



Architectural Contemporary Schools Based on Interaction of Form, Function and Structure

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ABSTRACT

The aim of current paper was to study the role of structure and structural thinking in the architectural design process in the three contemporary architectural schools. Paying attention to the structure along with other components of architecture (i.e. form and function) is of great importance in the architectural design process. Such attention in the past by the architects caused unity of the structure with other components. In the current era, development of the sciences and technology in different fields such as architecture and complexity in design and architecture has caused professionalization of different stages of design process. Hence, the professions such as structure engineering and architectural engineering have required static thinking and establishment of the structure, to loose structure unity with other architectural components, at some cases.

Keywords: Coastal Engineering, Architecture

INTRODUCTION

Structure in architecture is the first important issue in establishment of the space. Paying attentions to structure along with the two other fundamental factors (i.e. form and function) is of great importance in design and construction process of a building, an attention which necessitates synchronization of structural building during design process. In the past, synchronization of design and construction of a building inspired by spatial and time condition of each area would resulted in a unique unity in tangible achievement of these architectural components.¹ At the same time with industrial revolution (i.e. since 2nd half of 18th century) and development in different fields of sciences such as science of structure engineering, the architecture went away from the new structural applied science and such lag caused architecture to lose its dominance on the materials and structure of the new buildings such as grand hall of the exhibitions, stores and big roofed factories and other types of large scale engineering buildings and even it sit back from work space in favor of structure engineers.

In this regard and to eliminate the created gap the architecture and structure engineering, it seemed necessary to develop a new line of architectural education and to accompany it with curriculum which would increase perception and analysis power of the structure behavior by the architect. With continuation of such approach and with investigation of architectural examples such as Nervi, Fuller and Calatrava's works, sometimes such closeness reaches a place where bordering between architecture and structure engineering seemed void.²

It was tried to explain triple relationship among them in the form of contemporary architectural design schools and analyze degree of attention paid to each component in several index buildings of the contemporary architecture. Most of the architects follow the aim of architecture in determining form and function. The designers have all the time confronted the question that: which one of these two fundamental factors would start architectural design? It seems that in some cases of the contemporary history, some architects believe that structure and structural

thinking is considered as the last stage of design process. This might be due to excessive reliability of architecture to the developed science of the structure which makes it possible to build every form of the building. The aim of current paper was to explain the role of structure in architectural design process in the contemporary architectural schools. In this regard and in order to achieve the research objective, finding answer to the following questions seems necessary.

Conclusion

Studying three architectural contemporary schools it was tried to proceed on investigation of the role and place of structural technology in architectural design and its relationship with the two factors of form and function.