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form in architecture and music  
persistence of the intellect

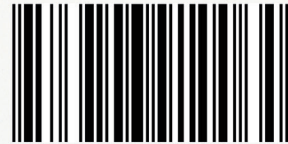
form in architecture and music  
persistence of the intellect

isben önen

At a time when technology has unleashed architects to design the most extravagant tangible forms, could questioning the concept of form in an abstract medium like music, which lies in the territory of idea, and incorporating its ephemeral qualities into the spatial realm lead to a reconsideration of architectural form?

Throughout history there has been a constant fascination of architects with music. Isben Önen, an architect and a musician himself, sets out explore the formal correspondence between his two fields of expertise, from Vitruvius to Leon Battista Alberti; from Gabrieli through the enlightenment, to Alban Berg and all the way to Renzo Piano's and Luigi Nono's contemporary Prometeo. This uncommonly vast and profound piece of scholarship is of interest not only to musicians and architects but also the non-specialized public. (Liane Lefairve)

Isben Önen's insightful book offers a new view of the relationship between the histories of Western music and architecture. It demonstrates both the profound overlaps and divergences between the two fields, presenting a wide-ranging understanding of the development of each field. This is cultural history at its best: richly informative and deeply engaging. (Christopher Long)



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Herausgegeben von Manfred Wagner

Isben Önen

**FORM IN ARCHITECTURE AND MUSIC**  
persistence of the intellect

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To my mother and father  
Sevil and Yusuf Hatay Önen

# **FORM IN ARCHITECTURE AND MUSIC**

persistence of the intellect



1	<b>Foreword</b>
5	<b>Prologue</b>
9	<b>Preface &amp; Acknowledgements</b>
19	<b>Prelude</b>
22	<b>TRACING CHANGE THROUGH FORM OVER TIME</b>
32	From Space and Sound to Architecture and Music
52	Form as a Term in Philosophy, Art History and Theory
61	<b>FORM IN MUSIC</b>
82	The Sonata
127	<b>FORM IN ARCHITECTURE</b>
142	The Temple
158	Markus Vitruvius Pollio, De architectura libri decem - Ten Books on Architecture
207	From Medieval to Renaissance
223	From Renaissance to Enlightenment
246	From the Nineteenth to the Twentieth Century
267	<b>TOWARDS A UNIFIED FORM AND ITS AFTERLIVES</b>
275	<b>Epilogue</b>
279	<b>Notes</b>
307	<b>Bibliography</b>
321	<b>Index</b>

# FOREWORD

This book discusses form in music and architecture as a structural element in the creative process. Form does indeed play a very important role, because it has material and immaterial attributes: it lies in a field of tension between idea and matter. In this way, the discussion can be built on a multidisciplinary foundation. The discussion of music and architecture cannot be reduced to a one-on-one comparison. Architecture and music are two separate media and have their own histories. It is important to set up this discussion on an overarching level, that is, to look across each discipline at how the intellect works.

Accordingly, Önen first contrasts space and sound in architecture and music, and then the concepts as they appear in philosophy, art history, and theory. For his argumentation, he draws not only on the better-known theoretical viewpoints, but also on rather lesser-known authors, even to specialists. In the musical context, these are often only performers, whereby the gap between science and interpretive experience history is generally maintained, but is convincingly linked, because first-class performers in fact often internalize much more musical knowledge from their direct musical experience than musicologists do. Önen is indifferent to the time from which the arguments come and for which time they stand, insisting on the intellectual rational qualities of music. In his examples he never drifts off to the purely emotionally controlled production, nor to its reception. He substantiates this by evidence ranging from Aristotle to the immediate present.

The certainty with which Isben Önen builds bridges to the respective theorists of the five centuries covered is impressive. The section on architecture begins with the temple as a timeless answer to the basic question and its own expression. Separate chapters are devoted to the transitions of the periods, which is undoubtedly related to the fact that the visibility of architecture shows stronger differences than the fluctuation of musical forms. In Vitruvius' time, nature played a very important role for the intellect and its own development of spatial reasoning.

The road from the Middle Ages to the Renaissance was characterized on the one hand by the importance of scholasticism, i.e. the theological and scientific perception of architecture, and on the other hand by new analytic methods, where it was a question of a new position of man, and thus the orders seemingly shifted, but nevertheless the guidance by the intellect and reason, only depending on a different target object, was decisive. Now in the way to the Enlightenment it was not only about the new experiences of the sciences by Galileo Galilei and Isaac Newton, but also about a new self-determination of man, who probably for the first time recognized "historical" architecture and also took note of the plurality of its form.

The transition from the Age of Enlightenment to the 19th century was marked by revolutionary architecture, which reverted to the old temple idea, also in terms of form, because it found in it a place for reverence for human values, remarks, and actions. As "post-Enlightenment," however, it sought an architecture that would fulfill every conceivable plan and spatial form arising from the needs of life. According to Schinkel and Semper, neither rationality nor order fell by the wayside.

The 20th century insisted on practicality – “the impractical cannot be beautiful” – which characterized Loos and van der Rohe and did not even throw off the utopias, if they existed at all. Although the principles that the material should create an order peculiar to itself had long applied even Mies van der Rohe’s concept contained an overriding system above it, in which all concepts were to hold their durability, their practicality, and their beauty through universal validity, temporal boundlessness, and reasonable adaptation.

The study is a fundamental study in the humanities, substantiated by much, even unknown and unusual literature, carried by a high abstraction and thus not always easy to understand. The pictorial arguments, the clever constructive diagrams, excellently thought out, and an extensive bibliography testify to this high effort and its crowning success.

Manfred Wagner

# PROLOGUE

Is there an absolute, inborn, timeless sense of form that is hard-wired into the human mind? Is it an innate cognitive category? Does it automatically tend to structure the way the artistic imagination shapes matter? Is it embodied in everything that human beings create, from poetry to architecture, music, art, dance, dramaturgy, the crafts? If so, how does it work? What are its rules?

Or, on the contrary, is our sense of form something that is arbitrary, relative, chameleonic, in constant flux, adapting to its constantly changing historical context, infinitely malleable?

Like a leitmotif, these questions have preoccupied Western writers periodically since Plato theorized on the concept of Idea in the fifth century BCE. In this same vein, Leon Battista Alberti wrote on *concinnitas* (1475), Claude Perrault on “absolute” versus “arbitrary” beauty (1683), and Henri Focillon on what he called the *Life of Forms* (1934). Alexander Tzonis and I were conscious of this great heritage when we wrote about *Classicism, the Poetics of Order* (1983). And these are the kind of issues that also inform Isben Önen’s authoritative and richly documented *Form in Architecture and Music*.

Önen chose as his avenue of inquiry a history of how musicologists and architectural writers have theorized about form. The aim is to seek parallels between the two fields, something he is well qualified to do as both an architect and a musician.

There is no better place to start a study of this kind than at the Arnold Schönberg Center in Vienna. It was founded to honor the work of this most radical and influential critic of musical form of the 20th century, who rebelled against the centuries-old foundations of what his enemy Eduard Hanslick called the “musically beautiful.” And, indeed, the Center, headed by his daughter, Nuria Schönberg Nono, a musicologist in her own right and the wife of Luigi Nono, granted the young Önen an Avenir Foundation Grant to begin his research on the topic in 2005.

The scope of his study is uncommonly broad. It starts with Vitruvius’ admonitions that a good architect must know music and goes all the way to composer Luigi Nono’s and architect Renzo Piano’s production of the opera *Il Prometeo, Tragedia dell’Ascolto* of 1981-85.

The study takes a long view of architectural and musicological knowledge over the centuries, with its ruptures and discontinuities. What emerges from this minute examination is the gradual abandonment of the belief in the absoluteness of form, and an acceptance of its relativity. The post-Schoenbergian writings of Charles Rosen and Alfred Brendel on the sonata form emerge as the culmination of writings of 17th, 18th and 19th century writers.

Something parallel occurs in architecture, as Önen stresses. If Bellori and Francois Blondel still believed in following the precepts of perfect form in the 17th century, the polemic attack by Perrault ultimately shook this belief to its foundation. It took another two centuries before a conservative, backward-looking profession of architecture would be forced to abandon its biased beliefs in absolute norms of beauty.



Since Vitruvius, architects have tended to incorporate musicological ideas into their design thinking. That is a constant. What changes is the concept of what constitutes form. For all their differences, as Isben Önen elegantly reminds us, Le Corbusier's and Iannis Xenakis's Phillips Pavilion, based on Edgar Varèse's *Poème Electronique*, Daniel Libeskind's references to Schönberg's *Moses and Aron* and Steven Holl's to Bela Bartok's *Music for Strings*, and Luigi Nono's and Renzo Piano's *Il Prometeo*, form a continuity with Vitruvius' admonition that architecture has much to gain from music.

Liane Lefaivre

# **PREFACE & ACKNOWLEDGEMENTS**

This book is based on my dissertation completed at the University of Applied Arts, Vienna over a timespan of nine years, from late 2007 to mid-2016. I do not remember the exact moment when I had the idea to focus on the concept of form in the arts. However, I do recall that when perusing countless other topics, and knowing of his mutual interest in music, I had exchanged ideas with architect and scholar Ziya Tanali or *zt* as he was known by his friends. After having discussed many possibilities, we had agreed that it would make sense to select a concept that was common to both architecture and music. With this in mind, and my initial proposal in hand, literally a couple of sentences written on a sheet of paper, there I was waiting to meet Prof. Manfred Wagner. I still remember the silence as he asked me what the final title of my research would be. As the single sheet of paper gradually evolved into a “brick” it has had its own U-turns, clear paths, and *cul-de-sacs* before reaching its final state. As architects know from their hearts, without the imposition of deadlines and submission dates there would never have been such a thing as a final state. Just as these deadlines were looming, I began teaching which made things even more complicated. Disregarding its temporal consequences, the delay also led to intellectual labyrinths: I was changing but most importantly, the ways in which I was thinking were changing. This marked the event of yet another postponement of the planned publication date. However, looking at things from a more positive angle, I could now be proud that my concerns about the risks of postponing something in general would soon turn out to be justified: once anything is delayed, one should expect that it will take a much longer break—if it ever gets a second chance—than foreseen.

The idea of writing a systematic and structured text on my two main creative tours de force, music and architecture had been brewing for a very long time. Parallel to my sporadic discussions with Tanali, my stay at the Arnold Schönberg Center in Vienna opened up new paths for exploration. Tanali and I considered many options for how the question should be formulated and which grounds should form the basis of the discussion. We both had no doubt that it needed to deal with an essential and structural commonness. We assumed that one could only then have the opportunity to define an open-ended void in which one could dwell intellectually. This attempt scrutinizes the concept of form in architecture and music. Throughout the course of human intellectual activity, the relation once of a physical reality, audial and spatial, had inevitably gained complexity as it evolved into music and architecture. If one is concerned with projecting a dialogue-based correlation between the two media, one requires a common denominator to define the nodal points with regard to the means of creativity, temporality, geography, and intellectual activity. This relationship dwells on the fundamentals laid at the crossroads of form, where many disciplines, such as philosophy, linguistics, and art history and theory, and concepts like figure, shape, type, format, and structure reside. I was neither concerned with a comparison confined to the restrictions of a specific medium nor to analogies, so it was necessary to introduce a set of concepts, namely the creative act, idea, order, and the persistence of the intellect. Developed around a set of discussions concerning these concepts the research aims to arrive at an overarching perception of form that can be emancipated from the confines of any single medium.

Within the selected temporal limits starting from the first century BCE, the scrutiny traces the continuity and ruptures in the emergence of the temple and sonata forms, focusing on a period between the late fifteenth and the

first half of the twentieth centuries. It sets out to look at the origins of the sonata as an idea in the Baroque era and how it was transformed into the sonata form laden with musical and non-musical preferences in the nineteenth century, stretching towards the twentieth century. To this end, it focuses on eight sonatas within a period of five centuries, covering compositions from Giovanni Gabrieli to *Pierre Boulez*. The questioning then turns to architecture and examines five architectural treatises starting with *Vitruvius* and covering a course of two millennia before arriving at the first half of the twentieth century and the works of Ludwig *Mies van der Rohe*. The result is the relationship of form to beauty, stretching through centuries under the persisting presence of the intellect striving towards an ordered, flawless whole. The discussion inevitably presents a historical layout in order to introduce temporal leaps and ruptures. However, the essence of this relationship could be understood within the complex intellectual thread. The book will perhaps be welcomed by some as an “old-fashioned” scrutiny that has turned its back on current and more popular topics that deal with more attractive subject matter like digital media, popular culture, or even eroticism. The suspicion that I was pursuing a topic with a certain “out-of-datedness” often came to me when I was checking out resources from the library. For example, nearly all of the books I wanted to borrow were not being used by other readers and the latest issuing stamps were dated some time ago. Furthermore, most of the books I requested were in distant storage facilities that were usually not accessible until the following day. Of course, I have nothing against the more recent topics of research or those who are interested in them, or the minority who are able to squeeze some thrilling essence out of such topics. I myself am to blame: I set aside more popular themes and found myself facing a rather tedious sort of research because I believed that there was something timeless in my topic.

Throughout the process of my research, I received interesting reactions from people. Whenever I mentioned what the subject was, without exception those I was speaking with responded positively. This led to yet more uncertainty, a contradictory fear that what I was doing was actually quite popular. At one level, this was reassuring but it created the anxiety that it would be a very hard task to fulfill all the expectations. The idea that I could find a perfect answer to my research question was troubling. More so was the comment I sometimes heard: "It sounds inspiring, but don't you have twice the sources to look into; architecture and music?" The image in my head of Sisyphus behind a single rock was already de-motivating, and I now had two boulders to move. Peter Eisenman's conclusion that the benefit for an architect writing a dissertation was that one had the chance to learn to sit still and concentrate on one single topic for three years, but this was not applicable in my case. Not only was I not able to sit still and tackle just one thing, but it also took me almost nine long years of my life, filled with sporadic pauses and at times, rupture. I am no longer that young "chap" who arrived in Vienna on a late September day in 2007, nor is the world the same place. Wars, forced immigration, fear, famine, pandemic, environmental crises, injustice in the distribution of everything, financial insufficiency underscored by intellectual and pragmatic incapability and so on... have all left their mark. Nowadays, no one really seems to recall the ideals of humanism in a world where idiocy rules or, as Tony Judt had then coined it, where "ill fares the land."

First and foremost I am very grateful to my supervisor, my Doktorvater Manfred Wagner and external advisor Christopher Long. Wagner's acceptance of me as his student at the very beginning changed everything in my life. His discipline and well-structured knowledge, especially of musical and cultural theory, have been immensely beneficial. If I were to single out

two topics from his nearly fifty years of research, these would be his works on the relationship of Enlightenment and music, and the correlation of the musical realm with that of the cultural and societal. The presence of Chris as a mentor was probably the best thing that could have happened to a dissertant coping with an architectural theory spanning two millennia. His profound knowledge and highly refined methodology were very helpful, and his humaneness should be acknowledged in capital letters. I would like to thank them both for their careful reading, patience, intellectual guidance, and courage. I also would like to offer my sincere thanks to Liane Lefavre, not only for her generous support and advice throughout the years but also for the prologue she wrote to this book; and of course, Alexander Tzonis for his ingenious commentary in our sporadic meetings in Vienna. In the time I spent with them they served as elegant role models for how to structure one's intellect in a novel, sophisticated, and poetic way.

To Ziya Tanali I owe a great deal of my intellectual formation regardless of medium. From the day I met him years ago as a first-year architecture student I have been inspired by his knowledge which he generously and in a most enlightened and humanist attitude passed on to those who were interested. It's thanks to him that since I left for Vienna, I have not really come across anything that was completely unfamiliar to me. It was always a relief to know that he would be just around the corner if things turned out other than they should have, which they did most of the time. I miss him. I also want to thank Zeynep A. Onur for the supportive discussion sessions both online and offline, moreover for believing in me covering almost the last two decades. In addition, I wish to express my gratitude to the late Selcuk and Kamuran Gündemir for their musical appreciation and humanism, from which I benefited as a young boy.

For their financial support I would like to thank Rector Gerald Bast on behalf of the University of Applied Arts Vienna. I give credit to the *Fondazione Renzo Piano* in Geneva for allowing me to include the material concerning the project for Luigi Nono's *Il Prometeo* and to Nicolette Durand for arranging the materials. In addition to the architectural material, I was kindly permitted to include the images by photographer Gianni Berengo Gardin. I thank Susanna Berengo Gardin on behalf of Archivio Berengo Gardin. Xenakis Association in Paris and Nuria Schönberg-Nono on behalf of Fondazione Archivio Luigi Nono in Venice are also to be acknowledged for their kind permission to include material from their archives. Special thanks to Peter MacCallum for allowing me to include his photos, which capture the subtle essence of Miesian space and Robert Tavernor for the Alberti images. In terms of institutions: the Greek Ministry of Culture and Sports, Ephorate of Antiquities of Ilia, Ancient Olympia for providing the images of the beautiful West pediment of the Zeus Temple and the Austrian Academy of Sciences, which instead of granting me the scholarship I had applied for, sent a letter of rejection including an anonymous evaluation. I kept this ingeniously written one page of text and profited immensely from the critique. I was fortunate to receive the Avenir Foundation Grant initiated by the Arnold Schönberg Center in Vienna and I owe a lot to the Schoenberg Center for the opportunities it provided me. I would also like to thank Therese Muxeneder, who initiated my connection to Prof. Wagner, for her generous guidance through valuable sources, and Eike Fess for his friendly support regarding the archival material. Likewise, my thanks go to Anna Spohn for her guidance in tracking down Wagner's articles.

For allowing me to use her most poetic and subtle artwork *Torn II*, I salute and thank talented artist Hye Lee. She describes *Torn II* and the process in



which the work of art itself becomes a fertile ground for a dialogue between the artist, material, and technique as follows:

The collaged work embodies this idea in the process itself. The individual cutouts reflect shapes of negative spaces in old photographs of fractured Greek sculptures. These were dropped onto a piece of paper in random sequences. The paper was then pulled and flipped like fresh laundry until an interesting composition started to emerge by chance. This chance is what I call a happy accident, one which creates something new and unexpected, deserving of a closer look.

I am grateful to Emre Yavuz, a child prodigy, young concert pianist, and a dear friend, for his time and patient investigations when I asked for his help with the musical analysis for this research. The sessions turned into enjoyable yet challenging discussions from which I profited greatly. Also, to be acknowledged is a man of exception the late Kari Jormakka. His ideas and comments led me to unknown territories that I would never have thought of otherwise. I remember how dazzled and inspired I felt after a brainstorming session of ours, or rather was it of his? I owe special thanks to Ulrike Unterweger for translating the abstract to German and for her comments on the English version, to Gabrielle Greenlee for her treasured contribution and proofreading, and to Rachael Evans and Kevin Kelly for their skillful editing of the text. In addition, I wish to thank Susan Ambler-Smith for the English translation of Manfred Wagner's foreword, Walter Stelzhammer for his understanding in accepting my sabbatical leave from the office to finalize the research, and Michael Ritter on behalf of the Praesens Verlag for his patience throughout the long publishing process. A very important task in the process that makes this book "this" book is the layout and graphic design contributed by Sevval Cologlu.

I am sure readers will share my appreciation for how she managed it. Lana Nikolic took time to discuss and provide invaluable guidance regarding the layout. Finally, there were people who supported me with or without knowing that they were doing so: Yarsu, Meliha, and Meltem.

I do not really know how and in what form I should thank my parents Sevil and Yusuf H. Önen, to whom this dissertation is dedicated. They made it possible for me to start and finish, not only the dissertation and the book but countless things throughout the years. I must admit that my father, a professor himself, had been the major driving force for the completion of this venture.

There are three others that I want to thank in a special way, which cannot be done within the premises of writing. Without the support of my wife Özlem it would not have been possible to go through these challenges by any means at all. Her gentle presence, critical approach, perseverant courage, and generous support were incredible. And finally, as I approached the start-finish line, there had to be a happy end to all this, and it was not that nothing positive happened through the last nine years on the planet. The arrival of our daughter Vera brought everything that was missing from our lives at that time. And two years into the editing process our son Ren joined the family bringing us joy anew.

As time flew by, I kept finding myself changing the date under this text many times. Before I start adding the names of our grandchildren, it is now time to bring this to an end.

Vienna, December 2021



# PRELUDE

*...It must have been an Oriental tale. It's strange that he can still remember it.*

*Perhaps it's not strange.*

*Some details elude him: where the architect was from, who he was, why he had agreed to undertake the task.*

*He does remember this: An architect is instructed to build a palace with hundreds of, thousands of, cut stones of various colors. A palace such that whoever enters should feel perfectly at home, know which room is where, which stairway leads where, which door opens to which room; but at the same time, the palace has to be so extraordinary, built so ingeniously, that whoever enters it should know, recognize right away that he neither has seen nor will ever get to see another place like this in his lifetime.*

*The architect is given one more instruction. No two stones of identical color can be set either side by side or one over the other, except once, in one singular instance throughout the immense palace.*

*So the architect gets to work, applying his cunning, his utmost mastery, supervising the completion of the first row of stones. But the difficulties he encounters during the second row prove quite daunting. So he orders the workers to tear down the first row, deciding to start over by building up one of the corners. After getting a few rows completed, he moves to build another corner. To avoid tearing down what he has built. Each time he notices that a pair of same-colored stones would have to be set side by side, he leaves that wall segment on another segment. The thought that he is allowed only one exception disheartens him so much that he keeps postponing the exception, thinking he might need it later. Days, months, years pass like this; he grows old, one foot is already in the grave, as they say, each morning*

*may be the start of his last day, each night may be his last; then all of a sudden, he realizes.*

*He realizes that, though his workers have long abandoned him—in reality, he had pushed them away—and he’s been toiling alone for years in a dreadful frenzy, he has somehow managed to gather inside him all the patience his workers have lost, to recover deep in the heart of his heart all the patience he’s spent on his workers, absorb their strength in his own arms in order to fill the entire plot assigned to him with wall fragments, waiting to be connected. Even if he has enough strength or life left in him to connect these walls, he has completely cleared his mind of the rules according to which the palace was supposed to have been built; the finished structure will not even resemble a barn that could shelter animals, much less a place at once extraordinary, at once familiar to everyone. There is neither a palace nor a building in place, not even the notion of one or the other.*

*Only one question had crept its way into young Ioakim’s mind that night: So what if he didn’t build it? What if he didn’t toil?*

from *A Long Day’s Evening* by Bilge Karasu