

PREFACE

The story of this book goes back to 1984, when I became a research assistant on the subject of structural systems in the Middle East Technical University, Department of Architecture. One of the professors in the recruitment committee – I think it was Professor Kadriye Seyithanoğlu – approached me and said:

We decided to ask you to conduct research in the direction of relating the realms of architectural design and structural systems. You are good both in design and the mathematical issues about structures.

I was assisting professors both in design studios and in theory courses about structures. Then one of my architect relatives, who later became a well-known Cypriot architect – Ahmet Vural Behaeddin – told me that:

Structural systems are the area of structural engineers. You are an architect. You should study how structures effect architecture.

Therefore, I started my academic life with the mission of connecting knowledge about the structural systems to knowledge about architectural design. However, there was no academic literature relating these two realms to each other. Because of this, I first focused on structures as a technical issue and this was the main reason behind my research on a certain type of high-rise building structure as a master's thesis. However, I faced many problems with this thesis, because at that time interdisciplinary research was not on the agenda. The literature on structural systems was on the mathematical aspects of structural systems and theories of architecture were on qualitative features of architecture. These architectural features included structural systems; however, the technical dimension of structural systems was seemingly ignored. There was also very little literature available on the structural systems of high-rise buildings from an architectural point of view.

I was aware at that time that the most important common feature of architectural design and structural systems was the form of buildings, elements etc. I started preparing my PhD thesis on the form of a certain type of high-rise building structure. When I got my PhD degree in 1992 the effect of form on the wind performance of high-rise buildings was not known as it is known today. There were mostly rectangular high-rise buildings with

tapered forms. I saw the project of the Bank of China, which at that time was a high-rise building with a very radical form and I thought that it was not a project possible to realize. However, it was built within a few years.

While continuing my studies on structural systems, their examples and structural systems of student projects, I also started reading philosophy and attending some philosophy classes. I started with epistemology, then aesthetics, then ontology, then politics, then ethics and finally poetics. My philosophy readings have been ongoing since 1992. I learned a lot from philosophy and tried to relate the architectural features of buildings to their structural features with the help of philosophy. I compared the types of knowledge in architecture and structural engineering. I discovered that the first one is ontological and artistic, whilst the second is epistemological and analytical. I studied the political dimension of earthquakes. I recognized the problem of technology as meaninglessness with the help of ontology. I studied the ethics behind building codes, which sometimes restricts architectural design in various different ways. When I started reading poetics, I understood that secularity of the modern world causes the exclusion of certain poetic dimensions from architecture. Most of these excluded poetic dimensions are about the immanent characteristics of the material world including architecture.

At that time, I started focusing more on the theories of tectonics and the history of these theories. Again, I came face to face with the issue of separation of the artistic from the analytical, because some theoreticians supported the technical dimension of tectonics, whilst others supported its artistic dimension. It was mainly the contemporary theoreticians who supported the artistic dimension of tectonics in order to avoid the problem of technology which causes meaninglessness. I found out that the problem of technology is actually due to the ruthless applications of the commercial approach which causes meaningless architecture.

I taught at least fifteen hours weekly during my thirty-five years of academic life. Parallel to the readings of philosophy and research, I changed the character of the structure courses that I taught at the Eastern Mediterranean University. Previously they were mathematical courses. In 2006, I changed them into tectonics courses, which combine the technical knowledge about structural systems, the mathematical knowledge about them and the tectonic qualities of their good architectural examples. Taking place in the design studios and helping students of architecture and interior architecture to design the structural systems of their design projects contributed considerably to build up an architectural approach, bit by bit, to structural design in

architecture. In 2016, I published the intellectual material related to my undergraduate courses about structural systems as a book called: "The Tectonics of Structural Systems – An Architectural Approach" with Taylor and Francis – Routledge.

My students contributed a lot to my knowledge about the tectonics of structural systems by bringing new developments to my attention, asking questions about the structural systems of their design projects, asking detailed questions about building technologies and bringing architecturally valuable examples of various structural systems to the class. My students were like my agents of research and they seriously contributed to the accumulation of my knowledge in the long term. My post-graduate students also contributed to my knowledge about tectonics. I supervised five completed PhD dissertations and twelve master's theses. These theses were either about tectonics or related subjects to tectonics. These theses also allowed me to delve into the details of the tectonics of certain structural systems.

However, the technical dimension of "The Tectonics of Structural Systems – An Architectural Approach" was dominant in comparison to the aesthetic dimension. This was because of the character of my courses. After this book, I started to think about how I could reflect the harmonious character of tectonics with its technical and artistic dimensions in the successful cases of architecture to another theory. The balance and harmony of architectural aesthetics, technical knowledge and philosophy in the theories of Gevork Hartoonian greatly inspired me. This book was planned with that intention. It took four years to complete. 13.1.2022, Monarga, Cyprus