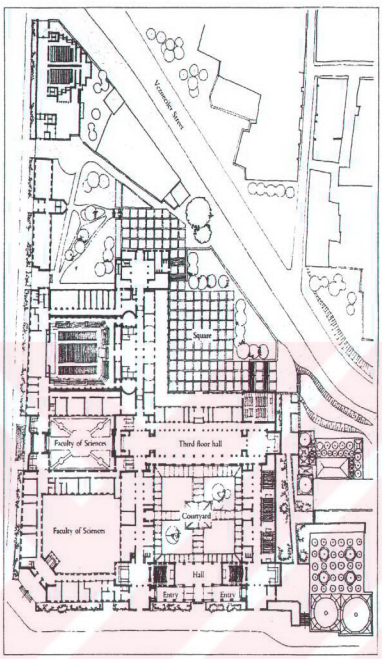


Fig.4.38a İstanbul University Faculty of Sciences and Letters. Site plan.
Source: Bozdoğan (1987).

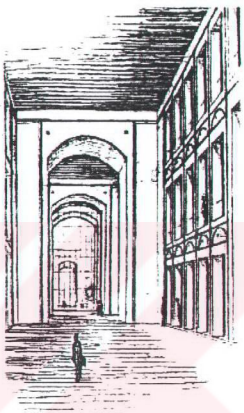


Fig.4.38b Sketch for the high inner spaces.
Source: Bozdoğan (1987).

Ankara University Faculty of Sciences is designed in a similar approach: symmetrical masses composed of rectangular prisms arranged around their individual courtyards, facing each other. These courtyards provide spacious and green voids enabling the user to breath within the massive stone masses.

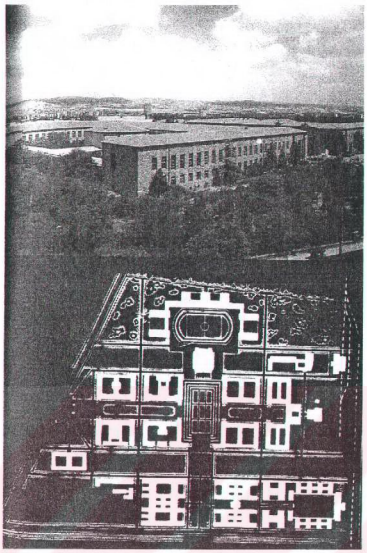


Fig.4.39a Ankara University Faculty of Sciences and. Site plan.
Source: Tanyeli (2001).

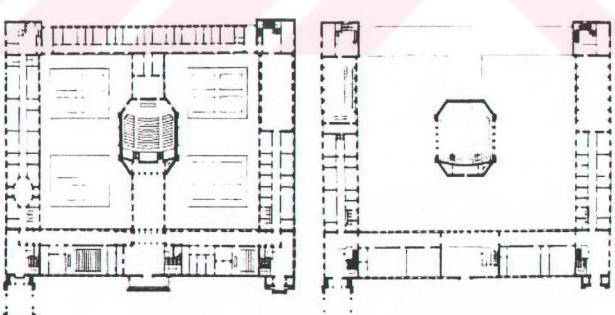


Fig.4.39b Floor plans and site plans.
Source: Bozdoğan (1987).

In both examples there is an explicit display of Eldem's reference to the *avlulu medrese* type of the monumental Ottoman buildings through an interpretative approach; and the compositions of both buildings are based on rectangles. Eldem's rectangular system adheres to a pattern: a central courtyard surrounded by narrow rectangular masses that overlap at the corners. The reduction of all spaces to rectangles resembles the rectangular units forming the "Turkish House". The plan of the Ankara University Faculty of Sciences is clearly legible: three blocks of narrow rectangles surrounding a rectangular courtyard comprising an octagonal auditorium at the center. On the other hand, the planimetric organization of İstanbul University Faculty of Sciences and Letters is composed of the combination of numerous rectangles intersecting with one another. In both plans, the arrangement of spaces through rectangle-within-rectangle figures enables the separation of functioning spaces and circulatory arteries. However, both projects sacrifice compactness of plan for a monumental, courtyard-layout in elevation.

Another institutional building to which Eldem applies the courtyard is the İstanbul Palace of Justice. The planimetric scheme consists of a long, narrow corridor to which rectangular blocks containing the offices are attached on both sides. In-between the blocks courtyards are plugged in. The integrated courtyards prevent monotony, and enable the masses to breath and receive sunlight. Instead of a heavy, boring single mass, Eldem's design is fragmented into parts; articulated with small, green courtyards whose one end is open. In this project, the single spacious courtyard theme is replaced by a theme of numerous courtyards of small size.

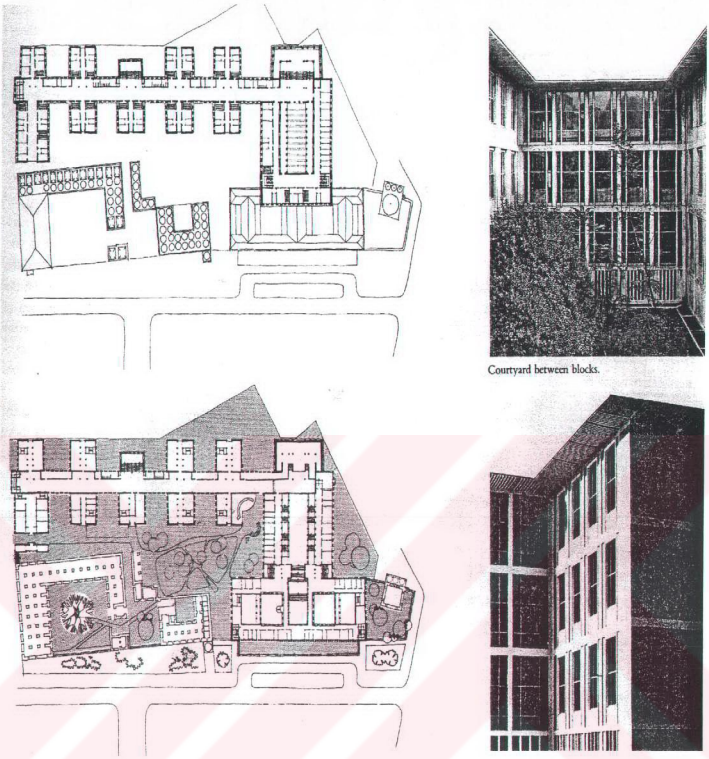


Fig.4.40 İstanbul Palace of Justice. Floor plans (left).
Courtyard between blocks (above right). Detail of the façade (below right).
Source: Bozdoğan (1987).

Social Security Complex in Zeyrek is a fundamental example in representing Eldem's preoccupation with the traditional courtyard theme. In this project, Eldem not only refers to the traditional "Turkish House" but also to other urban artifacts such as the streets and squares. Here, Eldem's emphasis on the building typology fuses with the urban morphology. The overall project is actually an interpretation of the urban context of the Ottoman urban fabric. Yücel

describes the organizational scheme of the complex as: "The building complex reproduces the basic pattern of the urban residential aggregate, with small blocks articulated around narrow open spaces." (Yücel, 1983:61) These blocks are integrated into the urban fabric through the paved courtyards inserted in between the blocks, fragmenting the long elevation into masses of different scale. Although these examples of institutional architecture do not directly refer to the "Turkish House", in their principles of composition, they show Eldem's insistence on re-structuring the traditional archetypes in a sensitive manner.

Fig.4.41a Social Security Agency Complex in Zeyrek. View from the old *mahalle* behind.
Source: Bozdoğan (1987).

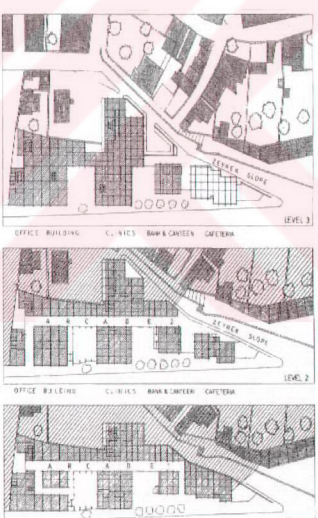


Fig.4.41b Diagrammatic plans of the levels.
Source: Bozdoğan (1987).

4.6 USE OF TYPICAL ELEMENTS OF TRADITIONAL TURKISH ARCHITECTURE
(House in Eldem's Architecture)

In his designs, Eldem tries to refer to all aspects of the "Turkish House", benefiting not only from its planimetric typologies but also from its archetypes.

4.6.1 Pavilion

One of the typological elements that Eldem employs in shaping his edifices and amplifying their three dimensional effect is the pavilion or the kiosk. Yenal bases the origin of this archetype on the primitive hut:

> Probably stemming from the primitive wooden hut with slender, long columns called çardak (trellis) in rural Anatolia, it shows a remarkable uninterrupted evolutionary trend both in Space and Time (Yenal, 1987:166).

Pavilion has little functional justification. Yet the resultant emphasis on this archetype deserves attention. There is no doubt that Eldem scrutinized this element's historical development carefully long before he managed to integrate it in his designs. Pavilion is a utilitarian structure used frequently in the Ottoman architecture –applied in residential units, gardens, institutional edifices and regional buildings. Eldem explains the way this archetype was applied in the gardens in Ottoman architecture as:

> The gardens in the Ottoman architecture were occasionally enlivened with pavilions resembling the formal gardens of Europe in the Middle Ages...a row of porticoes or galleries established the

> transition from garden to house linking the garden to the house (Eldem, 1987:293).

The serial use of this architectural element is one of the basic compositional principles of the Turkish dwelling architecture. Through the incorporation of voids in architectural composition in the form of porticos and windows, the solid parts are brought into equilibrium. Yenal argues that Eldem got acquainted with the origins of this archetype through the *Turfan Expedition-Exhibition* led by Albert von Le Coq during his post-graduate study in Berlin:

> Eldem had traced its earliest known use in von Le Coq's Central Asian shelters, then...to Anatolia and finally, in İstanbul. It was either used as an independent, free-standing pavilion or incorporated into much larger buildings (Yenal, 1987:166).

Various functions were assigned to this element throughout time. It was used as a mosque, a *sebil*, various library and *medrese* porticoes and belvederes, a *şadırvan* or as the courtyard in a palace. Eldem, too, applied this formative element for various purposes in his designs.

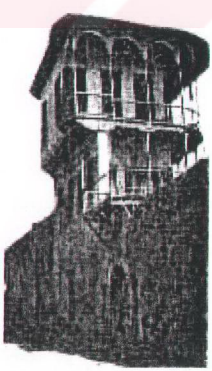


Fig.4.42 House, Kozan, Turkey.
Source: Yenal (1987).

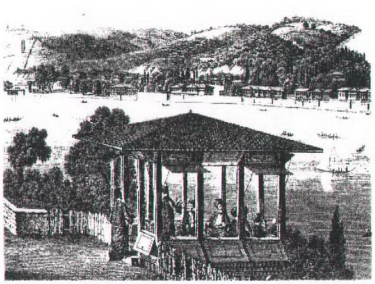


Fig.4.43 Coffee House, Kandilli, 1819.
Source: Goodwin (1971).

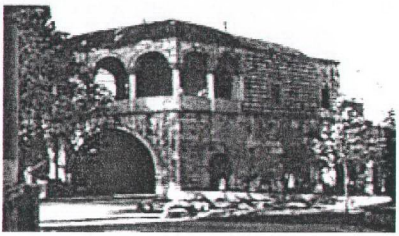


Fig.4.44 Hekimoğlu Ali Pasha Complex, İstanbul. View of the library.
Source: Goodwin (1971).

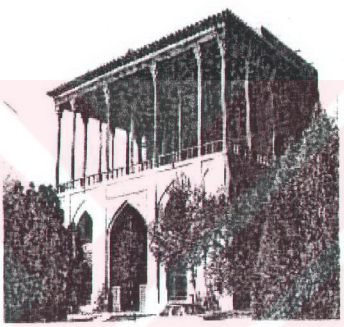


Fig.4.45 Ali Qapu, Isfahan, 1597-1668.
Source: Yenal (1987).

Fig.4.46 Topkapı Sarayı, İstanbul.
Court of the Black Eunuchs.
Source: Goodwin (1971).

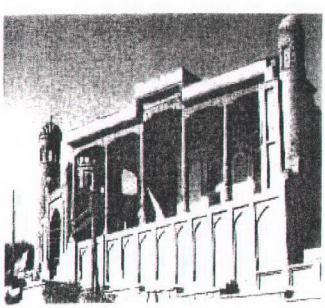


Fig.4.47 Hazret Chisr Mosque, Samarkand.
Source: Yenal (1987).

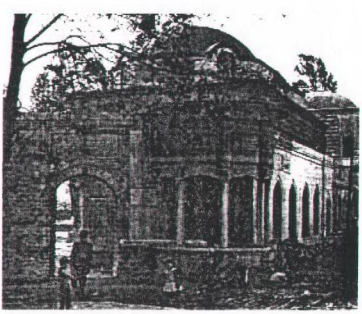


Fig.4.48 Hekimoğlu Ali Pasha Complex, İstanbul. Sebil and gate.
Source: Goodwin (1971).

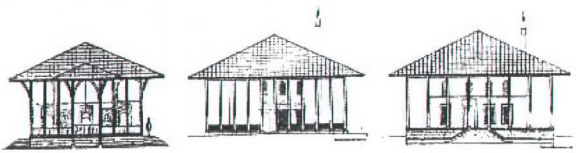


Fig.4.49 Left to right: The Fener Kiosk, Fenerbahçe, İstanbul, 16th century - Hall of the Divan, Edirne Palace, 15th century - Hall of the Divan, Topkapı Palace, 15th century. Source: Yenal (1987).

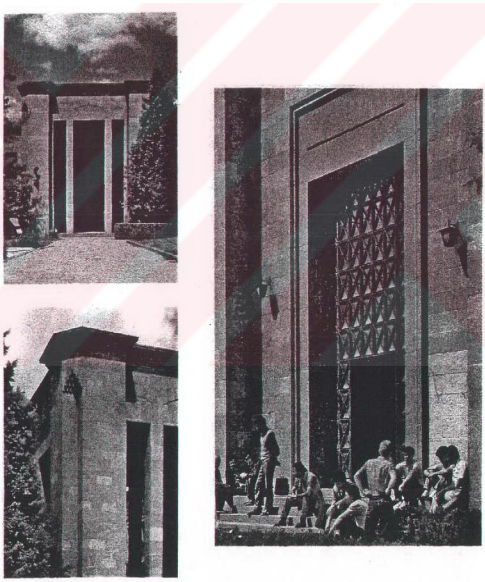


Fig.4.50 Ankara University Faculty of Sciences. Monumental porticos. Source: Bozdoğan (1987).

Fig.4.51 İstanbul University Faculty of Sciences and Letters.
Portico on the main entrance.
Source: Bozdoğan (1987).

Eldem's skilful disposition of the clearly defined portico in the three-dimensional composition can be exemplified in two of his projects among others. In İstanbul University Faculty of Sciences and Letters, the portico placed on top of the courtyard gateway forms a roofed area offering shade, and emphasizes the monumentality of the building. The portico, with its tall columns and wide eaves, together with the monumental gateway create an oppressing effect on the spectator approaching the entrance. The massive effect of the stone and the giant orders of the building create a monumental atmosphere; however, this portico –via its immense proportions and its position within the composition– has its role to play in the creation of a monumental impact. Thus, it is a deliberate choice of the architect to place the portico above the monumental gateway: not only for fulfilling functional necessities (to cast shade, to protect the building from rain) but also for providing the desired quality of space. Thereby, the portico in this design can be defined as a utilitarian monument.

In Ankara University Faculty of Sciences, a pair of monumental porticos marks the corners of the masses defining the gateways to the building. Here, the whole gateway is in the form of a giant portico, creating again an overwhelming and monumental spatial effect. These two porticos welcome the spectators, who – in approaching the masses– feel rather "small". In these two examples, the porticos are incorporated in the design, forming a part of the buildings. The proportion of masses –which is one of the compositional principles of the *Beaux-Arts* tradition– is regarded with much attention in both examples. The ingeniously proportioned masses –both on their own and with regard to other masses within the compositions– create the spatial quality desired by the architect.

On the other hand, in some of his designs Eldem uses the pavilion as an independent element. In Şark Insurance Company Headquarters, for example, it is used as a freestanding pavilion to emphasize the main entrance. Here it is applied as a structural shelter. In Suna Kıraç Yalı, the pool pavilion at the back patio serves the outdoor life. However, the functional use in these two works does not deprive the portico of significant expression.

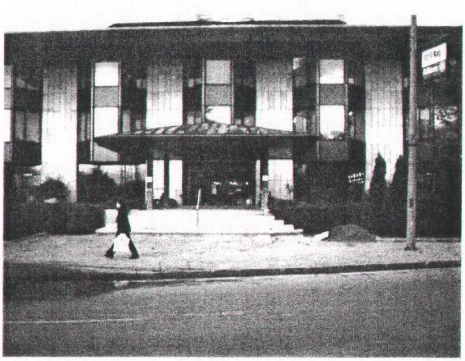


Fig.4.52 Şark Insurance Company Headquarters.
The free-standing pavilion at the entrance. Source: Özbil (2001).

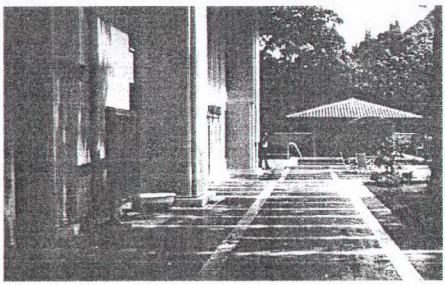


Fig.4.53 Suna Kıraç Yalı –view of the tea pavilion.
Source: Eldem (1982).

> It is a middle-eastern motif ...to cast a shadow over the building behind and make it look more elegant. This element, coupled with a separation and clear expression of the reinforced concrete skeleton, independent of the arrangement of walls...I believe that such porticos are extremely appropriate for Turkish architecture. How they can be used remains yet to be investigated and deserves attention (Eldem quoted in Bozdoğan, 1987:78).

Eldem's aim in adapting this archetype may be argued to be based on two reasons: the first one is the formal and volumetric qualities inherent in the portico which contribute to the spatial effect that Eldem tries to achieve in his projects (monumental atmosphere, a defined entrance); the second reason is the potentiality of this archetype to be adapted to contemporary functions with a modern approach, linking the traditional heritage to the contemporary.

4.6.2 *Cumba*

Cumba (a bay-window), which is one of the major themes of the traditional domestic architecture, is another element manifested rather frequently

in Eldem's projects –both in his residences and in his institutional buildings. Eldem adapts this archetype in two ways: in the first one, he demonstrates it within its literal understanding as in the Taşlık Coffee House, Komili House (1978-1980) and Ayaşlı *Yalı* (1938) (Bozdoğan, 1987:49). In these three projects, the *cumbas* are direct quotations from the traditional "Turkish House". Eldem inherits them without much interpretation and integrates them into his compositions. However, they are not stylistic copies but formal imitations in the sense that Eldem, abandoning the decorative elements or the arch motives, only inherits the pure form of the *cumbas*. His rendition of this archetype in his buildings is very clear and simple. In the second way, Eldem makes an abstract reference to the traditional *cumba*, creating a traditional *cumba* effect via the use of balconies. The balconies of Şemsettin Sirer *Yalı* (1966-1967) (Bozdoğan, 1987:118) facing the Bosphorus, the projecting balconies of Admiral Bristol Hospital (1943) and Termal Hotel (1934-1937) (Bozdoğan, 1987:53) clearly exhibit the interpretations of the *cumba* archetype. Via abstracting the traditional *cumba* and re-modeling it through stepped-balconies, Eldem succeeds to maintain a connection with tradition while at the same time breaking with many traditional procedures. What is left of the tradition is subtle enough not immediately to give the impression that it is a quotation of the previous form. In addition, Eldem perceives the glazed areas in the *cumbas* as the harbingers of the modern, large-glazed surfaces (Eldem, 1983:17). Thus, the application of the *cumba* through abstraction can be designated as Eldem's pursuit of achieving modern qualities deduced from the traditional archetypes in a creative manner in an attempt to prove that the "Turkish House" has inherently a modern essence.

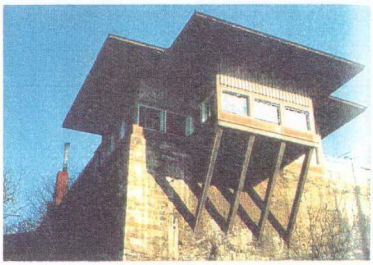


Fig.4.54 Taşlık Coffee House (1978-1980).
Source: Tanyeli (2001).

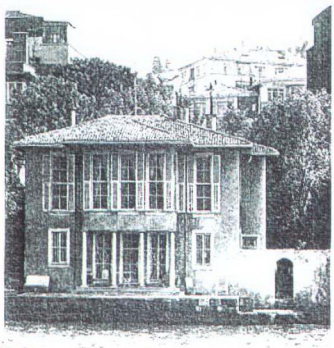


Fig.4.55 Ayaşlı Yalı –view from the Bosphorus.
Source: Bozdoğan (1987).

Fig.4.56 Komili House, Kandilli.
Source: Bozdoğan (1987).

Fig.4.57 Şemsettin Sirer Yalı, Yeniköy.
Source: Bozdoğan (1987).

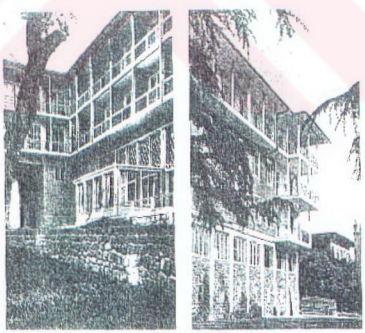


Fig.4.58 Termal Hotel, Yalova.
(on the right).
Admiral Bristol Hospital, İstanbul.
(on the left).
Source: Bozdoğan (1987).

4.6.3 Projections

Kuban claims that in Turkey, due to an irregular land ownership, the building lots do not have regular forms, thus, it is a common approach to have the upper sections overhung the lower main walls of the house in order to achieve orderly spaces on the upper floors (Kuban, 1982:198). Hence, it may be argued that this fact is the reason underlying the use of projections in the Turkish residential architecture, emphasizing the overall mass of the house.

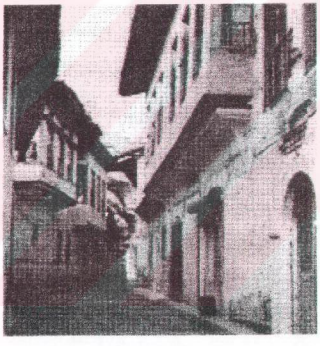


Fig.4.59 A street in Antalya.
Source: Cerasi (1999).

Eldem, in his projects, largely refers to cantilevers, composing them in various ways. However, the most common theme highlighting his usage of projections in his designs is the composition of upper floors projected beyond the solid cell of the ground level. This theme, which is also present in many examples of the traditional house, is manipulated in varying modes in his different

buildings, illustrating an abstract reference to traditional projections. In Social Security Agency Complex in Zeyrek, the upper floors project forward in a stepped section, overhanging the high ground floor. The flat, plain solid masses of the buildings' ground floors –varying in height due to the topography– also indicate the functional differentiation within the buildings. Though not realized, these parts were designed to enclose the shops, supermarkets and cafeteria whereas the upper floors serve as offices. The blocks are articulated through the play of stepped-projections. In the design of Social Security Agency Complex, these projections should be read as gestures referring to the old traditional houses behind, harmonizing perfectly well with the traditional background.

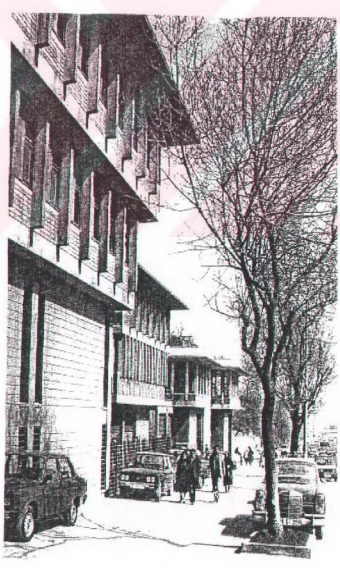


Fig.4.60 Social Security Agency.
The façade on the Atatürk Boulevard.
Source: Bozdoğan (1987).

Fig.4.61 The houses outside the Topkapı Palace, 19th and 20th centuries.
Source: Cerasi (1999).

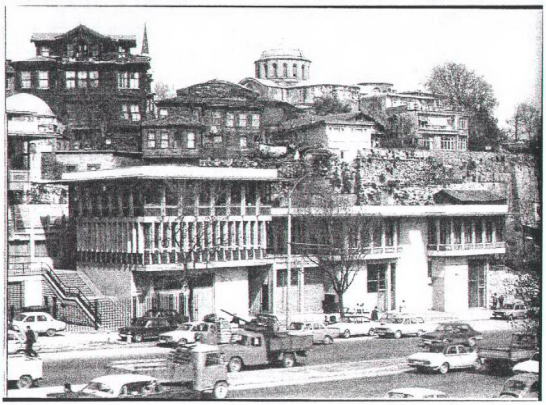


Fig.4.62 View of the complex with the traditional *mahalle* behind. Source: Tanyeli (2001).

The enlargement of the "Turkish House" from the ground level up to the large roof finds a new expression in Eldem's buildings by raising the house above a solid base. In the Indian Embassy Building, the upper floors project on the ground floor at the same level.

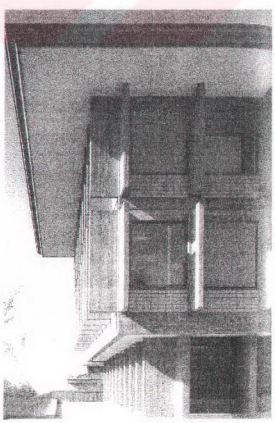


Fig.4.63 Indian Embassy Building, Ankara. Source: Bozdoğan (1987).

Besides this application of the cantilevers through an interpretative approach, Eldem uses this archetype in an imitative manner as well, to express his persistence in donating his buildings the image of the traditional "Turkish House", in which the most typical features of the traditional house survive. Two instances of such continuity are Uşaklıgil House (1956-1965) (Bozdoğan, 1987:111) and the Dutch Embassy Residence (1973-1977). In the elevations of these two buildings the balconies are integrated within the projections, clearly exhibiting Eldem's formal adaptation of the projection theme on the façades of his buildings. In the composition of these two buildings the traditional projection principle serves as a model for Eldem to which he can refer through various transpositions.

Fig.4.64 Dutch Embassy Residence, (1973-1977), Ankara. Source: Bozdoğan (1987).

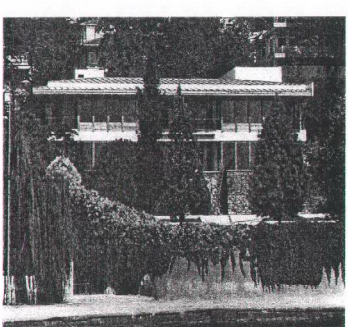


Fig.4.65 Uşaklıgil House –view from the Bosphorus. Source: Bozdoğan (1987).

4.6.4 Pitched roof and wide eaves

Pitched roof and wide eaves, two important typical elements of the traditional "Turkish House", have been an essential Eldem trademark. In almost all his edifices –except for a few examples that remain outside his native architecture paradigm, exposing his encounter with the prevailing architectural themes– Eldem applies projecting wide eaves sitting heavily above the mass of the building. Moreover, in order to provide this volumetric effect, he attaches fake wide eaves on the borders of the flat roofs of his various buildings. The wide eaves of the Social Security Agency Complex and the Dutch Embassy Residence, which surround the edges of the flat roofs, exemplify Eldem's strong preoccupation with wide projecting eaves –in these examples as abstractions of this archetype of the "Turkish House".

Fig.4.66 Social Security Complex –view from the stairs.
Source: Bozdoğan (1987).

Fig.4.67 Dutch Embassy Residence, Ankara.
Source: Bozdoğan (1987).

The compositional principle in the application of the pitched roof in the traditional "Turkish House" is based on structuring the roof in conformity with the spatial configurations of different spaces on the upper storey. Thus, the roof constitutes an organic unity with the planimetric and volumetric compositions of the upper floor. On the contrary, the pitched roof in Eldem's designs is generally formed of a grand single plane with projecting wide eaves enclosing the overall volumetric mass of the building. This single-piece roof pulls the various organisms together, uniting them within a whole. Eldem intones the significance of the use of eaves in his following statement: "We should build our buildings with wide eaves so that we could preserve them." (Eldem quoted in Anonymous, 1983:20) It is in both senses that Eldem tries to refer to this traditional archetype – functionally and aesthetically.

4.7 PRINCIPLES OF COMPOSITION IN ELDEM'S ARCHITECTURE (With Particular Reference To The "Turkish House")

4.7.1 Repetition

In both the monumental and traditional Turkish architecture, repetition of certain architectural elements is very common and widely praised. The repetition of *revaks* in the courtyards of the mosques and palaces, and the repetitive windows of the "Turkish House" illustrate examples of the repetition concept. The lateral arrangement of these elements offers the house a horizontal skyline and yield homogeneity. Eldem, in his designs, inherits this compositional principle as a basic invariable; he applies this principle in his organizations of both the windows and other elements. Atilla Yücel explains Eldem's arrangement of windows as:

> In Eldem's architecture, the use of the window is a compromise between Auguste Perret's vertical order and the horizontal frames of some Le Corbusier buildings. And to achieve this, the architect again refers to the horizontal repetition of vertical frames, according to the vernacular example of the Turkish House (Yücel, 1983:60).

In his designs, in order to achieve the repetitive pattern of the windows, Eldem either refers to the serial use of certain vertical façade elements or he depicts this repetition through the consecutive use of windows of 1:2 proportion. Eldem sets the arrangement of windows on the norm of 1:2 proportion –a fundamental compositional principle in the "Turkish House", which he appreciates highly:

> If we degrade the 1:2 proportioned windows – prevalent in all the Turkish cities beginning from the 19th century– by labeling them as "cliché", then architecture would be reduced in quality (Eldem quoted in Yenal, 1998:44).

Common to most of Eldem's designs is his insistent emphasis of certain elements through their repetition –both horizontally and vertically. The repetitive vertical façade elements of wide slender steel rods on the front elevation of Şemsettin Sirer *Yalı*; the lateral arrangement of windows of 1:2 proportion on the façades of the State Monopolies General Directorate in Ankara (1934-1937) (Bozdoğan, 1987:58) and İstanbul University Faculty of Sciences and Letters; the recurrent vertical precast façade elements of the Indian Embassy Building are a few examples from a wide range of buildings in which the architect applies the repetition principle. The masses gain a vertical volumetric effect via the attachment of long, slender elements on the façades while at the same time their lateral arrangement lend the buildings horizontality. Eldem's elevations reflect a successful rendition of this dialectical quality.

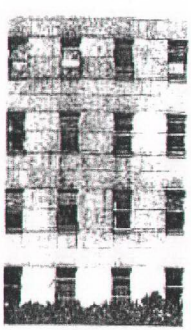


Fig.4.68a The arrangement of windows of the State Monopolies General Directorate. Source: Bozdoğan (1987).

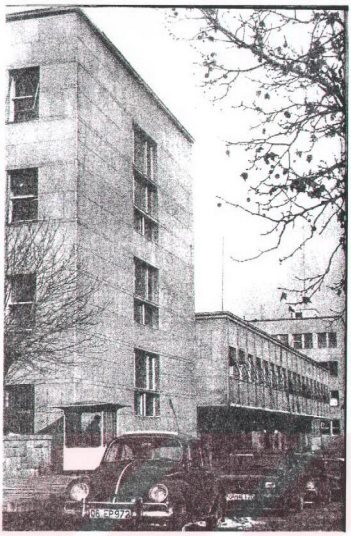


Fig.4.68b State Monopolies General Directorate.
Source: Bozdoğan (1987).

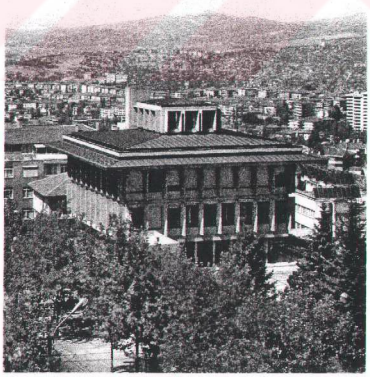


Fig.4.69 Indian Embassy Building.
Source: Bozdoğan (1987).

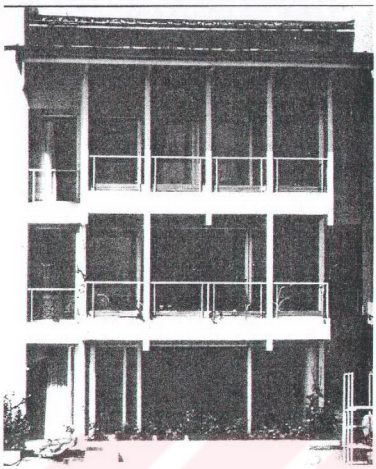


Fig.4.70 Şemsettin Sirer *Yalı*.
Source: Bozdoğan (1987).

In addition, Eldem's application of the repetition principle transcends his preoccupation with typological studies and extends into a *mahalle* or street concept as it is in the case of the Social Security Agency Complex (1962-1964) and the Yıldız Housing Complex (1976-1978) (Bozdoğan, 1987:155) respectively. In the Zeyrek Complex, the consecutive arrangement of elements within one building is transcended by the repetitive use of common façade elements in numerous blocks. Rows of vertical windows, laterally arranged vertical precast façade elements, recurrent ornamented panels covering the infill parapets under the windows are applied to each block of the complex on four sides. In this project, Eldem tries to benefit from the precedent not only within the scope of the "Turkish House" but also of the traditional Turkish urban typo-morphology. The repetitive pattern formed by the recurrent traditional houses within the urban

context is tried to be emphasized by the architect via his arrangement of repetitive blocks in a small *mahalle* concept, arranged around small courtyards.

In the Yıldız Housing Complex, the recurrent Eldem themes of the lateral arrangement of windows and their parapet panels are again expressed on the villas, which, sitting on different levels, reflect the character of a traditional street with terraced pedestrian paths plugged in-between. The *mahalle* and the street concept reinterpreted in these examples display once more Eldem's lifelong emphasis on cultural continuity.

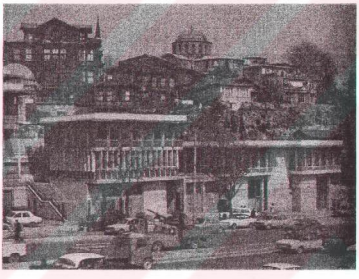


Fig.4.71 Social Security Agency Complex, Zeyrek. Source: Tanyeli (2001).

Fig.4.72 Yıldız Housing Complex. Source: Bozoğan (1987).

4.7.2 Modulation

The modular logic achieved through the timber-frame structural system and the grid system of the planimetric organization are fundamental compositional principles of the traditional house. Eldem asserts that:

> In the room concept of the Turkish House, there exists a dimensioning formed by the repetition of windows. This dimensioning is displayed through the window or wall elements that the structural system enables (Eldem, 1981:43).

Alternating windows and walls demonstrate a strong modulation on the façades. For Eldem, the module serves as the basis of both planimetric composition and of volumetric organization. Strong modulation is a fundamental architectural constant which the architect uses with much attention and consciousness in his designs –powerful modulation expressed in the planimetric organizations, on the structural formations, elevations, interior ceiling finish, underneath the wide projecting eaves and even on the garden pavements. The modulation originating from the structural use of the timber framework in the traditional dwelling architecture is applied within a modern language in Eldem's designs, achieved through the reinforced concrete structure.

The modular logic is the dominant theme of the façade arrangements in Eldem's designs –extending from *yalıs* to institutional buildings. Eldem's preoccupation in expressing a powerful modulation gets restricted to the arrangement of windows only in his early works, as in the Tahsin Günel *Yalı* (1938) (Eldem, 1944:147-153), due to the plastered façades of his buildings.

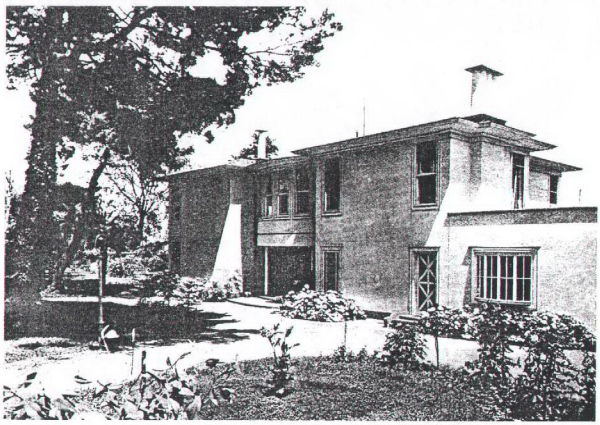


Fig.4.73 Tahsin Günel *Yalı* –view from the garden. Source: Eldem (1982).

In the Uşaklıgil House and the Dutch Embassy (1973-1975) (Eldem, 1982:96), the modular arrangements of the elevations are achieved through the serial use of vertical precast elements.

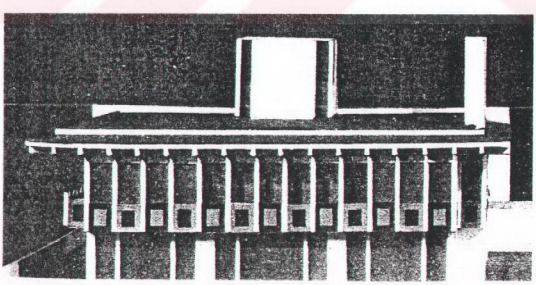


Fig.4.74 Dutch Embassy –model. Source: Eldem (1982).

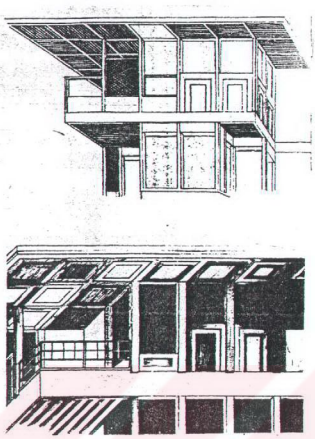


Fig.4.75a Uşaklıgil House –sketches. Source: Eldem (1982).

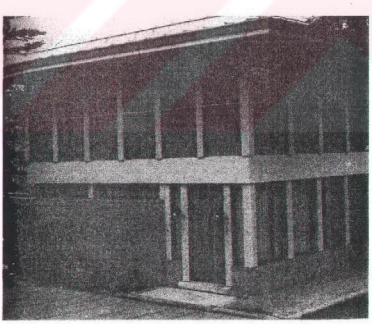


Fig.4.75b Uşaklıgil House –elevation. Source: Eldem (1982).

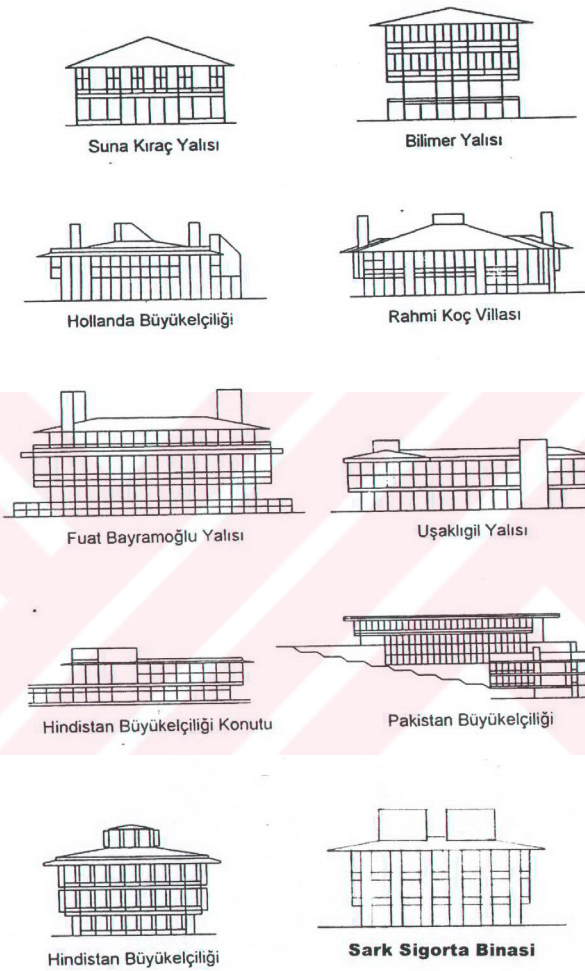


Fig.4.76 Modulation in Eldem's various buildings.
Source: Ergüler (1996).

On the façades of the Indian Embassy Residence (1965) (Bozdoğan, 1987:128), the modular logic is expressed via the repetitive arrangement of prefabricated casings placed in-between the windows. Eldem explains the function of these elements as emphasizing the planimetric module of the building on the elevations (Eldem, 1982:56).

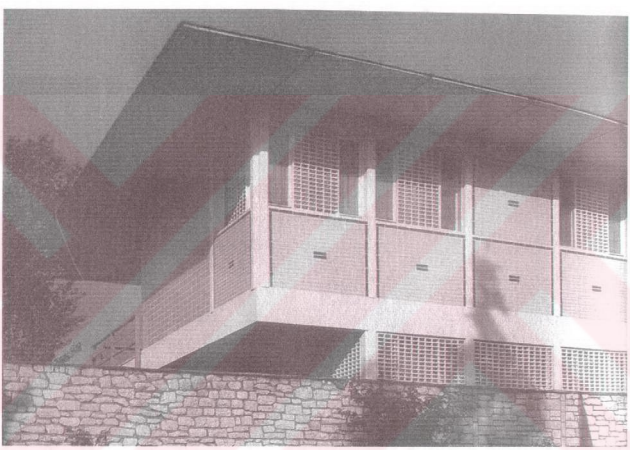


Fig.4.77 Indian Embassy Residence.
Source: Tanyeli (2001).

In Şemsettin Sirer *Yalı* and Sertel *Köşkü* (1975-1979) (Eldem 1982:127), modular logic is expressed in the extension of the modular partitioning of the elevation on the timber covering underneath the roof.

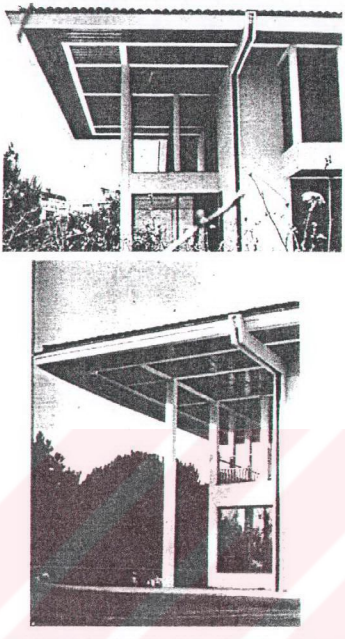


Fig.4.78 Sertel *Köşkü*, Yeniköy. Details of the roof.
Source: Eldem (1982).

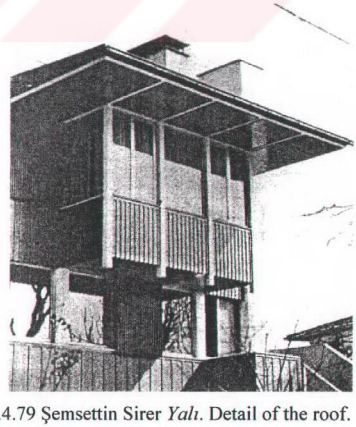


Fig.4.79 Şemsettin Sirer *Yalı*. Detail of the roof.
Source: Eldem (1982).

Eldem saw that the plans and elevations of the simple geometric shapes of the traditional dwelling architecture could easily be represented on a grid of regularly spaced lines intersecting at right angles. The grid system used by the Ottoman craftsman/designer is re-applied by Eldem in his planimetric compositions. This kind of representation reinforces the composition. The reason underlying Eldem's choice of composing on a grid may be delineated in two ways: the success of the grid due to its simplicity and its potentiality to serve as an ingenious tool in the composition of masses and spaces in plan. The grid allows for the abstraction and standardization critical for Eldem's compositional method.

In the planimetric schemes of the Uşaklıgil House and Şark Insurance Company Headquarters (1979), the plans are laid out on a grid system reflecting both the strong axiality of the buildings and the modular logic of the compositions. In these two drawings, it is evident that Eldem used the compositional method of Durand and of the *Beaux-Arts* architect: the whole operation is controlled by means of three dimensional geometry on the surface of a graph paper grid, which assembles the various elements on the same level according to rules of composition. The relation of masses with each other, their proportions and scale are all organized with regard to the grid system. Eldem's own manner, his method of design by composing elements on grid sections, is explicitly set out in these two schemes. On the grid, he locates the main point-supporters –namely columns– and then considers the enclosing walls, which leave the columns as freestanding as possible. However, it should be mentioned that Eldem owes a lot to the late 18th century's European compositional techniques: reduction of all spaces to rectangles, the grid system, and the use of simple configurations of axes.

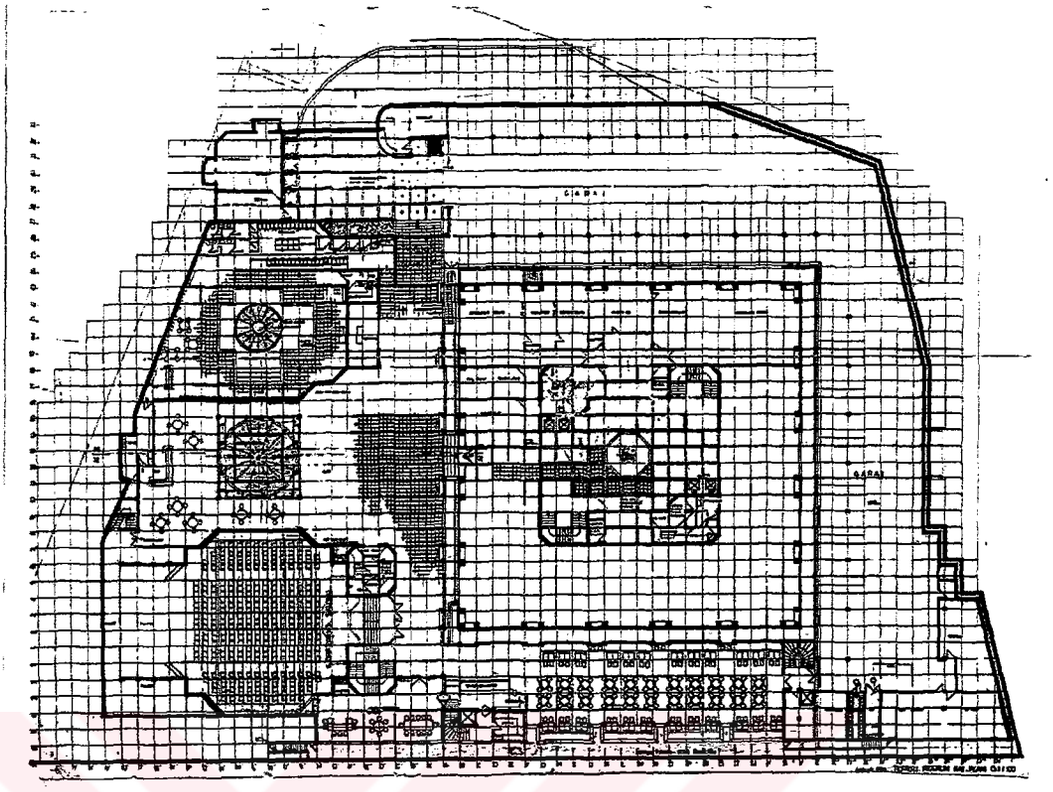


Fig.4.80 Şark Insurance Company Headquarters –first basement floor plan.
Source: Özbil (2001).

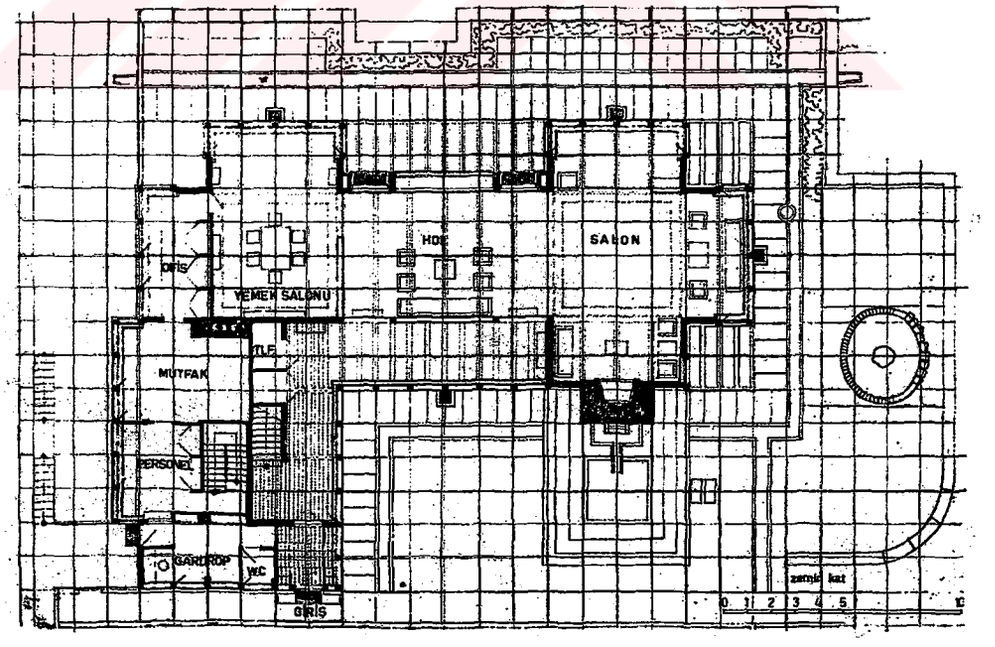


Fig.4.81 Uşaklıgil House –the grid system of the house.
Source: Eldem (1982).

Eldem's compositional logic adhered closely to a grid stated by not only the columns of the circumferential peristyle but also the pattern of squares covering the floor spaces and of furniture. In his Dutch Embassy Residence (1973-1977), the square pattern of the marble floor covering the central *sofa* restates Eldem's insistence on the use of the grid.

Fig.4.82a Dutch Embassy Residence –marbled floor of the central atrium.
Source: Bozdoğan (1987).

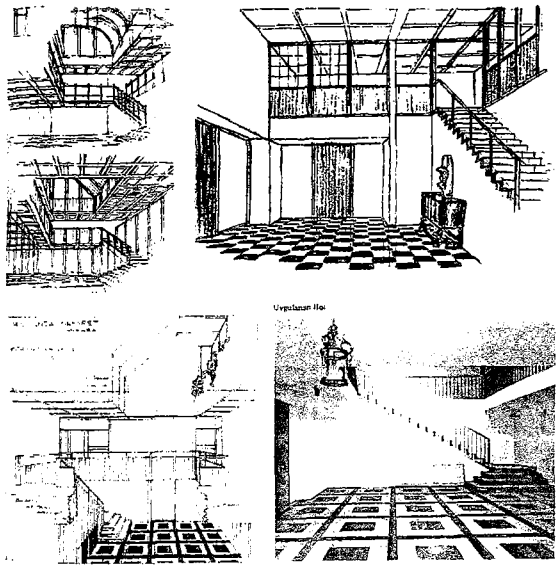


Fig.4.82b Dutch Embassy Residence –sketches for the central *sofa*.
Source: Eldem (1982).

In his Suna Kıraç *Yalı* (1965), the significance of the grid is re-emphasized both on the elevations and on the garden pavement via the square pattern of marble floor tiles.

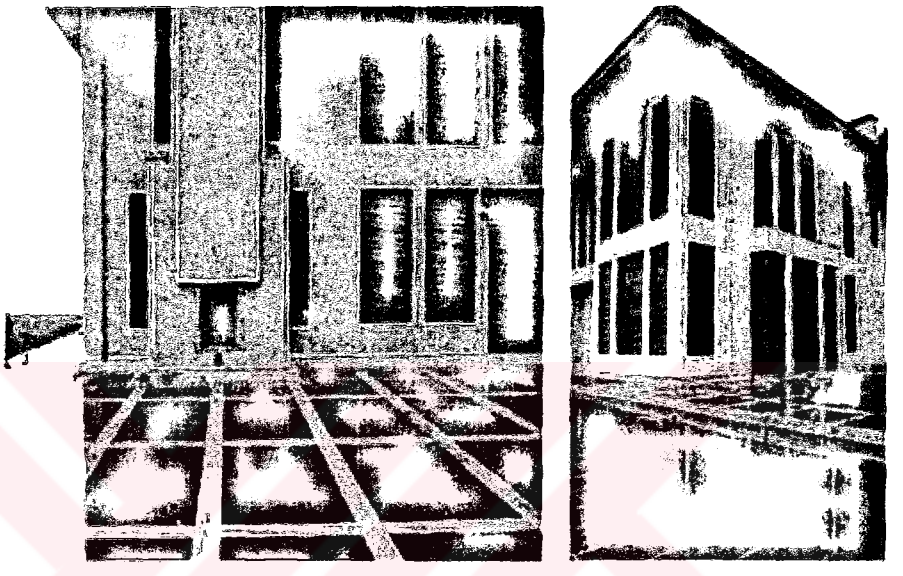


Fig.4.83a Suna Kıraç *Yalı*, İstanbul.
Source: Bozdoğan (1987).

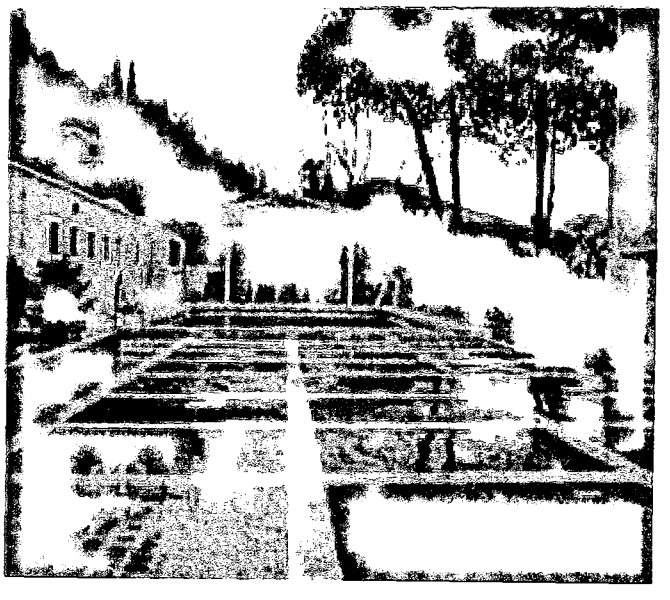


Fig.4.83b Suna Kıraç *Yalı* –the garden pavement.
Source: Bozdoğan (1987).

In the Dutch Embassy, the notion of the grid is superseded by the square concrete panels on the *cumbas*. In the Ilıcak *Yalı* (1978-1980), the grid is alternatively applied on the wooden cupboards through the use of square patterns.

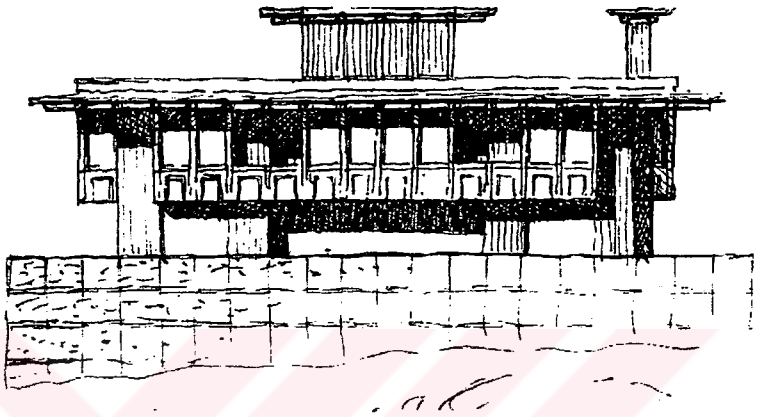


Fig.4.84 Dutch Embassy Residence –sketch of the square panels on *cumbas*. Source: Eldem (1982).

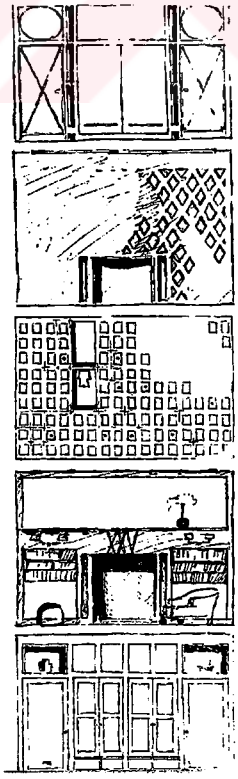


Fig.4.85 Sketches for the wooden cupboards of the Ilıcak *Yalı*. Source: Eldem (1982).

It is the clarity of expression and potential of variation that Eldem pursues in the modular logic of the tradition. Eldem expresses the reason lying behind his preoccupation with the modulation as:

> Typical modular features of the Turkish House have the capacity to be regenerated in contemporary design principles...as a system of structure, the Turkish House presents a tradition for contemporary architecture (Eldem, 1981:50).

4.7.3 Axiality

The structure of Eldem's buildings is strongly developed along axes organized by the grid system and the modular logic in conformity with the structural organization of the "Turkish House". The strong axiality in his designs is legible both from the planimetric compositions and from the exterior. The Ilıcak *Yalı* and the Suna Kıraç *Yalı* are designed along an axis of symmetry passing through their *sofas*. The *köşk* type projections of the living and dining rooms located on two sides of the *sofa* emphasize the main axis –or the nodal axis. The varied spaces preserve mirror symmetry to left and right of the central axis. The resulting sea frontages are symmetrical, reflecting the planimetric compositions. The indication of axes by the composition of masses is an essential structural quality of the Turkish dwelling architecture. Through the scrutiny of the planimetric schemes of these two *yalıs*, it is clearly seen that their structural organizations represent the nodal type traditional houses –namely the inner *sofa* type– in which the spaces are serially organized around an interior space that dominates the spatial hierarchy. The main fluxes of movement occur along the

nodal axis, which in return individuates the center of the overall composition of the plans.

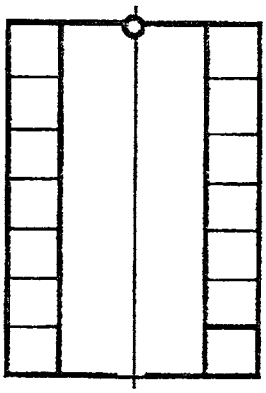


Fig.4.86 The nodal axis passing through the *sofa*.
Source: Strappa (1995).

Fig.4.87a Ilıcak *Yalı* –view from the Bosphorus.
Source: Tanyeli (2001).

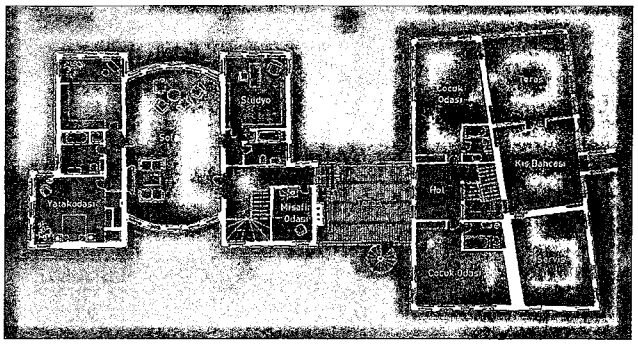


Fig.4.87b Ilıcak *Yalı* –first floor plan. Source: Tanyeli (2001).

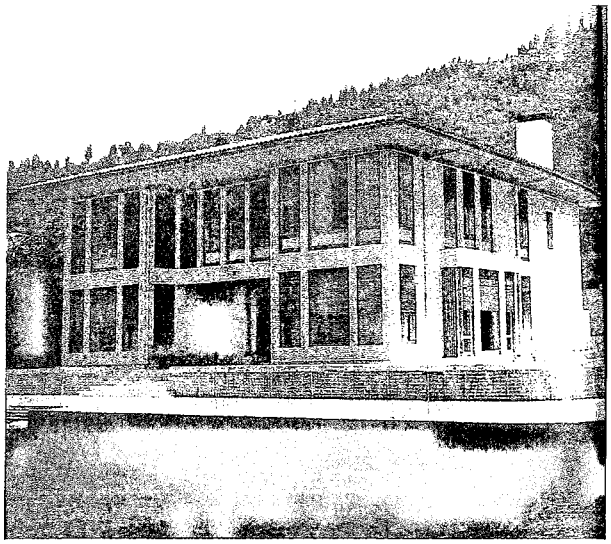


Fig.4.88a Suna Kıraç *Yalı* –view from the Bosphorus.
Source: Tanyeli (2001).

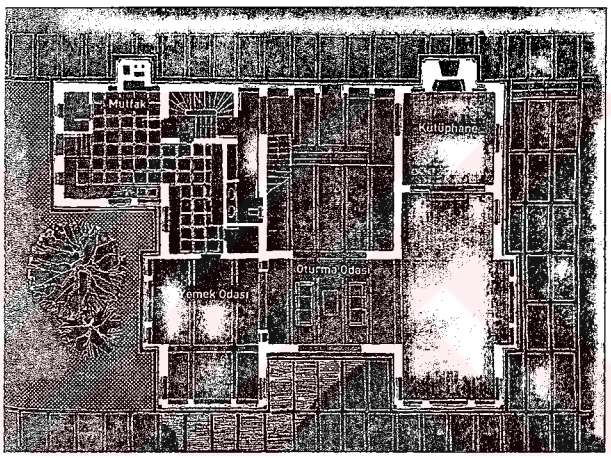


Fig.4.88b Suna Kıraç *Yalı* –ground floor plan.
Source: Tanyeli (2001).

In Şark Insurance Company Headquarters, the strong axiality achieved through the grid system of the planimetric schemes and the perfect symmetry of the plani-volumetric composition is reflected on the elevations through the repetition of aluminum *cumbas* and the symmetrical arrangements of the façades. The center of axes is emphasized by the high, spacious central void within the building and the octagonal gallery at the center on the ground floor. The planimetric composition of the building can be classified into the polar type

structure –in other words, the structure of the house type with a central *sofa*– in which the various parts of the building are united into a whole via a unifying central element. In this project, the offices are organized around a central void presiding over the overall composition. This spacious void is emphasized by four rectangular prisms piercing through the roof.

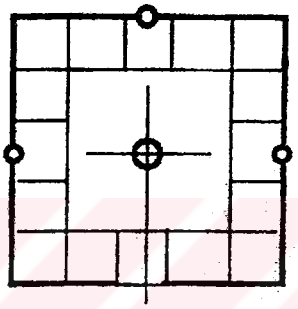


Fig.4.89 The polar type with two circulatory axes.
Source: Strappa (1995).

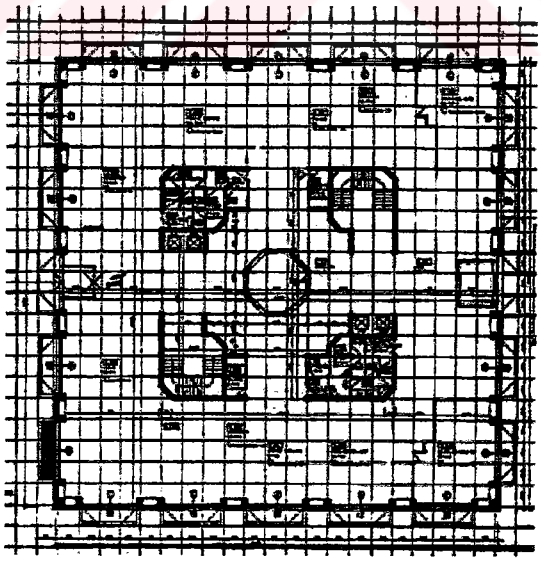


Fig.4.90 Şark Insurance Company Headquarters –second floor plan.
Source: Özbil (2001).

The building preserves mirror symmetry not only along its main circulatory axes but also along its diagonal axes.

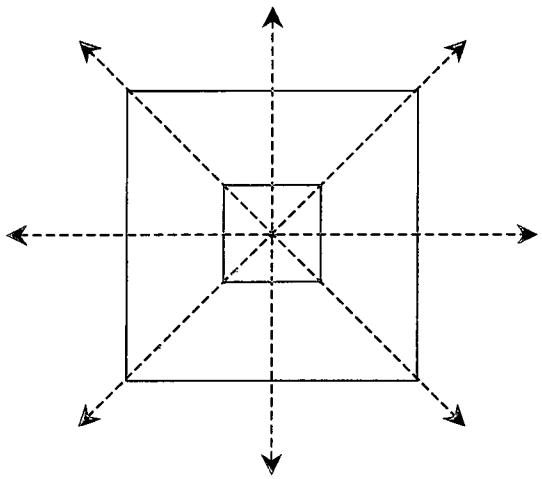


Fig.4.91 Diagrammatic analysis of the axes of symmetry in the building –red lines showing the main circulatory axes.

The building has two main circulatory axes (resembling the traditional house type with a central *sofa*), orienting the main flux of movement from the street or the garden to the offices or the center. The central void may be claimed to represent the main vertical axis enabling the circulation between the floors.

As a result, it can be suggested that in his compositional method, Eldem proceeds from the general to the particular, moving from the main axes to secondary axes, and then to planning grids. His composition on grid system is directed and organized by axes. In other words, Eldem recasts the traditional archetypes, which he obtains from the decomposition of the traditional architecture, according to a modular grid and an elemental vocabulary of columns, walls, galleries, etc., and then synthesizes them along the axes of composition to generate ensembles.

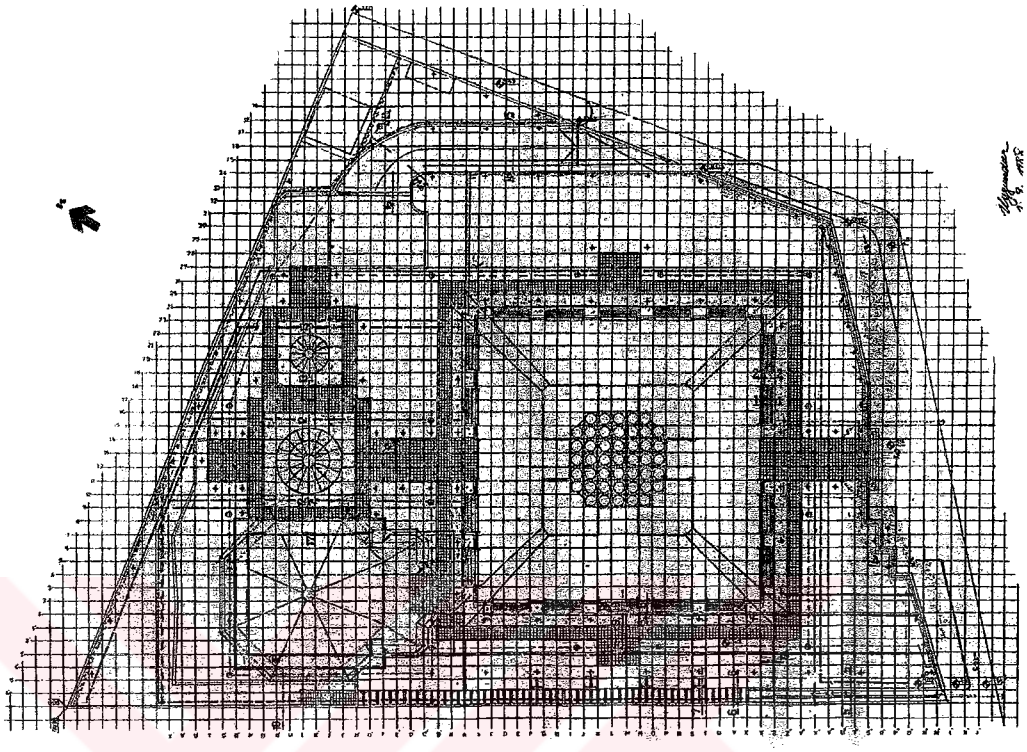


Fig.4.92a Şark Insurance Company Headquarters –site plan.
Source: Özbil (2001).

Fig.4.92b View of the building from the garden.
Source: Özbil (2001).

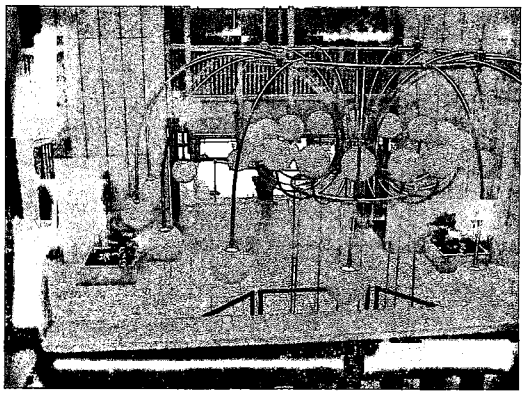


Fig.4.92c View from the inside of the building –central inner void.
Source: Özbil (2001).

4.7.4 Reinterpretation of Modern Spatial and Structural Qualities of the "Turkish House"

Eldem's quest for the synthesis of the traditional and the modern draws him close to the modern structural qualities of the traditional "Turkish House": namely the structural lightness, openness and clarity. Via the use of numerous openings on the façades of his buildings and glazing the both ends of the *sofa*, Eldem, in his designs, seeks to achieve the structural lightness and transparency that are typical of the traditional house. The projections at the two ends of the inner *sofa* in the Ayaşlı *Yalı* constitute transparency throughout the house with repetitive large glazed windows; and curved façades at the two ends of the *karnıyarık* type *sofa* cutting through the Ilıcak *Yalı* are amply glazed for transparency and openness of the house. The initial darkness of the interior is thus enlightened. These two longitudinal *sofas* stretching from one end of the houses to the other provide a continuous view across the houses, integrating the exterior with the interior and enabling sunlight throughout the buildings as well. It is the sense of transparency and openness that is typical of the "Turkish House" which Eldem is in the pursuit of. In an interview, Eldem expresses his desire to achieve transparency via his compositions through *sofas*:

> I attempted to re-model the existing compositional character inherent in the interaction between *sofas* and rooms, and the transparency intrinsic to this character, inspiring from Anatolia (Eldem quoted in Yenal, 1998:42).

Fig.4.93a Ayaşlı *Yalı* –view from the projection of the inner *sofa*.
Source: Eldem (1982).

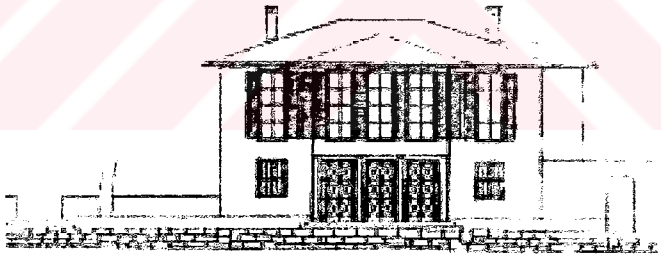


Fig.4.93b Ayaşlı *Yalı* –front elevation.
Source : Bozdoğan (1987).

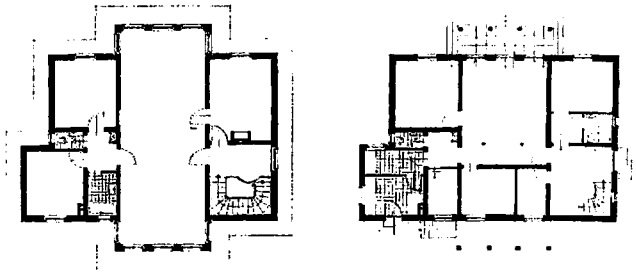


Fig.4.93c Ayaşlı *Yalı* –floor plans.
Source: Bozdoğan (1987).

The structural clarity of the traditional Turkish residential architecture is rendered by the distinction between the windows and the structural elements of the timber-frame skeleton. In his designs, Eldem adapts this idea and reproduces it on the façades of his buildings through the use of reinforced concrete structure. In the Suna Kıraç *Yalı* and The Uşaklıgil House, the idea of distinguishing the structural frame from the windows again predominates the designs: the wooden window sashes with white borders contrasting with the reinforced concrete in the first one; and the white colored precast façade elements contrasting with the wooden infill parapet panels in the latter. Eldem's skillful rendition of a clear division of the structural framework –that is, reinforced concrete skeleton– and the openings on the elevations lends his buildings (no matter how massive they may be) the quality of structural lightness, a structural property intrinsic to the "Turkish House".

Fig.4.94 Suna Kıraç *Yalı* –view from the Bosphorus.
Source: Tanyeli (2001).

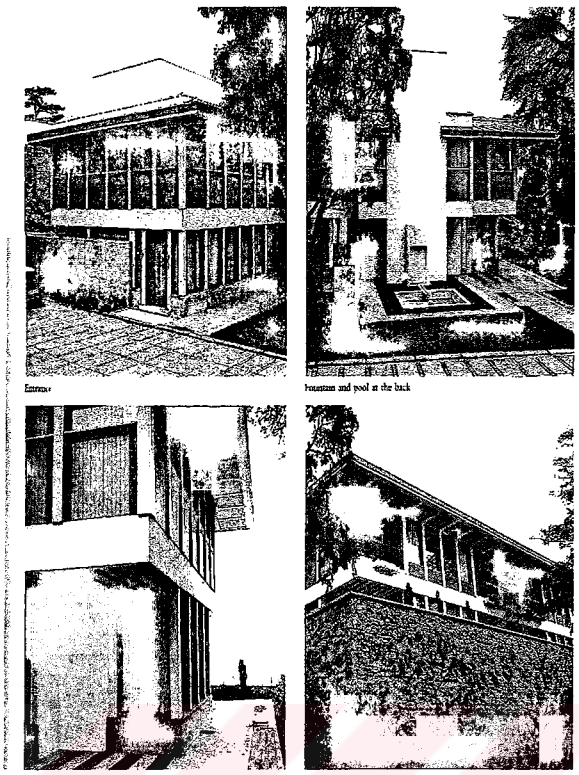


Fig.4.95 Uşaklıgil House –various views of the house. Source: Bozdoğan (1987).

Typologies and structural principles of the traditional "Turkish House" have always been a great source of inspiration for Eldem. The modern qualities of the traditional guided him in his persistent struggle to constitute a link between the past and the contemporary. Some of his designs display essentially modern influences in which there still exists a tradition conscious gesture; whereas, others exhibit more devoted characteristics in search of a national architecture. In this intention to ease the polarity between tradition and modernity, Eldem exposes explicit quotations from the traditional "Turkish House", through either formal quotations or abstract references. Yet in both ways, it is the quality of expression that is adapted rather than stylistic decorative elements. Eldem possesses a vast repertoire of mixed references, however, as Sibel Bozdoğan remarks:

> The personal style of Eldem gradually evolves: around, first, a reinterpretation of the plan type of the traditional Turkish house; secondly the lightness and the openness of the Turkish house to be reproduced in reinforced concrete; and thirdly, the articulation of the elevations with the horizontal repetition of vertical windows of 1:2 proportion (Bozdoğan, 1987:43).

In his enterprise to construct a communicable architectural discourse, the "Turkish House" has always been the invariable inspiration in his career, remaining unique in its ability to satisfy Eldem's desire to build up rich conjunctions between history –expressed as typological adaptability– and modern design. What is essential in Eldem's idea of type is that for Eldem, type is not merely a static architectural element but also an operative design principle in the act of making architecture. This application of history to modern design links Eldem to the past not only architecturally but also culturally. Demonstrating the capacity of cultural heritage as an idea to foster broad, and the adaptability of the notion of type by nourishing the history with his genuine personal improvisations to constitute radical departures from historical typologies, Eldem definitely renders himself an important figure in the contemporary Turkish architecture.

CHAPTER 5.

CONCLUSION

The elaborate work of Sedad Hakkı Eldem on his typological method of architectural design remains little known by the community of architects in Turkey. It has been kept out of the limelight for reasons that will be discussed later in this chapter. However, Eldem's works provide an ingenious opportunity for those who are interested in issues of type and typology in architecture. His significance lies in his concise application of typology as an agent of regeneration and continuity with the past in an era of "reductionist modernism", and equally in his introduction of typological issues to the making of architecture in Turkey. By this thesis, it is aimed to open up Eldem's typological approach to design process into discussion –through his studies on the "Turkish House" and an elaborate analysis of his projects–, and to emphasize the validity of the typological dimension of design operations re-introduced by Eldem. This dissertation suggests that the approach of Eldem also carries the capacity of being an initiator for new directions and perspectives to be explored, especially through his perception of type and typological approach. The information and occasional insights offered by this thesis would help, hopefully, to free Eldem's architectural discourse from the reductionist labels and enable a new way of looking into his works. In order to comprehend the reasons lying behind labeling Eldem as a leading architect, firstly, the validity of type and typological issues should be discussed.

5.1 THE VALIDITY OF TYPOLOGICAL STUDIES

In this thesis, the various definitions of type –from Quatremère de Quincy to Muratori, from Durand to Aldo Rossi–are presented. Common to all is the idea of type as a carrier of architectural knowledge which is defined by Quatremère as "a sort of nucleus about which are collected...the development and variations of forms to which the object is susceptible" (Quatremère quoted in Francescato, 1994:258). That is, associated with type are concepts and physical elements that individuate the type. Such a notion of type suggests that knowledge in architecture is attainable (through the study of the precedent) and transmittable (through design operations). This approach to type is intoned in an aphorism of T. S. Eliot's:

> Tradition can't simply be inherited, it must be labored for. You can't approach it without a historical sense; and a historical sense means that you appreciate the pastness of the past as well as its presence (Eliot quoted in Middleton, 1982:16).

Once again the issue of typology is raised as a methodology of design. The notion of type does not merely indicate a static classificatory term but rather an active principle in the design process, restoring a continuous link between the past, the present and the future. Architectural knowledge is generated and transmitted through typologies. The adherence to architectural types, however, does not imply the slavish imitation. It was again Quatremère who objected to the mechanical imitation of the type, which he defined as a "model". Type embodies the structural rules of the object, whereas model implies a mere reproduction of the object. Martin Symes, in his article *Typological Thinking in Architectural*

Practice, suggests that the capacity of a type to be modified and adapted is due to the fact that a type is not a model (Symes, 1994:167). Hence, type is abstract whereas model is literal; thus it is through the understanding of the essence of the architectural type and re-structuring its rules that innovation can be introduced to design –not through the application of models. Quatremère, however, blames those who deny either types or models. According to Anthony Vidler, Quatremère perceives those people as "reducing design to a play, where each individual is the master and rule –hence the most complete anarchy in the whole and in the details of every composition." (Vidler, 1977:103) This may be seen as an extreme assertion, but it points to an important dilemma of the architect: types carry the imperatives of social customs which strongly reinforce their generations; thus, the architect is often caught in a dilemma whether to follow the customs or to declare his independence. This conflict is intoned by Symes:

> It can be argued that referring to existing types is not strictly necessary: that it is always possible to think every problem through from the beginning, to create a fresh solution to each challenge, and to take high risks of being unable to carry an idea through. Sometimes architects do indeed dare to do just this. But the culture of architecture as a practical profession is made from mixing such innovative creativity with the use of standards, norms, and models (Symes, 1994:169-170).

The importance of typology resides not only in its power to provide continuity into the present and the future (continuity of thought and belief, continuity of structural essence, and continuity of an excellent taste in the craft) but also in its potentiality to constitute the base for operational criteria in design. An interpretative view of typology may donate universal principles to the

architect, enabling him to work in a complex modern society. As Hans Hollein remarks:

> During this century it is clear that we are confronted with a duality in our life and environment. On one hand there is something specific to and inseparable from a given cultural and geographic situation (which we could call regionalism), whilst on the other hand there are developments which are global uniform for all areas and mankind (Hollein, 1987:11).

Today it is both impossible to ignore global architectural tendencies and to base architecture merely on traditional grounds. Hence, it is a challenging undertaking in easing the polarity between local and global architectural developments. This is where typological studies take charge of: forming the basis of an architecture rooted in the cultural heritage and at the same time presenting a global search and development. Rafael Moneo states his deep conviction in the significance of typology:

> To understand the question of type is to understand the nature of the architectural object today. It is a question that cannot be avoided. The architectural object can no longer be considered as a single, isolated event because it is bounded by the world that surrounds it as well as by its history. It extends life to other objects by virtue of its specific architectural condition, thereby establishing a chain of related events in which it is possible to find common formal structures (Moneo, 1978:44).

The mediatory potential of typology asserted by Moneo is due to the fact that types encompass certain characteristics that have already been agreed on, and they have the capacity to be modified in accordance with the cultural alterations. Today, with the great building dynamism of societies and the overwhelming desire of the contemporary architect for "personal satisfaction", the traditional architectural patterns disappear very quickly. In this dissertation, through the work

of Eldem, typological approach to design process is re-asserted as a possible means to maintenance of cultural patrimony which would be otherwise devastated by the endless cycle of production and consumption.

5.2 CONTRIBUTIONS OF ELDEM'S ARCHITECTURAL DISCOURSE

Eldem's works and his design methodology re-raise the issue of typology in architecture, not searching for its legitimization in nature or technology (that is, not through Laugier's primitive hut or Bentham's Panopticon), but with a deep belief in the high capacity inherent within architecture itself. Typology serves Eldem in two ways, which are named as the *typological moment* and the *moment of invention* by the historian Guilio Carlo Argan (Argan quoted in Moudon, 1994:294). In the first, it acts as a tool to identify and understand the rules of composition; in the second, it enables him to deal with the historical and cultural problems through a critical approach. Eldem's contribution lies not merely in his typological research on the "Turkish House" and in generating classificatory terms for the planimetric organizations, which are assimilated into the architectural discourse in Turkey throughout time. His main contribution should be sought in his success to generate a design methodology from his typological research. In fact, it is a desire to demonstrate that applying the universal principles of tradition does not preclude a "new architecture" suitable to a new way of life. Eldem's designs in this thesis suggest that the main significance of types is their ability to present a repository of experience and knowledge, and to permit a flexible response to the contemporary design problems architects face. His works

show clearly the continuing role of compositional principles in the transition from a traditional to a modernist position. However, Eldem's main intention in his studies on the "Turkish House" diverges in an important manner from Durand's classification of known building types. Durand's goal was to derive the "true principle of architecture" from a series of plans. On the other hand, Eldem's endeavors in his classificatory work surpass a process of "arts for arts sake". Via assembling all possible plan types of the "Turkish House", categorizing them according to their *sofas*, analyzing their evolutionary framework and fragmenting them into their architectural elements, Eldem is in the pursuit of extracting certain universal principles on which he can base his design criteria. Thus, Eldem's aim is more fundamental than that of simple collection.

Eldem's classification of the "Turkish House" is revealed through its physical properties. Physical properties include such categories as materials, arrangement of spaces, style, size, geometric order, archetypes, compositional principles and construction system. The "Turkish House" is analyzed in construction systems (timber-frame, mud-and-brick system); in plan and space configuration (houses without a *sofa*, with an outer *sofa*, an inner *sofa*, a central *sofa*); with its archetypes (windows, doors, courtyards, *sofas*) and in its compositional principles (repetition, modulation, axiality). These formal categories allow efficient insight on alternative formal arrangements and the modern structural rules, which have the capacity to be adapted to contemporary building problems. Eldem did not build up his typological classification concerning social ideology or cultural phenomena that have considerable impact on the generation of new types and on their evolution, though he was most probably aware of them.

For Eldem, the "Turkish House" stands complete and ready to be decomposed into fragments. These fragments –archetypes– are selected and reassembled according to two levels of expression: the first, inherited due to their meanings inherent in the past existence on the forms; the second, recomposed through a personal perception in a new context.

Eldem subdivides the "Turkish House" and the traditional Ottoman architecture into their basic irreducible elements. These archetypes –*sofa*, pavilion, courtyard, *cumba*, etc.– then he synthesizes through his personal filter and re-combines to form complete ensembles. The whole design process is controlled by modern compositional principles extracted from the traditional house (the modular logic and the axial system manifest in the planimetric and volumetric configurations, structural clarity, transparency and the repetitive use of certain elements). In Eldem's designs, one can sense the dynamism with which the architect plays with all the permutations of relationship between the fixed elements. This decomposition of architecture into its fragments inherent in Eldem's architectural discourse renders him "original". The classical typological approach has a tendency to conceive type as a whole that cannot be reduced to its elements. The validity of archetypes is avoided. Maurice Cerasi suggested analyzing the interrelationship between various archetypes within a type and interpreting them through conscious design criteria some forty years after Eldem. Hence, this fact alone demonstrates the significance and foresight embedded in Eldem's architectural discourse.

Rather than treating type as an answer –an image of a typical outcome– Eldem sees type as a question in two ways. First, when applying a traditional house type to a particular circumstance. In this case, the type itself raises a

question about what is to be perpetuated and what modified; for example, in his design for the Fethi Okyar House, the house type with an outer *sofa* is turned into a wide terrace continuing on three sides of the house in an attempt to enable an uninterrupted view of the sea. Second, Eldem does not perceive type as a fixed unity but as a changing entity, hence its nature cannot be assumed to be fully understood, but remains a constant question. For instance, the traditional central *sofa* in the "Turkish House" is transformed into a high, spacious central void in Eldem's institutional and embassy buildings, acquiring a monumental quality.

Following the formative principles embedded in the "Turkish House", Eldem builds up his own design methodology, which attempts to exploit all aspects of architectural heritage as full as possible. In his mission of typological reading, Eldem proceeds along two paths. In the first one, he treats the precedent as a *formal imitation*, restating the validity of the adopted type/archetype for the present. The oval *sofa* of the Ağaoğlu House or the *karnıyarık* plan type of the Ilıcak *Yalı* is inherited by Eldem as a pure model. Colquhoun asserts that: "...in selecting and arranging certain conventionally constituted organizations of a building the architect thus makes his voluntary decisions explaining his ideological position in architecture." (Colquhoun, 1981:45) Apparently Eldem's ideological position is manifest in his designs: though he carries strong formal concerns while treating certain types/archetypes of the "Turkish House" as models, he is interested not in their detailing or ornamentation but rather in the pure forms –the essence of their geometries– and the generative principles. Thus, his adoption is not stylistic but abstract. Quatremère argues that the correct manner of imitation would render the architect "worthy of being associated and compared" with his antique counterpart (Quatremère quoted in Lavin, 1992:104).

In this sense, Eldem's manner of perceiving the "Turkish House" as an abstract model does not devalue his architecture. Rather his works gain appreciation on the level that they reflect the aesthetical and cultural values residing in the traditional house –which were long forgotten under the banner of modern architecture– and demonstrate its capacity of adaptability to contemporary circumstances through modest designs. Eldem names his formal approach towards architecture as repetition:

> Repetition also involves repertoire, doesn't it? I see nothing wrong with it. Nothing wrong with "imitating one's self". Otherwise when a project gets built and sealed with the patent of the architect, not to be repeated thereafter, it is doomed to finish...to die (Eldem quoted in Bozdoğan, 1987:84).

In the second case, Eldem treats the "Turkish House" as the *abstract essence*, modifying it through an interpretative approach. He translates the structural essence of type into operative design criteria; thus, type is a starting point for Eldem, free to transform its basic elements and its technology. He decomposes the "Turkish House" into its singular archetypes, filters them through an interpretative framework and integrates them into his designs in a modern sense or makes abstract references to these elements. However, how abstract these references may be, the compositional principles of the traditional Turkish dwelling architecture are still manifest, presiding over the overall design. This interpretative approach of Eldem towards the use of type, hence, illustrates his ability to borrow elements from the precedent and to modify, restructure both their forms and use. In summary, it can be argued that both of these approaches towards exploiting the precedent point to a common point: for Eldem, the design process is associated with performing operations on typologies to produce

ensembles that are based on sound principles. His enterprise is the generation of an architectural discourse that is transmitted and repeated in time but not reduced to a didactic formula; not copied but interpreted.

Eldem's persistent emphasis on cultural patrimony and traditional heritage does not render him "historicist". While type reveals the historical dimension of architecture, it does not, in Eldem's view, produce architecture that is inherently historicist. In an interview, Eldem expresses his ideas on "historicism":

> I always tried not to produce architecture smelling of historicism. However, in some projects, due to the scale of the building, there emerged a need to assemble large masses. The overall composition of these large, massive volumes came close to an outcome which may be claimed as "historicism". The difficulty resides in capturing an architectural style in accordance with the masses and to apply modern architecture appropriately (Eldem quoted in Yenal, 1998:44).

The work of Eldem is not "historicist" but ultimately "classic" in the sense that it rests on the re-enactment of an archetypal action to which the architectural procedure might refer at any time, in any circumstance. It is classic, as Bozdoğan intones, "in the etymological meaning of the term as the 'best possible' abstracted from the real world of artefacts and experience" (Bozdoğan, 1987:144). Its real force lies in an assertion which has not been yet systematically examined: it presents to the student as well as to the practitioner an opportunity to overcome the basic architectural paradox of keeping up with the contemporary and at the same time maintaining a "national" character. However, unfortunately, Eldem's works and issues related to his architectural discourse are either kept out of the limelight or reduced to certain categories in the schools of architecture and the communities of architecture in Turkey. This misfortunate condition is due to the misleading perception of typological issues as restricting architectural creativity

and as precluding the architect from progressing. As a result, Eldem's works are seen as reflecting solely the past and are labeled as "regressive" by certain architectural authorities. Eldem states his regret over this misinterpretation:

> I never imagined my architecture as regressing. I conceived it as modern and I still do!...It is a cultural issue. Folklore is being executed at every station, at every dock but is being restricted in architecture. My architectural discourse has the intention to overcome this restriction and to teach architecture to the public. Thus, the classification of my works under the categories of the "First" and the "Second National Architectural Movement" really disappoints me, because they have a very different approach. This proves that my executions have been definitely not comprehended; its intention not comprehended...(Eldem quoted in Yenal, 1998:45).

Unfortunately, today it still is not possible to deny these remarks of the architect. Eldem, in fact, should be better appreciated today when the architect – lost in the prevalent architectural pluralism– is again in the pursuit of a local identity. It is his search for a modern interpretation of tradition that renders Eldem a unique architect in the Turkish architecture. Rather than regressing, Eldem progresses by suggesting that the design process involves adapting past typologies to present needs through a critical framework. Hence, it is Eldem's achievement in adapting tradition –not as ornament or style, but as a set of universal structural principles– that is being undermined by the communities of architecture in Turkey.

5.3 POSING A QUESTION: DOES TYPOLOGICAL ANALYSIS HAVE THE MERIT OF TEACHING DESIGN THROUGH VALID MEANS?

Much of the ambiguity and disruption in the contemporary architecture in Turkey is due to the failure of finding an alternative to a market-oriented architecture, blind adoption of the Westernized aesthetics of the contemporary architecture or picture-book historicism. This thesis argues, through Eldem's typological analysis of the "Turkish House", that typological issues enable the architect to develop a convincing and well-defined design methodology where historical consciousness would play a decisive role. Because of their dynamic nature and complexity, types cannot be taken for granted and are necessarily a question for study. The need for designers to acquire personal satisfaction, for society to recognize the legitimacy of a "new architecture", and for economy to support it also encourages the use of types in architectural practice. Julia W. Robinson argues forcefully that if types are accepted as a subject for study, they may enable the architect to identify those forms that are desirable to maintain and to create better solutions to building problems through the generation of new form alternatives (Robinson, 1994:191). However, the advantages of using types in the design process are not restricted to formal attributes only. Types also encompass fundamental structural principles that have the merit of acting as sound design criteria in the making of architecture. Schön asserts that type is a powerful design tool, because it represents simultaneously a set of rules for organization of space; a set of behaviors that take place within it; and a set of architectural qualities (Schön, 1988:185). Its usefulness in architectural practice, then, is that it demonstrates a starting point for the design problem at hand, prescribing a

structural framework to address it. If type is treated as a solution, this framework provides limits to thinking. If type is treated as a question, this framework provides new perspectives for further exploration. Typological studies offer several ways to develop perspectives in the design process: to comprehend the nature of existing types; to understand how they may be adapted to particular circumstances; and to develop design methodologies by identifying the basic architectural elements of existing types that may be recombined in new ways. Thus, it is important to note that the design process not only starts with type, but in fact consists of operations on type. In acting on type, architects present their own ideologies, personalities, memories, world-views, and individual creativity. The synthesis of these complex phenomena lends the architectural artifacts expressive and characteristic qualities. Moneo suggests that designing consists of translating the idea of type into a specific form of the work (Moneo, 1978:40). If architects become preoccupied with types, they are initially bound to the organizations that a specific type encompasses, but because types are not formulae to be copied, architects are free to modify the initial type.

In *The New Architecture and the Bauhaus*, Gropius wrote of type:

> Proper respect for tradition will find a truer echo in types than in the miscellaneous solutions of an often arbitrary and aloof individualism because the greater community utility of the former embodies a deeper architectural significance (Gropius quoted in Levin, 1982:7).

Through these words, Gropius evokes the idea that types are more functional than the functionalist determinism, because they embody social recognition and familiarity.

From Durand to Rossi, the discourse on typology delineates typology neither as a refinement of creativity supported by intuition nor as a set of imitations of images. Rather, types are the means through which architectural knowledge –that is, the unity of form, function and meaning generated by the interrelation between architecture and society – is transmitted in time. It assumes, as Peter Waldman –a member of the architecture faculty of Rice University– proposes, that "invention is the responsibility of the educated architect and not the license of the spirited designer" (Waldman, 1982:13). If that is the case, typological analyses and operations should definitely be referred to as a studio device in order to educate the young architects. Bruce Abbey and Robert Dripps talk of a crisis in architectural schools resulting from a recent emphasis on the development of an eclectic attitude toward the use of past styles as sources of design (Abbey, Dripps, 1982:14). This so-called "crisis" is also valid for, at least in part, the schools of architecture in Turkey where the quest for new aesthetic values and creative freedom resulted in stylistic quotation, regarding the validity of using historical precedent merely as a source of stylistic inspiration. This reductionist approach towards architecture, which is just the opposite of typological approach, once again brings into mind the importance of typological issues, posing at the same time a fundamental question: does typological analysis have the merit of teaching design through valid means? The answer is certainly worth searching for.

LIST OF REFERENCES

Abbey, Bruce and Dripps, Robert. 'Analyzing Organizational Schemes', *Journal of Architectural Education*, no: 2, winter 1982.

Alsaç, Üstün. 'İkinci Ulusal Mimarlık Dönemi', *Arkitekt*, no:10, 1991.

Anonymous, Sedad *Hakkı Eldem: 50 Yıllık Meslek Jübilesi*, Mimar Sinan Üniversitesi Yayınları, İstanbul, 1983.
(Monograph published on the occasion of Eldem's fiftieth year in the profession).

Anonymous, 'Sedad Hakkı Eldem', *Mimarlık*, Mimarlar Odası, no: 4, 1988.

Argan, Giulio Carlo. 'On The Typology Of Architecture', *Architectural Design*, December 1962.

Aslanoğlu, İnci. *Erken Cumhuriyet Dönemi Mimarlığı*, 1980.

Benevolo, L. *History of Modern Architecture*, The MIT Press, Cambridge, 1977.

Bozdoğan, Sibel. 'Modernity in Tradition', *Sedad Eldem Architect In Turkey*, Concept Media Ltd., 1987.

Cataldi, Giancarlo. 'Designing in Stages', *Typological Process And Design Theory*, ed. Attilio Petruccioli, proceedings of the International Symposium sponsored by the Aga Khan Program for Islamic Architecture at Harvard University and the Massachusetts Institute of Technology held at M.I.T., Cambridge, March 1995.

Cerasi, Maurice M. 'Type, Urban Context, and Language in Conflict', *Typological Process And Design Theory*, ed. Attilio Petruccioli, proceedings of the International Symposium sponsored by the Aga Khan Program for Islamic Architecture at Harvard University and the Massachusetts Institute of Technology held at M.I.T., Cambridge, March 1995.

Cerasi, Maurice M. *Osmanlı Kenti*, translated by Aslı Ataöv, Yapı Kredi Yayınları, İstanbul, 1999.

Chafee, Richard. 'The Teaching of Architecture at the Ecole des Beaux-Arts', *The Architecture of the Ecole des Beaux-Arts*, ed. Arthur Drexler, Secker and Warburg, London, 1977.

Colquhoun, Alan. 'Typology and Design Method', *Essays in Architectural Criticism: Modern Architecture and Historical Change*, The MIT Press, Cambridge, 1981.

Colquhoun, Alan. *Modernity and the Classical Tradition Architectural Essays 1980-1987*, The MIT Press, Cambridge, 1991.

Collins, P. 'Origins of graph paper as an influence on architectural design', *Journel of the Society of Architectural Historians*, no:4, 1962.

Drexler, Arthur. 'Foreword', *The Architecture of the Ecole des Beaux-Arts*, ed. Arthur Drexler, Secker and Warburg, London, 1977.

Eisenmann, Peter. 'The End of the Classical: the End of the Beginning, the End of the End', *Perspecta*, no:21, 1984.

Eldem, S. H. 'Milli Mimari Meselesi', *Arkitekt*, n.9-10, İstanbul, 1939.

Eldem, S. H. 'Yerli Mimariye Doğru', *Arkitekt*, n.3-4, İstanbul, 1940.

Eldem, S. H. 'Toward A Local Idiom: A Summary History of Contemporary Architecture In Turkey', in *Conservation As Cultural Survival* (Proceedings of the Aga Khan Award Seminar Two, held in İstanbul, September 1978), Geneva, 1980.

Eldem, S. H. *Büyük Konutlar*, introduction by Leyla Baydar, Yaprak Kitabevi, Ankara, 1982.

Eldem, S. H. *Türk Evi Plan Tipleri*, İstanbul Teknik Üniversitesi yayını, İstanbul, 1954.

Eldem, S. H. 'Son 120 Sene İçinde Türk Mimarisinde Millilik ve Rejyonalizm Araştırmaları', *Mimaride Türk Milli Üslubu Semineri*, Kültür ve Turizm Bak. yayını, İstanbul, 1984.

Eldem, S. H. 'Elli Yıllık Cumhuriyet Mimarlığı', *Mimarlık*, no: 11/12, 1973.

Eldem, S. H. 'Beylerbeyi'nde Bir Yalı', *Arkitekt*, no: 8, İstanbul, 1938.

Eldem, S. H. *Türk Evi Osmanlı Dönemi(Volume I)*, Türkiye Anıt Çevre Turizm Değerlerini Koruma Vakfı, İstanbul, 1984a.

Eldem, S. H. *Türk Evi Osmanlı Dönemi(Volume III)*, Türkiye Anıt Çevre Turizm Değerlerini Koruma Vakfı, İstanbul, 1987.

Eldem, S. H. 'Boğaziçinde Bir Yalı', *Arkitekt*, İstanbul, 1944.

Eldem, S. H. "Development of Regionalist Tendencies" paper presented at The Aga Khan Award for Architecture Seminar *Conservation as Cultural Survival* held in İstanbul, September 26-28, 1978.

Eldem, S. H. 'A Comparative Spatial Analysis of Turkish and Japanese Dwellings', *Process*, no: 27, Tokyo, 1981.

Ergüler, Meltem. *Sedad Hakkı Eldem Binalarının Analizi*, unpublished master's thesis, İstanbul Techical University, 1996.

Francescato, Guido. 'Type and the Possibility of an Architectural Scholarship', *Ordering Space: Types in Architecture and Design*, ed. Karen A. Flack and Lynda H. Scneekloth, International Thomson Publishing Incorporation, New York, 1994.

Goodwin, Godfrey. *A History of Ottoman Architecture*, Thames and Hudson Ltd., London, 1971.

Gülgönen, Ahmet and Laisney, François. 'Contextual Approaches to Typology at the Ecole des Beaux-Arts', *Journal of Architectural Education*, no: 2, winter 1982.

Hasol, Ayşe. 'Sedad Hakkı Eldem'le Bir Söyleşi', *Yapı*, no:69, October 1986.

Hays, K. Michael. 'Introduction', to Anthony Vidler's 'Third Typology' in *Architecture Theory since 1968*, The MIT Press, Cambridge, 1998.
Hitchcock, Henry-Russell. *Perspecta,*, no:6, New Haven, 1960.

Hitchcock, Henry-Russell. *Architecture Nineteenth and Twentieth Centuries*, Penguin Books, Baltimore, 1958.

Hollein, Hans. 'Foreword', *Sedad Eldem Architect In Turkey*, Concept Media Ltd., 1987.

İncesu, B. 'Sedad Hakkı Eldem', *Mimarlık Dekorasyon*, no:1, October 1990.

Kahn, A. 'Toward a nonoppressive interpretation of the concept of type', *Type and the (Im)possibilities of Convention*, Midgård Monographs 2, 1991.

Kizis, Yannis. 'Morea, Thessaly, Istanbul; Local Heritage and Interactions in 18th Century Domestic Architecture', *7 Centuries of Ottoman Architecture "A Supra-National Heritage"*, YEM, İstanbul, 1999.

Krauss, Rosalind E. The Originality of the Avant-Garde and Other Modernist Myths, The MIT Press, Cambridge, 1985.

Krier, Rob. *Urban Space*, Academy Editions, London, 1979.

Kropf, Karl S. *The Definition of Built Form in Urban Morphology*, Ph.D. diss., Department of Geography, University of Birmingham, 1993.

Kuban, Doğan. 'Bizde Rejyonalizm Üzerine', *Mimarlık ve Sanat*, no:1, 1961.

Kuban, Doğan. *Türk ve İslam Sanatı Üzerine Denemeler*, Arkeoloji ve Sanat Yayınları, İstanbul, 1982.

Lavin, Sylvia. 'The Transformation of Type', *Quatremère de Quincy and the Invention of a Modern Language of Architecture*, The MIT Press, Cambridge, 1992.

Levi-Strauss, Claude. *The Savage Mind*, University of Chicago Press, Chicago, 1966.

Levin, Edward. 'In Search of Lost Time', *Journal of Architectural Education*, no: 2, winter 1982.

Middleton, R. D. 'Introduction', *The Beaux-Arts and Nineteenth Century French Architecture*, ed. Robin Middleton, Thames and Hudson, London, 1982.

Moneo, Rafael. 'On Typology', *Oppositions,* no: 13, Princeton Architectural Press, New York, Summer 1978.

Morris, Ellen K. 'Architectural Type and the Institutional Programme', *Journal of Architectural Education*, no: 2, winter 1982.

Moudon, Anne Vernez. 'Getting to Know the Built Landscape: Typomorphology', *Ordering Space: Types in Architecture and Design*, ed. Karen A. Flack and Lynda H. Scneekloth, International Thomson Publishing Incorporation, New York, 1994.

Oechslin, W. 'Premises for the resumption of the discussion of typology', *Assemblage 1*, 1986.

Orhun, Deniz. 'Is It The *Turkish House* Or The Living-Integrating House?', *7 Centuries of Ottoman Architecture "A Supra-National Heritage"*, YEM, İstanbul, 1999.

Özbil, Ayşe. Drawings (plans, elevations, sections and details) obtained from Şark Insurance Company Headquarters; photographs of the building taken by the author, 2001.

Özer, Bülent. *Rejyonalizm, Üniversalizm ve Çağdaş Mimarimiz Üzerine Bir Deneme*, doctoral dissertation, İTÜ Yayınları, İstanbul,1964.

Özer, Bülent. 'T planı ve Çağdaş Mimarimiz', *Mimarlık*, no:5, 1966.

Özkan, Suha. 'Echoes of Sedad Eldem', *Sedad Eldem Architect In Turkey*, Concept Media Ltd., 1987.

Özkan, Suha. *Regionalism Within Modernism*, draft for translation written for *Architecture and Behavior*, October 27 1992.

Pèrez-Gòmez, Alberto. *Architecture and The Crisis of Modern Science*, The MIT Press, Cambridge, Mass., 1983.

Petruccioli, Attilio. 'Exoteric, Polytheistic Fundamentalist Typology', *Typological Process And Design Theory*, ed. Attilio Petruccioli, proceedings of the International Symposium sponsored by the Aga Khan Program for Islamic Architecture at Harvard University and the Massachusetts Institute of Technology held at M.I.T., Cambridge, March 1995.

Robertson, Howard. *Mimari Kompozisyonun Prensipleri,* translated by Sermet Gürel, İstanbul Teknik Üniversite Matbaası, İstanbul, 1949.

Robertson, Howard. *Modern Architectural Design*, Thames and Hudson, London, 1924.

Robinson, Julia W. 'The Question of Type', *Ordering Space Types in Architecture and Design*, ed. Karen A. Franck and Lynda H. Schneekloth, International Thomson Publishing Incorporation, New York, 1994.

Rossi, Aldo. *The Architecture of the City*, the MIT Press, Massachusetts, 1984.

Rykwert, Joseph. 'The Ecole des Beaux-Arts and the Classical Tradition', *The Beaux-Arts and Nineteenth Century French Architecture*, ed. Robin Middleton, Thames and Hudson, London, 1982.

Sakaoğlu, Necdet. *Divriği'de Türk Mimarisi*, Türk Tarih Kurumu, İstanbul, 1978.

Schön, D.A. 'Designing: rules, types and worlds', *Design Studies*, no:9, 1988.
Silvetti, Jorge. 'The Beauty of Shadows', *Oppositions*, no:9, Princeton Architectural Press, New York, Summer 1977.

Strappa, Giuseppe. 'The Notion of enclosure in the formation of Special Building Type', *Typological Process And Design Theory*, ed. Attilio Petruccioli, proceedings of the International Symposium sponsored by the Aga Khan Program for Islamic Architecture at Harvard University and the Massachusetts Institute of Technology held at M.I.T., Cambridge, March 1995.

Symes, Martin. 'Typological Thinking in Architectural Practice', *Ordering Space Types in Architecture and Design*, ed. Karen A. Franck and Lynda H. Schneekloth, International Thomson Publishing Incorporation, New York, 1994.

Szambien, Werner. 'Durand and the continuity of tradition', *The Beaux-Arts and Nineteenth Century French Architecture*, ed. Robin Middleton, Thames and Hudson, London, 1982.

Tapan, Mete. 'International Style: Liberalism In Architecture', *Modern Turkish Architecture,* ed. Holod, Renata and Evin, Ahmet, University of Pennsylvania Press, Philadelphia, 1984.

Tanyeli, Uğur. *Sedad Hakkı Eldem*, Boyut Yayın Grubu, İstanbul, December 2001.

Todorov, Tzvetan. *Theories of the Symbol*, Ithaca: Cornell University Press, 1984.

Tuckerman, Arthur L. in a letter of March 20, 1884 to the secretary of the R.I.B.A., *R.I.B.A. Transactions*, 1st ser., vol. XXXIV, session 1883-1884.

Van Zanten, David. 'Architectural Composition at the Ecole des Beaux-Arts from Charles Percier to Charles Garnier', *The Architecture of the Ecole des Beaux-Arts*, ed. Arthur Drexler, Museum of Modern Art, Secker and Warburg, London, 1977. 1977.

Vidler, Anthony. 'The Idea of Type: The Transformation of the Academic Ideal, 1750-1830', *Oppositions*, no:8, Princeton Architectural Press, New York, 1977.

Waldman, Peter. 'A Primer of Easy Pieces: Teaching through Typological Narrative', *Journal of Architectural Education*, no: 2, winter 1982.

Yenal, Engin. 'Profile Of The Man', *Sedad Eldem Architect In Turkey*, Concept Media Ltd., 1987.

Yenal, Engin. 'Eldem'i Yitireli on yıl oldu!', *Mimarlık*, no:283, October 1998.

Yücel, Atilla. 'Contemporary Turkish Architecture: A Thematic Overview through the Work of Eldem, Cansever and Çinici', *Mimar: Architecture in Development*, no: 10, 1983.

Yücel, Atilla. 'Pluralism Takes Command: The Turkish Architectural Scene Today', *Modern Turkish Architecture*, ed. Holod, Renata and Evin, Ahmet, University of Pennsylvania Press, Philadelphia, 1984.

GLOSSARY

avlu: courtyard.

cumba: a bay-window.

çardak: pergola or trellis.

eyvan: a vaulted recess for sitting within the *sofa*.

hayat: another term used to identify the outer *sofa* of the traditional "Turkish House"; a wide balcony continuing in front of the rooms as a passage to the garden/courtyard.

karnıyarık: an important plan type of the traditional Turkish House, with a central *sofa* cutting across the house.

konak: a large mansion including various parts such as the *harem* (serving family's private life) and *selamlık* (for male guests).

köşk (kiosk): a term used for projecting bays in the Turkish House; also a pavilion built separately for shelter.

mahalle: the smallest unit of the traditional urban fabric, including the squares, parks and streets.

revak: a domed or vaulted colonnade flanking a courtyard or garden.

sekilik: a raised-platform within the house serving as a place for sitting.

sofa: a hall, constituting the distributive space and the focal point of the traditional house.

taşlık: the term used to define the courtyard in the traditional Turkish dwelling architecture.

yalı: mansion built along the shores of the Bosphorus.