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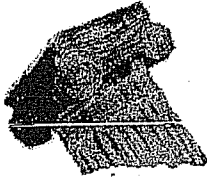
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AN ANALYTICAL APPROACH FOR THE ASSESSMENT OF NEW EXTERIOR ADDITIONS TO HISTORIC BUILDINGS

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ABSTRACT

Intervention within the architectural heritage is one of the inevitable approaches in architectural conservation in order to adapt the historic buildings to the changing contemporary conditions. Considered as major interventions, introduction of new exterior additions to historic buildings may appear to be acceptable, especially when the demands of new conditions require extra space. In practice, the standards guiding interventions and new additions are determined by legislations of each country most of which have been developed on the basis of international charters regarding architectural conservation.

However, it is observed that such regulations may result in unappreciated examples, as the interpretation of the architect is still one of the basic criteria directing the state of the building after restoration. This study is structured as an alternating approach to the dilemma of either putting forward strict rules or simple guides in order to direct the design of any new addition. Therefore, the aim is not to direct the architect through providing a set of rules, but to help invoke the criteria that may form a basis for design decisions through the analysis and evaluation of actual examples. The study is expected to be helpful for the architects in the establishment of a relation between the historic building and the contemporary addition by proposing an assessment method applied on example buildings with additions.

1. INTRODUCTION

Designing a new addition is discussed much due to its nature to cause dilemmas. One of the dilemmas relates to the limits of the intervention: Considering the characteristics of the structure, which renders it worth to be protected, it is

requested to keep interventions at minimum in order not to cause loss in values. On the other hand, it is expected that the structure should meet at least the resources allocated for its restoration and even bring more than the spent resource. Whereas, meeting these expectations requires greater interventions. Especially, the public buildings in city centres are exposed to large-scale interventions. If such a historic building keeps its functional continuity, it will inevitably be exposed to greater interventions in order to meet the increasing demands or to meet the requirements of any new function, which will provide more income. Another dilemma that can be shown as a reason for debates about the interventions is that the intervention is new in any scale. This causes the dilemma of establishing the appropriate relation of traditional-contemporary language. This study began as a survey of different attitudes and especially contemporary architectural approaches towards the historic buildings facing the above-mentioned dilemmas.

As historic buildings are progressively coming under the threat of inappropriate interventions in Turkey, the related regulations determining the type and range of interventions have been changed frequently to find out the recipe for the acceptable approach for interventions. Infact, the acceptable approach by means of conservation is that the new addition can be both separated from the historical structure and should be in harmony. Nevertheless, it is not quite possible to formulate the architectural characteristics of the additions and to form an architectural guide. In this study, the hypothesis is that the design of a new addition can be stimulated through the analysis and assessment of completed projects. Case study examples are provided to point out acceptable and unacceptable preservation approaches where new use requirements were met through construction of an exterior addition. These examples are included to suggest ways that change to historic buildings can be sensitively accomplished, not to provide in-depth project analyses or endorse particular architectural design.

The suggested method is exemplified on six public buildings from İzmir: Alsancak Public Hospital, Usakizade Mansion, Konak Public Hospital, Alsancak Train Station, School for Deaf and Blind and Pasaport Quay. Among them School for Deaf and Blind is presented in this paper. The studied buildings have been intervened on the basis of a restoration project, which fulfilled the requirements of the commissions having the right to decide or comment on the application of the restoration criteria. According to the type of addition, new exterior additions that exceed the building site, either adjacent or connected to the mass of the historic building were chosen. The analysis of example buildings are presented on tables and followed by written assessment.

2. INQUIRY OF NEW EXTERIOR ADDITIONS TO HISTORIC BUILDINGS

When the subject of new exterior additions is introduced, the possibility of destroying both the building's significant characteristics and the historic character

of the environment arises. To avoid destruction or inappropriate results the main restoration approach should be based on an exhaustive study of the architectural heritage which enables a differentiation between the fundamental elements and linking these elements at the physical, spatial and functional levels. Thus, in the comprehensive process a detailed documentation and examination of the actual state and the study of the historical evolution of the building is necessary. The creative approach and design constitutes the third phase of the restoration process that follows documentation and restitution. The assessment of existing building and its context bears importance since the creative process differs in each case and in each context which forms the way of joining old to new [1].

On the other hand, the practical assessment inevitably allows for a certain degree of subjectivity and relativity. In order to make it as objective as possible, some criteria must be respected. Therefore, together with the architectural characteristics, the values that make the building an historic heritage and that are inevitably necessary to preserve should also be clearly defined. In the following two headings the aspects considered in the analysis of a historic building and the features forming the architectural character will be discussed. The data gathered will be used to develop the criteria for the assessment of the relationship between the historic building and new addition.

2.1. Analysis of Historical Buildings

As the starting point of conservation studies is based on the definition of the significance of the heritage, while designing a new addition, the significance of the building should clearly be defined. Such a statement will prevent the false attitude which may interfere with the aspects to be protected in a building. An architectural product gains importance through the values society perceives to be expressed by that edifice, which may change in time, and due to the significance it gains, its protection and conservation as an architectural heritage becomes a must. In the past, the importance was given to an architectural product if it was a major monument embracing reflections of religious or political power. Today, the approach is to perceive the architectural edifice as a medium reflecting the cultural, social and spiritual features of a changing society.

Regarding these tangible and intangible values of an architectural edifice, the analysis considers a building's merit in five sets of criteria. The following criteria have been developed for the building's values attributed due to its degree of: architectural importance, historical importance, contextual importance, authentic importance, contemporary importance.

2.2. Analysis of New Exterior Additions to Historic Buildings

In any analysis of an architectural edifice, various factors as forces directing the evidence of architecture should be regarded in relation to two sets of conditions; on the one hand buildings must respond to fundamental issues such as the need for shelter and for ideas to be symbolized, on the other hand, they must relate to a region, to a specific location, to topography, to climate and to the movement of

people. This intrinsic link is evident in the origin of architecture which belongs to the satisfaction of the basic needs of man [2]. All these concrete and abstract terms that a building includes, form its architectural character which are explained under following topics:

Environmental relations: The basic physical characteristics of the surrounding buildings such as height and function are considered. The location of the building in the city, its perception from the main roads, its accessibility is the criteria for analysis of an historic building before and after a new addition.

Building-lot relations: As most of the exterior additions are constructed horizontally to the historic building either attached or detached, they particularly interfere with the relation of the building with its own lot. Building-lot relations may reside in the number of buildings in the lot, building order, location of buildings in the boundaries of the lot, orientation or specific location of buildings among each other, and use of open-space.

Mass relations: Massing is one of the more significant factors that contribute to establishing the character of a specific building, because the eye tends to complete any eroded or distorted articulated form to its simple geometrical form: a cube, a rectilinear box, a horizontal cylinder etc. Thus, if the mass is considered as a geometrical object, its architectural form will become the fundamental expression in its original state. Then the form is organized and articulated to satisfy the functional demands of the programme [3]. The analysis of mass includes form of the building, its height, its proportions, type of superstructure and its structural system.

Façades: Façade analysis of the example buildings included in this study is based on the analysis of façade composition and separate analysis of each component. The components, such as window, door, roof etc. are different in their forms, materials and colours according to the functional and structural requirements and materials used in their production. The components of the façade are analysed regarding their number, placement, form, proportions, divisions, units, type, material, surface material and ornaments. On the other hand, the composition is the language binding the components to the whole, while providing each component individually recognisable [3]. The arrangement of windows and doors in a regular and repetitive manner across the front of a building establishes the façade order which includes proportions, main axis, and ratio of solid and glazed surfaces. Superstructure is another feature of façade and it is analysed according to the type of slope and material. For the exterior analysis of a building, the choice of surface materials on new additions is important because of its high visibility. Exterior surface finishes provide colour to buildings depending on the materials used. Stucco, stone or wood, as well as paint or stain that covers a material's natural colour can add visual interest to a new addition.

The criteria for the analysis of new exterior additions to historic buildings are presented in the following on one of the example buildings (Figure: 1).

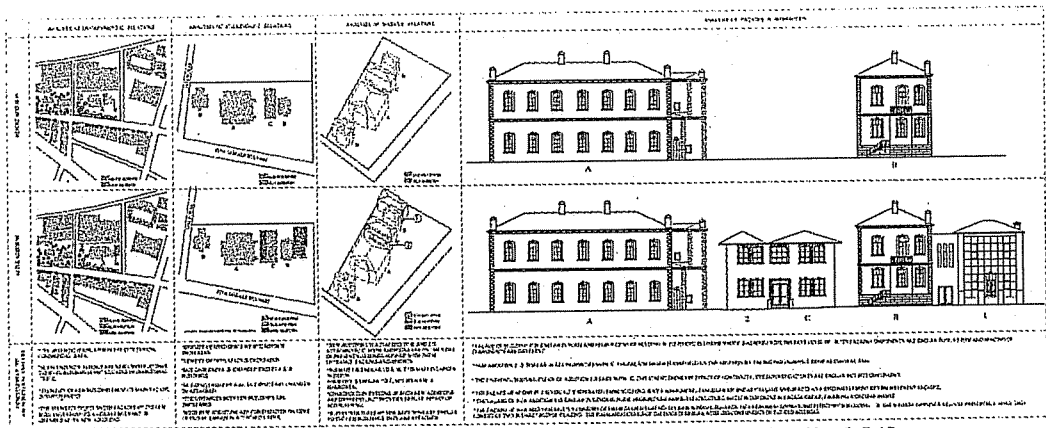


Figure 1. Analysis of School for the Deaf and Blind [4].

3. ASSESSMENT OF INTERVENTIONS

The interpretation of data gathered from the analysis of sample buildings forms the base for the assessment process which is exemplified below on School for the Deaf and Blind [4]. Constructed in 1880's the building functioned as the English Hospital until the Republic Period, when the School for the Deaf and Blind had moved into this building. Today, the building complex serves as the High School for Tourism.

Assessment of environmental relations: Considering the neighbour buildings, the old school is lower in height and has low area usage density. The main entrance to the building plot is from the west side facing the street, but the orientation of the main building is towards the north. It is possibly because the entrance to the site was from the north, when it was built. The orientation of new addition is towards west with reference to current entrance to the plot. The large open space provides a green area among the dense built-up neighbourhood in the city centre. With the introduction of new addition;

- the perception of the historic building from the street is not disturbed.
- the distinguishing effect of the building as a green and low dense area among the high dense environment is not destroyed.

Assessment of building-lot relations: There are two buildings on the lot; the main school building A, and the secondary building B, which was used as an administration office. The main building was constructed on the north side of the lot with an old addition on its south. It is situated in a large garden, which acts as a separation element from the high-rise new constructions around. With the introduction of new addition:

- the regular pattern of the old building complex in height is continued.
- the building order is destroyed; the new addition is attached to old building.
- although the use and placement of open spaces is respected, the distance between the buildings is reduced.

-the area covered by buildings is increased, thus the amount of green area is decreased.

-the use of the main building and the functional distribution among the blocks is continued.

Assessment of mass relations: The generic form of the mass of main building is a hallowed cube; it is a two-storey building consisted of cells arranged around a courtyard. The square planned courtyard was later closed by an iron and glass shelter. The secondary building B has a rectangular prismatic form and it is smaller than the main building. The new addition was constructed adjacent to B due to the need for additional space. With the introduction of new addition:

-similar formed masses are used and the new addition is designed lower than the old building.

-masses are articulated by similar super structures and the construction system of new addition is designed as concrete skeleton system in order to provide similar appearance with masonry.

-the masses are differentiated by the articulation of façades.

Assessment of façades: The entrance façade of the main building and the new addition are not facing each other and front façades comprise a silhouette. The problem of establishing harmony in between the old building and the new addition can be understood by the examination of proposals for the addition to B. The proposals of the architect show that it is difficult to balance the harmony and differentiation at the same time.

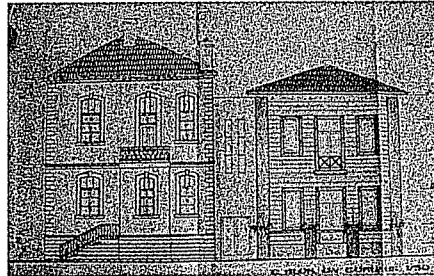


Figure 2. The first proposal for the new addition.

(Source: İzmir 1st Numbered Regional Council for Immovable Cultural and Natural Properties)

Concerning the relation of two façades, in the first proposal, the façade order and façade components of the new addition are similar to the old building's (Figure: 2). The articulations of historic components are eliminated for abstraction. As respect to historic building, the dimension of the new mass is reduced and a small connection part is designed in between the old building and the new one, which also serves as an interior corridor between the two buildings.

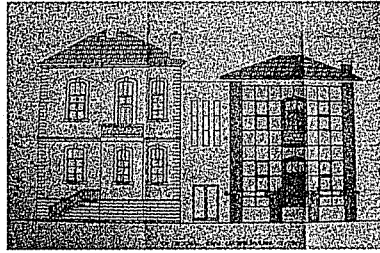


Figure 3. The second proposal for the new addition.
(Source: İzmir 1st Numbered Regional Council for Immovable Cultural and Natural Properties)

In the second proposal the connection part is enlarged and the façade of the new addition is rearranged to look more “contemporary” (Figure: 3). However, the historic details, which are designed in order to establish a harmony with the old building, are exaggerated and false selections. Thus, the end product resulted in a maladjusted new addition: neither a good imitation, nor a contemporary design (Figure: 4).

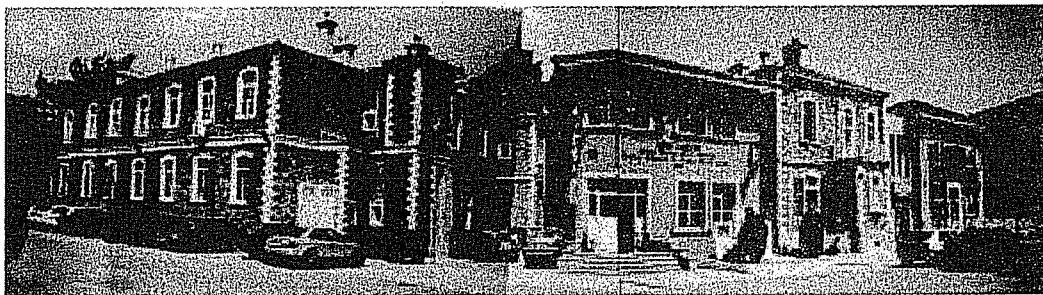


Figure 4. Existing situation of the building. The new addition is on the right end.

4. CONCLUSIONS

From the assessments of examples it is concluded that the approach of architects for new additions tends to create “harmony” through “similarity” in general, and architects tend to use “difference” to make the new addition “distinguishable” from the original. This kind of approach was observed in the additions of all examples except Passport Quay, which is totally contrasting with the historic building. In all other examples the similarity and abstraction is used in different aspects of new design.

When the examples are evaluated in relation with the appropriateness of the new addition and the legal regulations directing their design, it is concluded that the existing evaluation methods for the value assessment of historic buildings should be developed and detailed regarding the relation in between the architectural character and historic values of the building. Thus, the potential to damage and destroy significant historic material and features and the possibility of

changing the historic character may be reduced. Besides, the methodology of historic building registration and determination of interventions within the building should be revised, since the historic character of each building may differ.

An equally important consideration is to provide proper explanations for the terminology used in regulations, such as "harmony" which may be understood as "to preserve the building's historic character", as observed from the examples. However, in an acceptable approach, a new addition should make a distinction from the old in order not to cause falsification while it should establish its own language and should bear a contemporary identity. The features of the historical structure, which can be reference to the new design, are its own architectural characteristics and the values that make it worth protection. Thus, it is defended that they should not go beyond being the references.

As offering a receipt regarding how the new design will be is trying to destroy the creativity of the architect, this study is thought to be helpful as a clear and consistent guidance for professionals who are responsible for the resolving of ethical priorities and values concerned with conservation. With reference to the assessment method developed in this study, it is possible to derive the issues to be taken into consideration both in determination of the limits of an intervention and in succeeding design decisions for additions. Thus, this study may be helpful for the architects in two manners: by proposing a method for criticizing and evaluating the existing new additions to historic buildings and by forming a basis supporting the decision of approach for the new additions during the design process.

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