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# Harmonical Contrast Design Approach in Historical Urban Context

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## **ABSTRACT**

### **HARMONICAL CONTRAST DESIGN APPROACH IN HISTORICAL URBAN CONTEXT**

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The new building in the historical environment is one of the important research, discussion, and application topics of architectural practice. The debates emerged with the discourses of modern architecture and developed until today with the help of other architectural movements. When today's applications are examined, various approaches draw attention. These are reflectivity, interpretation of historical values, analogical and contrast approaches. Although the contrast approach has the potential to reflect the designer's self in the best way and to increase the interest in the historical building, good contrast designs cannot be made for various reasons. One of the most important of these reasons is that the context has intangible features beyond being a physical object, these features are not adequately perceived and interpreted by the designers, and the visual integrity of the new building is not evaluated at the city scale. In international texts on conservation theory, the context is generally treated as a purely physical fit. These problems cause unsuccessful examples and cause historical environments to lose their original qualities. Therefore, this study focuses on harmonious contrast design approaches. The study aims to provide a better understanding of harmonious contrast design by architects. In this context, in the light of the principles of conservation theory, contrast design examples that have attracted attention in historical city centers in the world in recent years have been examined and evaluated. As a result of the evaluation, it is seen that the harmonious contrast designs differ from the historical building with their form and material properties, and they harmonize with their color and scale characteristics. In addition, it has been determined that the color selection of harmonious contrasting designs

increases the similarity with historical buildings by choosing the colors found in the historical context. On the other hand, it was concluded that choosing colors suitable for the historical context in harmonious contrasting designs increase the harmony of the buildings with the historical context while ensuring the separation of the historical building.

**Key words:** architecture, historical context, contrast design, urban design,



## ÖZ

### TARİHİ KENT ÇEVRESİNDE UYUMLU KARŞIT TASARIM

#### YAKLAŞIMI

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Tarihi çevrede yeni yapı, mimarlık pratiğinin önemli araştırma, tartışma ve uygulama konularından biridir. Tartışmalar modern mimarlık söylemleriyle ortaya çıkmış ve diğer mimarlık akımlarının yardımıyla günümüze kadar gelişim göstermiştir. Günümüzdeki uygulamalar incelendiğinde çeşitli yaklaşımlar dikkat çekmektedir. Bunlar; yansıtıcılık, tarihi verilerin yorumlanması, analogik ve kontrast yaklaşımlardır. Bunlardan kontrast yaklaşım, tasarımcının kendini en iyi şekilde yansıtabildiği ve tarihi yapıya olan ilgiyi arttırabilecek bir potansiyel taşımasına rağmen, çeşitli nedenlerle iyi kontrast tasarımlar yapılamamaktadır. Bu nedenlerin en önemlilerinden biri, bağlamın fiziksel bir nesne olmasının ötesinde somut olmayan özelliklerinin de olması, bu özelliklerin tasarımcılar tarafından yeterince algılanıp yorumlanmaması ve yeni yapının görsel bütünlüğünün şehir ölçeğinde değerlendirilmemesidir. Koruma kuramına ilişkin uluslararası metinlerde de genellikle bağlam salt fiziksel bir uyum olarak ele alınmaktadır. Bu sorunlar başarısız örneklerle sebep olmakta ve tarihi çevrelerin özgün niteliklerini kaybetmesine yol açmaktadır. Bu sebeple bu çalışma uyumlu kontrast tasarım yaklaşımlarına odaklanmaktadır. Çalışmanın amacı, uyumlu kontrast tasarımın mimarlar tarafından daha iyi anlaşılmasını sağlamaktır. Bu kapsamda, koruma kuramı ilkeleri ışığında, son yıllarda dünyada tarihi kent merkezlerinde dikkat çeken kontrast tasarım örnekleri incelenerek değerlendirilmiştir. Değerlendirme sonucunda uyumlu karşıt tasarımların form ve malzeme özellikleriyle tarihi yapıdan ayrıştığı, renk ve ölçek özellikleriyle ise uyum sağladığı görülmektedir. Ayrıca uyumlu karşıt tasarımların renk seçiminde tarihi bağlamda bulunan renklerin tercih edilmesiyle tarihi yapılarla benzerliği arttırdığı tespit edilmiştir. Diğer taraftan, uyumlu karşıt tasarımlarda tarihi bağlama uygun renklerin seçilmesinin yapıların tarihi bağlama uyumunu artırırken tarihi yapının ayrışmasını sağladığı sonucuna varılmıştır.

**Anahtar Kelimeler:** mimarlık, tarihi bağlam, kontrast tasarım, kentsel tasarım.

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Çağın Demir

İzmir, 2021



## **TEXT OF OATH**

I declare and honestly confirm that my study, titled “HARMONICAL CONTRAST DESIGN IN HISTORICAL ENVIRONMENT” and presented as a Master’s Thesis, has been written without applying to any assistance inconsistent with scientific ethics and traditions. I declare, to the best of my knowledge and belief, that all content and ideas drawn directly or indirectly from external sources are indicated in the text and listed in the list of references.



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## **ABBREVIATIONS**

ICOMOS International Council on Monuments and Sites

UNESCO United Nations Educational, Scientific and Cultural Organization



# CHAPTER 1

## INTRODUCTION

### 1. Introduction

Cities are morphological settings that consisted of historical and sociological changes. In the historical process, civilizations reflected their aesthetic understanding and technological developments to the cities and gave shape to the city with changes and transformations. Also, cities have been associated with appearance, life value, and symbolic meaning that reflect civilizations' social, economic, and architectural values by historical settings. Today, with population growth, globalization, and socio-economic changes, these changes cause the city to grow and new aesthetic understandings to emerge. The emergence of new aesthetic understandings shows its effect in many areas from superstructure works in the city (manhole covers, electricity poles, etc.) to buildings.

One of the potential areas that contribute to the city by being transformed in the city is historical areas. Although there are many methods to contribute these areas to the city, the method that adds value to the city and its historical context is adaptive re-use. This concept adds value to historical building by adapting contemporary needs of the city, while preserving historical value of the city. However, because of the new functions, historical buildings need new buildings to fulfill new requirements. While, the new buildings revive the historical texture, they create a transition between the city and the historical texture. One of the reasons for these tensions is the differences between the historical context and the aesthetic understanding of the city that discussed both architectural and conservation platforms. In the conservation theories, they offers suggestions for new buildings to be compatible with historical buildings. This suggestions gave based on aesthetic features of historical buildings like color, material and etc.

However, new buildings that fit all suggested features observed to become a copy of the historical building, give no aesthetic value to the historical setting, and have no

clue about modern buildings architectural era. However, with the help of creative approaches, new buildings reflect their architectural era by contemporary materials and techniques. While Bilgin (Bilgin, 2010) defines these approaches as interpretation, reflection, contrast, and generator, Semes defines as abstract, referenced, and extreme contrast designs (Semes, 2008). While most of these approaches assist new buildings to design compatible to historical context, these approaches does not reflect aesthetic understanding of city.

Compared to abstract, referenced designs, the contrast designs reflect the modern aesthetic of the city. However, compatibility problems with the historical context are observed at the extreme side of this approach. Approaches that are compatible with historical buildings but observe the aesthetic understanding of the city can be described as harmonious contrast designs. While harmonious contrast designs adapt to the historical structure with the suggestions specified in the conservation theories, they reflect the aesthetic understanding of the period at the highest level. The relations between the harmonious contrast designs and the historical texture cannot be understood, and there is a need for in-depth literature studies. This study aims to disseminate the contrast designs that will reflect the modern aesthetics of the city to the historical textures by determining the parameters in which the contrast designs are compatible with the historical structures. Therefore, the harmonious contrast designs were supported by literature studies by accepting the features specified in the conservation theories as to the starting point. The selected examples were examined as a result of the criteria obtained.

## **1.1 Aim**

Answers to several questions were sought for the effective application of contrast designs in historical textures and for the emergence of qualified designs.

-With which design features do the harmonical contrast approach harmonize and differentiate with the historical structure?

-What kind of a relationship with the context is observed in the harmonical contrast designs?

-What are the features that distinguish harmonical contrast designs from other approaches?

In this direction, the relationship of contemporary contrast designs with the historical building is examined in-depth and the points where they are compatible and diverge with the historical context are determined. Within these studies, it is thought that it will contribute to the development of literature studies on new structures and contrast designs in the historical context.

## **1.2. Scope and Constrains**

The scope of the thesis deals with the issues of harmonious contrast design and its relationship with the context of the city/history. The concepts of compatibility, contrast, and compability concepts are examined in conservation theories. In this study, new structures built with contrast design approaches in historical city centers were examined and evaluated in detail. In the selection of these structures, criterias such as location, architectural typology, etc. were not determined, it was sufficient to be located in the historical city center. Contrast designs are generally handled through examples in western Europe. The reason for this is that more examples are found in this part of the world in the literature review. Among the contrast designs, examples in the archaeological site and rural areas were not taken into consideration.

The lack of a category and chronological order of new buildings in the historical texture on the other architectural platform was influential in the selection of Archdaily from one of the architectural platforms.

## **1.4. Method**

In this study, the contrast design approach located in the city and within the historical texture was determined, and its harmony with the historical context and the aesthetics of the city was examined. Conservation theories, new approaches located in the historical context, and the concept of contrast designs in the historical context were examined through literature research.

In the first stage, the literature review was made and contemporary approaches in historical city centers were researched. Common approaches in the studies were divided into four categories as abstraction, interpretation, contrast, and extreme contrast design. In the second stage, conservation theories were investigated according to the analysis of the design of the new building in the historical building. Four analysis parameters were provided which are scale, form, color and material. As a result of this



examination, it was concluded that new building in the historical context should be compatible these categories. Finally, these samples were analyzed according to the determined categories and examples compared with each other.



## **CHAPTER 2**

### **DISTINGUISHABILITY AND HARMONY IN NEW BUILDINGS IN HISTORICAL SETTLEMENT CONCERNING CONSERVATION THEORIES**

The compatibility and distinguishability of new designs in historical textures have been a controversial issue in modern conservation theories. This discussion provides suggestions on how new buildings relate to the historical and urban context in conservation theories. These suggestions affect the aesthetic structure of the new buildings in historical context.

In the modern conservation theory, the adaptation of new buildings to the historical texture was first determined by the Athens charter (1931) Article iii. It is stated in the article as "respect". In the article, it is emphasized that the character of the new building, the image of the city, and especially the environment of the historic building should be preserved. In addition, in the second article in the Athens charter, it was stated that the character and historical value of the historic building should be preserved (ICOMOS, 1931). Harmony feature specified in the article, it is suggested that the character and image of the city and the exterior appearance of the new building should be suitable for the city. Also, with the protection of the historical buildings, it can be meant the physical preservation of the historical buildings and the architectural features, aesthetic structure, technology and material of the historical building.

In the Venice charter published in 1964, it was stated that new buildings could be allowed as long as they were compatible with the mass and color of historical buildings (Article 6). On the other hand, it has been emphasized that additional buildings can be designed as long as they do not hide the interesting parts of the historical building and are compatible with the composition and context of the historical building (Article 13) (ICOMOS, 1964). While mass harmony can be considered as the height of the new building's historical buildings and their three-dimensional relations with each other, color harmony can be indicated by the harmony of the new building with the color palette from the facades of the historical buildings to the roofs. On the other hand, composition and historical structure can be explained as aesthetic features that add

value to the historical structure that is attached, such as rhythm, form, and facade layout.

In the Conclusion of the Seminar on the Integration of Modern Architecture in Historical Environments (1974), it was stated that the new structure should preserve its physical, historical, architectural, and traditional values to design in a historical context. and it is mentioned that the new structure creates integrity (ICOMOS, 1974). The compatibility of the new building with the historical context is discussed by not shadowing the historical buildings and creating a visual integrity.

In the Congress on the European Architectural Heritage (1975), it is suggested that new buildings should be built in a historical texture, provided that they are compatible with the existing context, the proportions, forms, and scales of historical buildings, and traditional materials are used (Article 7) (ICOMOS, 1975) . It is suggested that new building should be compatible with its form and scale. However, there is no suggestion that these features should be reflected, except for the use of materials from historical buildings in new buildings.

In the Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas charter published in 1976, any kind of building that would harm the authentic value of historical buildings do not be allowed. However, new buildings that contrast with the historical building from some points, harmonize and provide aesthetic pleasure are allowed (ii-4) (ICOMOS, 1976). As a result, new buildings built in the historical texture that is integrated with the modernity of the city have been proposed (Article ii-5). It has been proposed to ensure harmony in the new buildings built in the historical context not to disturb the harmony with the aesthetic appearance of the historical buildings, and to ensure integrity.

The Washington charter (1987) stated that new buildings should be designed in harmony with the concrete features of historical buildings (Article 2, clause c and 10) and their context (Article 5). The concrete features of historical buildings, style, construction technique, material, color, decorative forms, interior and exterior space (clause 2, clause c), plot, scale (10th article). Also context is defined by historical texture and city environment (ICOMOS, 1987).

In the 1999 Burra Charter, it allows designs that will not damage the intangible features of the historical texture with a minimum scale (3,5, 8, and 15. Articles) of the new buildings. It is suggested to be respectful to the material properties (ICOMOS, 1999)

In the Viena Momerandum published in 2003, new buildings are needed in the historical environment and designs that should provide the visual integrity of the historical buildings are proposed. (Article 17). Contemporary designs that refer to historical buildings are not recommended so that new designs do not provide misleading information (Article 21) (UNESCO; 2003). Emphasis is placed on the application of reference designs. In the Momerandum, examples that reference historical buildings are not preferred, and parcel, scale, ratio, volume and height compatibility are seen in new buildings.

The harmony of the new buildings in the historical context is based on harmony with the historical context, creating integrity and not overshadowing the historical buildings in modern conservation theories. In the future, new buildings have been elaborated and developed depending on the features that should fit the historical buildings in the conservation theories. Detailed versions of these features are collected under form, scale, material color and context headings.

## **2.1. Form**

In conservation theories, form is one of the features that reflect the aesthetic value of the historical building. This feature also plays an important role in ensuring the visual integrity of the buildings and determining the character of the buildings.

In the Venice charter (1964), it is stated that the preservation of historical buildings can be achieved by presenting the historical buildings more clearly and creating integrity (Article 14) (ICOMOS, 1964). According to form, new buildings in the historical context should be simple to present the historical buildings. In addition, the formal relations of the two buildings should be determined to understand the relationship between the forms of the historical and the new buildings to ensure integrity.

In the Recommendation Concerning the Preservation of Cultural Property Endangered by Public or Private Works (1968), it was suggested that new buildings should be designed following the character of historical buildings (Article 24-b). The character

of historical buildings includes the tangible features of the building as well as the intangible features of the building (UNESCO, 1968). When charter examined in terms of form, new buildings designed by adapting to character can be a copy of the historical building unless the features are interpreted. Besides, new buildings can be designed according to the intangible features of historical buildings. Also, designing new forms according to intangible values can reflect the historical forms with their intangible values, independent of the tangible values of the forms of the historical building.

In the European Charter of the Architectural Heritage (1975) it was stated that new buildings should be built in good quality and the historical building and its environment should be respected (Article k) (ICOMOS, 1975). In the charter, it can be mentioned that new buildings should be produced in good quality and in their style. The compatibility of new buildings to the historical environment can be determined by interpreting the form of historical buildings or by interpreting intangible relations.

In the Charter for Preservation of Quebec Declaration (1982), it has been suggested that the new buildings in the historical context should be designed based on the historical structure as much as possible (Article V-C) (UNESCO, 1982). The approach stated in the charter may cause new buildings to have a similar form to historical buildings. In addition, the similar form of the new building with the historical building prevents the new building from reflecting the technological features and architectural understanding of the period.

On the other hand, Appleton charter (1983) suggested that new buildings in the historical texture should reflect contemporary ideas. But new designs should respect historical buildings and highlight historical buildings (ICOMOS 1983). In the charter it was emphasized that new buildings should not harm the historical texture and that historical buildings should be in the foreground. Therefore, it is concluded that new buildings should be designed in a way that reflect its aesthetic and do not overshadow the forms of historical buildings.

In the Charter for The Conservation of Historic Towns and Urban Areas (1987), it is stated that interesting designs will be made on the condition that the historical building integrates with its surroundings (Article 10) (ICOMOS, 1987). The new building's attractiveness can be achieved by differentiating the form of the new building from the

historical building, and the distinguishing of the new building from the historical building can be achieved by other features.

In the Charter for the Protection and Management of Archaeological Heritage, published in 1990, it was suggested that new buildings in the historical context should be interesting and creative (Article 6) (ICOMOS 1990). One of the features that new building distinguish from historical building and reflect its aesthetic understanding is form. The fact that interesting new buildings in the historical texture can be achieved by designing new forms independently of the historical texture.

In the Nara Document of Authenticity (1994), since there are no specific criteria to evaluate the authenticity and intangible features, it is recommended to evaluate the historical environment in a cultural context (Article 11). Cultural context and authenticity are defined by features such as shape and form, material and main idea, use and function, traditions and customs, region and construction, emotions and spirit of space, internal and external factors (ICOMOS, 1994). In the Nara authenticity document, the form of the building is discussed together with the intangible values of the historical buildings. The ideas that make the form of the historical building indicate the intangible and the tangible value of the building. Therefore, document suggested new building to design same form as historical building.

In the Principles for the Analysis, Conservation and Structural Restoration of Architectural Heritage published in 2003, it was suggested that new buildings should reflect the technology of their time as well as provide integrity (Article 1.3) (UNESCO, 2010). When the technology, which is stated in the theory, is evaluated in terms of form, it is predicted that form of the new building can be designed independently of the historical structure. For example, a historical stone building built with the technology of its period has a shorter span compared to modern buildings, and the form of the building changes accordingly. The new building, on the other hand, can be designed in more original forms as it crosses wider openings because of technological development.

In The Paris Declaration on Heritage as a Driver of Development (2011), it is stated that the new buildings in the historical context can be designed by being inspired by the materials, construction techniques, plans, and design of the historical buildings (Article 2) (UNESCO 2011). In the Paris declaration, it is stated that new structures

can be built by interpreting the form and other intangible features of historical buildings. Depending on declaration, new structures can be designed by copying the form of the historical building or by interpreting certain formal features of the historical building in the new structure.

When conservation theories from 1968 to 2011 are examined based on form, design approaches based on the form of the historical building are at the forefront in most of the conservation theories. The new buildings designed depending on the forms of historical buildings reflect the tangible and intangible features of historical buildings. However, these forms do not reflect the technological and architectural understanding of the period of new buildings. On the other hand, in conservation theories, it is suggested to use simplicity, visual integrity, and intangible features of historical buildings in new buildings which is designed independent form of the historical building. Since there are concerns about the compatibility of the new structures with the historical context, simplicity, visual integrity and intangible features can be used new buildings to compatible with historical surroundings.

## **2.2. Scale**

Scale is one of the most discussed issues after form of new buildings in the historical context in conservation theories. The scale is not only determines the relationships between the new building and the historical context but also determines the relationships between historical surrounding and the city context. Although the concept of scale is mentioned in many theories, proportion, height and construction area harmony are discussed in this section.

In the Charter for The Conservation of Historic Towns and Urban Areas (1987), it has been suggested that new buildings should be designed following the historical context of the buildings' construction site and the scale of the historical context (Article 10) (ICOMOS, 1987). The compatibility of the new buildings with the historical context is indicated by comparing the height, scale, and volume of the new building with the historical buildings. In this comparison, new buildings expected to design harmoniously with these features.

In Conservation and Structural Restoration of Architectural Heritage (2003), it is suggested that the new building should be designed minimum in the historical context (Article 3.5) (ICOMOS, 2003). In the conservation theory, it is suggested that the new

buildings should be designed on a small scale compared to the historical one, and it is aimed that the historical context do not be damaged by the new building.

However, In the Vienna Memorendum (2005), it is suggested that new buildings should be designed depending on the scale, construction area, proportion (Article 22), volume, and height (Article 26) of the historical context (ICOMOS, 2005). In the memorandum, it is stated that in addition to the scale feature, it is stated that the new buildings should be compatible with the proportion of the historical building and the construction area to adapt to the historical context. According to this statement, new building can be designed same scale as historical context.

In conservation theories, it has been suggested that new buildings should be designed according to the height, proportions, construction area, and three-dimensional relations established with the context of historical buildings, in addition to scale compatibility. However, in some conservation theories, it is emphasized that new structures should be designed at a minimum scale so they do not damage historical structures and compate with its surrounding. Having two different arguments in conservation theories, it is concluded that new structures should be designed in harmony with the historical context or at a minimum scale.

### **2.3 Color and Material**

As a solution to the harmony problem of new buildings in historical context, material and color properties are discussed in conservation theories.

In the Athens Charter for the Restoration of Historic Monuments (1931), it is stated that modern materials can be used in historical buildings (Article 5) (ICOMOS, 1931). When the regulation is evaluated according to the material properties of the new buildings, it can be concluded that modern materials can be used to new buildings in the historical context. Usage of modern materials in historical context causes visibility of chronological difference between historical and new building. Also, new building can express its technology and aesthetics of its era.

In Venice Charter (1964), it is suggested that new buildings should be designed in harmony with the color of the historical context (Article 6). It has been stated that the material properties of the historical building represent the cultural value of the historical building (Article 9) (ICOMOS, 1964). In the charter, it was requested that the new buildings should be designed in harmonious colors to provide visual integrity



with the historical building. The color harmony of the new building can be achieved by choosing the same colors from the historical building, or by choosing similar colors that are compatible with the historical building. When charter evaluated based on material properties, it may be suggested new buildings to choose materials that are compatible with the cultural values of historical buildings. However, choosing same materials with historical buildings in new buildings cause new buildings not to distinguish with its context in terms of chronology.

However, in Conclusions of the Seminar on Integration of Modern Architecture in Old Surroundings (1974), it is suggested that new buildings should use materials that reflect their period, as long as they do not damage the historical context, and design with an their architectural understanding (ICOMOS, 1974). When the seminar results are evaluated in terms of materials and colors, it is seen that new building reflect their period with its color and material is allowed for new buildings. However, in seminar, it is stated that new buildings can reflect its era with materials in except not damaging, and not overshadowing the historical buildings. Thus, the new building should be compatible with the specific characteristics of the historical building such as form, scale, color and etc.

On the contrary, in the European Charter of the Architectural Heritage (1975), it was emphasized that new buildings in the historical environment should use traditional materials (Article 7) (ICOMOS-CoE, 1975). In the charter, new buildings in historical context encouraged to use traditional materials in addition to properties of the fabric. For this reason, new buildings can be similar to historical buildings and do not express its era and its technological developments.

In the Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas (1976), it is suggested in the conservation theory that new buildings should be designed in harmony with the dominant features of the historical context. In the theory, it stated the dominant features in the historical context as the features that draw attention in the context. These features are stated as the height, material, color, and material of the historical buildings. In addition, it was emphasized that new buildings were designed according to these features and based on the integrity of the context (Article 28) (UNESCO 1976). According to this charter, it is necessary for new buildings to use common color with the historical building or to use common materials to integrate with the historical context. However, common feature can be

other features in except color and material that new building can be designed differently from historical context.

In the Appleton Charter for the Protection and Enhancement of the Built Environment (1983), the use of contemporary materials are permitted in new structures, but require to compatible with the spirit of the historical context (ICOMOS, 1983). In new buildings, contemporary materials can be provided to make historical structures stand out and to reflect the past of the historical building. These approaches can harmonize the historical buildings with the new building.

Also, in the Charter for The Conservation of Historic Towns and Urban Areas (1987), it is stated that interesting designs integrates with the historical building and its surroundings (Article 10) (ICOMOS, 1987). In the charter, it is stated that the new building can be designed with compatible colors or materials with the historical context, as well as interesting colors and materials that can be used. In addition, integrity in the context can be achieved by the harmony of materials and colors. However, contemporary materials and different colors are also accepted in new building as long as it is compatible.

Nevertheless, in The Nara Document on Authenticity (1994), the materials and colors of the historical texture are accepted as authentic documents of the region and it is requested to be preserved (Article 13) (ICOMOS, 1994). The colors mentioned in the document can be determined by choosing modern materials and different colors that are compatible with the historical context in new buildings, as well as choosing the same color and materials with the historical building. However, the use of the same colors and materials as historical buildings in new buildings may damage and imitate the authenticity of the historical texture.

Also, in the New Zealand Charter for the Conservation of Places of Cultural Heritage Value (2010), colors and materials in new buildings should be compatible with the historical building. It stated that the same colors and materials as the historical buildings should not be used in new buildings. In addition, it recommended that new buildings should not use contrast colors and materials to the historical building (Article 21) (ICOMOS, 2010). For this reason, the colors that can be used in new buildings can be similar colors with historical buildings. However, there is no definite information how harmony established with historical building in terms of contemporary materials.

In The Australia Charter for Places of Cultural Significance (2013), it is stated that the buildings in historical context should be used in harmony with the historical structure, provided that they are not imitations (Article 3, 5, 8, 15, 21 and 22) (ICOMOS, 2013). In the charter, the harmony of the new buildings with the historical building is stated by using compatible materials instead of copying, and the usage of original materials and colors in new buildings is encouraged.

There are conflicts in conservation theories about the harmony of colors and materials between new buildings and historical context. Some of the conservation theories have stated that new structures should copy these features to preserve the material and color that are documented for the preservation of historical structures. On the other hand, other conservation theories stated that new buildings should prefer contemporary materials and different colors that are compatible with historical buildings, and suggested that colors and materials that are not compatible with historical buildings should not be used.

#### **2.4. Context**

New buildings in the historical environment has brought along the problem of adaptation to the historical context and the city environment. As a result, this problem has become a controversial issue in conservation theories.

In the International Charter for The Conservation and Restoration of Monuments and Sites (1964), it was stated that new buildings should be designed by considering the relationship with the historical building and its surroundings (Article 13) (ICOMOS, 1964). Since the historical context are in the city, the new buildings must be designed following the historical context and the city.

Besides, In the Seminar on Integration of Modern Architecture in Old Surroundings (1974), it was stated that new designs should be designed in harmony with the city and historical context. Also, it was stated that new buildings should be designed with modern techniques and that they should respect the aesthetic, structural, historical, and social structure of historical buildings. In addition, the historical building and the new building should be harmonious and integrated (ICOMOS, 1974). In the seminar, it was

suggested that new buildings should be built with modern technology and technique, but should be respectful to the characteristics of the historical environment.

In the Recommendation Concerning the Safeguarding and Contemporary Role of Historic Areas charter (1976), it is recommended that new structures should be considered together with the historical context and environment, and in harmony and balanced (Article 3). In addition, it was stated that new construction around the historical context is dangerous and that the historical context should be successfully integrated into the modern city (Article 5) (ICOMOS, 1976). In the charter, it is suggested that the historical context should be combined in harmony with its surroundings and integrated into the city environment. However, no suggestions have been made on how to integrate the historical textures into the contemporary urban environment.

In the Washington charter (1987), it was mentioned that contemporary buildings in harmony with the historical context enrich the environment. Also, it was suggested that new buildings be designed following the historical texture of the parcel, scale, height, and volume (Article 10). It is stated that the new function and design should be compatible with the historical texture and the city, by proposing to define a modern function that is compatible with the historical environment (Article 5) (ICOMOS, 1987). In the charter, it is suggested that the new buildings should be compatible with the two contexts to connect the historical texture and the modern city and that new building in the historical context should be compatible with the parcel, scale, height, and volume characteristics.

In the Vienna Momerandum (2003), it is suggested that new buildings in the historical texture provide historical and visual integrity. It has been stated that the historical texture in the city contains todays and past social expressions and developments. These features constitute land use and density, spatial organization, visual relations, topography, soil, vegetation, technical infrastructure, and small designs (sidewalks, lamps, etc.) (Article 8). On the other hand, for the compatibility of the old-new context of the buildings, it is suggested that historical buildings should be evaluated with their authenticity, texture, building densities (Article 18), history, culture, and architecture (Article 19), as well as city and roof views, and visual axes (Article 25). (UNESCO, 2003).

It is suggested that new buildings in the historical context should be compatible with the urban context and historical context in conservation theories. For designs that are compatible with the urban context, it is stated that all intangible features of the city should be evaluated and that they should be visually compatible with the natural and built environment of the city. To harmonize with the historical texture, it has been suggested to consider intangible features such as history and culture, as well as tangible features such as authenticity, texture integrity, building densities, and architectural style.



### CHAPTER 3

#### CREATIVE DESIGN APPROCHES IN HISTORICAL CONTEXT

Designs proposed in the historical texture are designed depending on all the features (form, scale, proportion, etc.) specified in the conservation theories, but these examples are described as copy of historical buildings. In *On Altering Architecture*, the author wrote that new buildings which are designed in a historical environment reflect all features of historical buildings (form, scale, detail, proportion, etc.) specified in conservation theories. These examples are defined as copies of historical buildings by the author. Also, he stated that the most important reason for these designs to carry the copy quality is their closeness to innovation and creativity (Scott, 2007). Besides, new buildings in historical context are evaluated as an imitation of the historical environment according to Şevki Vanlı in the article *Gerçek ile Mimarlık arasındaki Taklit*. Also, Vanlı advised designers to use the technology and historical values of the period creatively in their projects (Vanlı, 2007).

Today, there are creative methods using contemporary technology and materials in the new designs in historical settings. These methods are described several sources under the different titles. In the *Old Buildings New Design*, these methods described as contrast designs that are divided into extreme, restricted, and referenced designs within themselves. While the extreme design enables the old and the new building to attract attention together in the historical texture, restricted designs emphasize an important element in the historical structure. Also, referenced designs are provided by the use of an element of the historical building into new buildings, and differ in the amount of usage with restricted designs (Blozies, 2012). Besides, Creative approaches, according to architectural restoration theorist Michael Davies, have been classified as traditional, implicit, modern, and arrogant. The traditional approach is explained as interpreting the forms, materials, and details of historical buildings and transferring them to the new buildings. Another approach is implicit that the new building takes the form of the historic building as a reference, but differs from the historical building with other features. In modern approaches, the building is interpreted by form, material, and detail features of historical buildings by reflecting its period. In the arrogant approach, the contrast between the old and the new building is masterfully achieved. But the common features that connect the historical and the new buildings are not known

(Davies, 2013). In another resource, *Sense of Place: Design Guidelines for New Construction in Historic Districts*, new approaches are classified as abstract reference, invention within style, and intentional contrast. Invention within style approach aimed historic continuity of the architectural style by altering or enhancing of architectural elements of historical buildings. In the abstract reference approach, the new structure references the historical structure but is not similar to historical buildings. The intentional contrast is the design approach that change uninteresting environments, and the heavy use of this approach can damage the historical settings (Semes, 2008). According to Bilgin (Bilgin,2010), new approaches are classified as reflection, interpretation, and generator designs. In the reflection approach, new buildings are designed by choosing simple forms and reflective materials suitable for the historical settings. In the interpretation approach, some of the architectural features of the historical building are altered and transferred to new designs. On the other hand, generator approaches aimed to revive the historical texture by designing the new building in contrast to the historical texture.

When four sources are examined (Table 3.1), creative approaches are gathered under three main headings. These headings are abstraction, interpretation, and contrast designs. The abstraction approach is considered as designs, in which only the form of the historical building, is referenced and differed in other features. In interpretation, the new building references an element of historical texture and alters it. On the other hand, contrast design differentiates with its context with some features. In this study, creative approaches are examined under the headings of abstraction, interpretation, and contrast design.

**Table 3.1** Classification of creative approach with their source

SOURCES	NEW APPROACHES		
Old Buildigs New Designs-F.Scott	Restrained Contrast	Referential Contrast	Extreme Contrast
Design in the Historic Environment-Michael Davies	Subtle	Modern	Arrogant
Sense of Place Guiding of New Construction in Old Buildings W. Semes and Williams	Abstract Reference	Invention Within Style	Intentional Opposition
Tarihi Dokuda Yeninin İnşası-Güliz Bilgin		Interpration	Generator

### 3.1. Abstract Design Approach

Abstraction is the simplification of the referenced object and transferring it to the design. In this process, the complex elements and features of the referenced object are examined and the features or ideas to be emphasized are selected. These features can

be one or more, and the degree of abstraction changes according to the amount of referenced features (Bono, 1998).

According to the study of Pashmeena Vikramjit Ghom, the abstraction approach is provided by transferring the form, scale, and proportion features of the object to the new structure (Vikramjit Ghom, 2016). The intensity of use of these elements affects the degree of abstraction and the harmony/distinguishability balance between old and new structures. The designs, in which the old-new distinction is intense, refer to the minimum amount of elements, and there is an inverse proportion between the number of elements and the degree of abstraction (Strayer, 2007).

The abstraction approach in historical context is applied by separating the historical structure from ornamental, material, color features and transferring it to the new structure. The new building references certain features of historical buildings during the design process and differs from historical buildings with the architectural understanding of its period. The first example of the abstraction approach in architecture is the Goldran & Salatsch building designed by Adolf Loos in 1910 in Venice, Mitalplaz (Figure 3.1). While building is distinguished from the historical buildings around it with its texture, materials, and proportions, it is compatible with its form, scale, and color features (Semes, 2008).



**Figure 3.1** A view of Goldman & Salatsch building. Retrieved from: <http://architectuul.com/architecture/loos-haus-vienna> in February, 2019

An example of the abstraction approach is the Ph.D. annex building in France (Figure 3.2). The building, designed for doctoral students, displays a strong and prestigious image, in addition to harmonizing with its surroundings with its volume and usage of



materials. The materials that used in building are concrete, brick, wood, and zinc that reflect the industrial identity of the historical environment (Divisare, 2020).



**Figure 3.2** A view from Doctorate addition building. Retrieved from: [https://divisare.com/projects/419034-vulcano-gibello-olivier-mathiotte-extension-and-renovation-of-a-doctoral-school?utm\\_campaign=journal&utm\\_content=image-project-id-419034&utm\\_medium=email&utm\\_source=journal-id-323](https://divisare.com/projects/419034-vulcano-gibello-olivier-mathiotte-extension-and-renovation-of-a-doctoral-school?utm_campaign=journal&utm_content=image-project-id-419034&utm_medium=email&utm_source=journal-id-323) in March, 2020.

Abstraction refers to the form, scale, and proportions of historical buildings in the new structure, and is distinguished from the historical structure by using contemporary materials. In addition, in the new building, the history of the region was referred to by the selection of industrial materials, and the materials differed from the historical texture with their texture, color.

Another example of the abstraction approach is the DBB residence (Figure 3.3), which was built near the Hazegras castle in the western Flander region. Since Hazegras castle contains many historical events, the castle was associated with the backbone of DNA, and this allegory was reflected in the design of the new building. Govarte and Vanhouse architectural firm examined the military, social, cultural, natural, infrastructural, and technical traces around the Burkeldijik farmhouse and designed the annex building while preserving the form and proportions of the farmhouse. The

designers made the new structure welcoming by choosing wood material, which contrasts with the closed atmosphere of the Hazegras castle (Divisare, 2015).



**Figure 3.3** A view from DBB Residence. Retrieved from: <https://divisare.com/projects/328827-govaert-vanhoutte-architects-tim-van-de-velde-residence-dbb> in March, 2020.

The new structure took the form and scale of the farm structure as a reference and distinguished it with window and roof details. The simple design of the new building has brought the form and scale of the historical building to the fore. On the other hand, the use of gray-toned wood materials in the building made the new structure distinguish from the castle and the historical environment.

When the abstraction approach is examined through two examples, the new buildings are designed based on the scale, proportion, and form of the historical buildings. Harmony is provided by similar form, proportions, volume, and height with context, and buildings are distinguished by material and texture properties. Also, contrast increased the visibility of the new building in the historical texture and revealed the chronological difference between the historical and the new building by using contemporary materials.

### **3.2. Interpretation Approach**

The interpretation of historical building elements emerged with Post-modernism. Early example of this movement was executed by Venturi that he created a simple house with an eclectic approach and the use of different architectural elements has caused the pieces to break from their cultural and design context. Architectural elements which is taken out of context are brought together with a random and semi-organized approach (Kaminer, 2011).

In its early years of post-modernism was referred to as bringing together different architectural elements. And in the following years, the concept was developed and associated with the interpretation of architectural elements. While reference is made to the historical environment with the interpretation approach, it is ensured that it is compatible with the modern structures in the surrounding (Brush, 1991).

According to Al-Majidi and Raed Majeed citing Taha Abdul Rahman (2019), interpretation can be defined as differentiated analogy. The differentiated analogy is the approach in which two objects have similar properties but are different from each other. According to Philip Steadman (2008), the analogy is achieved by transferring the proportion and form of the referenced object to the new object. To turn analogy into an interpretation, the main form must be changed and new combinations must be tried in proportions and forms.

The analogy is achieved by taking reference to an object and having common properties of reference. But in the interpretation approach, the properties of the referenced object are changed. According to Steadman (2008), the interpretation approach can be done with form and proportion features. However, interpretation can be done with color, material, detail, etc. indicated that it can be achieved by altering its properties.

As an example of interpretation approach, Lasvis Quarter building can be given. The new building which is positioned between two 19th-century historical buildings was designed with a white glass shell (Figure 3.4) to create a contrast with the surrounding buildings. The new building is compatible with the historical buildings in scale and form and differs from the historical buildings. In terms of material, proportion, and color with its window proportions and glass shell.

Another example of the interpretation approach is the additional building designed for the freight depot of Malmö train station (Figure 3.5). The new building was thought to be a symmetrical copy of the historical building. However, the volume of the new building has been reduced in order not to damage the ancient ruins in the area next to the station. Corten steel was preferred to be compatible with the surrounding and historical structure (Archdaily, 2017).



**Figure 3.4** A view from Lasvis Quarter. Retrieved from: <https://www.archdaily.com/940454/headquarter-lasvit-in-novy-bor-ov-a> in March,2020.



**Figure 3.5** A view from Malmö Saluhall. Retrieved from: [https://www.archdaily.com/870949/malmo-saluhall-wingardh-arkitektkontor-ab?ad\\_medium=gallery](https://www.archdaily.com/870949/malmo-saluhall-wingardh-arkitektkontor-ab?ad_medium=gallery) in March, 2020.

The additional buildings differ from the historical structure with its material and volume features, which are compatible with its form and scale features. The new structure resembles the abstract approach by purifying the details and openings of the historical form. However, the traces of the chronological difference in the shipping warehouse are reduced in the new volume, causing new building to be characterized as an interpretation approach.

The interpretation approach is similar to the abstraction approach in its harmony with the scale and meaning bond features but differ from the abstraction approach with its proportion, form, material, and color features. The similarity of abstraction and interpretation approaches may be defined as the abstraction approach is characterized with the extreme degree of abstraction in some sources.

### 3.3. Contrast Designs

Although harmony is a situation between monotony and contradiction, having harmony in more than one feature in a design creates monotony and boringness. A good design benefits from harmony, but harmony is not enough to express the beautiful design. Harmony can be achieved in function, direction, form, scale, order, and character. Where there is more harmony, monotony and boring events begin. To prevent these events, the element of contrast can be used to add variety, interest, and excitement. Contrast can be achieved with a single feature (color, shape, line, texture, etc.) or with more than one feature, and the extreme differences between the two objects increase the interest. However, if the two units do not have common features, contrast can turn into a contradiction (Gürer, 1990).

The concept of contrast enables one object to be distinguished from the other by its form, scale, color, material, etc., and distinguishes two objects. However, the lack of common features of an object can cause objects to be contradictory.

Contrasts emphasize the object depending on the meaning of the object. While emphasis emerges with contrast features but contradictions differ from its environment (Şentürk,1999).

Contrast requires one object to be different to be distinguished from another. Differences are provided by style, color, material, texture, etc. in design elements, so there are endless combinations and possibilities. The object that is white where most objects are black, a naturalist drawn object in an expressionist drawing can be given as an example of contrast (A.Lauer and Pentak, 2008).

Morales (1996), described contrast design with the usage of abstract forms, simple geometries as well as the material differences of the buildings designed around the historical building. On the other hand, Demiri (Demiri, 2013) indicated that interpretation and abstraction of historical buildings take the form of the historical texture. But the contrast designs take form with the perspective of the architect, the inspiration he received from the historical context, and the meaning he established. Bilgin (2010) explained contrast designs as the abstraction of data from the context. Blosiez (2012) stated that the contrast designs can blend with the historical environment or add attention to itself.

According to the views of theorists, contrast designs are buildings that differ from the historical building and context with its form and other features. Also, new designs adapt to the historical context by interpreting intangible values. According to the definition of Blozies, contrast designs are divided into two that are extreme and harmonical according to the relationship it establishes with the historical context. While buildings designed independently from the historical context are distinguished from the historical context to attract attention, it can harm historical context by overshadowing. These type of designs can be called as Extreme contrast designs. However, harmonical contrast designs meet on common features with the historical buildings that cause both new buildings to distinguish and harmonize with historical context.

### **3.3.1 Harmonical Contrast Design**

Harmonical contrast designs add value to the historical texture and structure, while at the same time reflecting its architectural character. Unlike the abstraction and interpretation approach, these designs can differ from historical buildings with their form, scale, proportion, color, and material characteristics, but they are compatible with historical buildings.

John H. Daniel's faculty of architecture can be given as an example of harmonious contrast designs (Figure 3.6) in the historical context. In the building, the holiness of the historical context was preferred and is reflected in the landscape as well as the building. The concept of holiness has been achieved by choosing a white color in the interior that contrasts with the facade of the new building and by designing the new building in contrast to the historical texture. Another reason for preferring the contrast design approach was problems that emerged with the use of sustainability technologies (Archdaily, 2019a).

Although the new building differed from the historical building in color, materials, and form, the new building harmonizes with the historical building by interpreting composition rules of historical buildings which are repetition, vertical lines, diagonal lines like triangles. These compositional rules of the historical building transferred to the new building without its form.



**Figure 3.6** A view from Daniels Building. Retrieved from: <https://www.archdaily.com/916301/daniels-building-at-university-of-toronto-nadaaa> in March, 2020.

Another example to contrast design is Jenkins Street's additional building (Figure 3.7). Jenkins Street is a street that houses designed in the late Art Deco movement. The architect brought a new perspective to historical buildings by designing a building that contrasts with the surroundings of the street. Also, the new structure has a new character by visually separating it from its context (Archdaily, 2018b).



**Figure 3.7** A view from Jenkins Street Addition. Retrieved from: <https://www.archdaily.com/902871/jenkins-street-ckairouz-architects> in March, 2020.

The new addition exhibited a contrast attitude to the late Art Deco structure of Jenkins Street and the new building had a character independent of the street. Also, the new building is in harmony with its scale but differs from the historical building with the use of form, color, and usage of materials.

According to these two examples, harmonious contrast designs can be defined as both different and common features. When we examine the Daniels building and Jenkins Street Addition as harmonious contrast designs, two buildings differ from historical buildings in terms of their forms, colors, and materials. Besides, Daniel's building harmonizes with its context by mimicking the composition rules of historical buildings and their volume. Jenkins addition harmonizes with historical building with its volume.

### 3.3.2 Extreme Contrast Design

The extreme contrast approach differs from harmonious contrast designs by being interesting and shaping the historical context. Also, these designs generally shade and exceed the scale of the historical buildings with their complex form. According to Michael Davies, these structures are called the arrogant design approach (Davies, 2013). Also, according to Bilgin (2010), these designs revive the historical texture as a generator of the historical texture.

Mark (Figure 3.8) project can be given as an example for extreme contrast design. It was decided to demolish the historical church for the construction of the office and hotel building, but the church was preserved at the insistence of the architect. The building, which has historical and emotional importance, was designed with maximum height and volume in minimum floor space (Archdaily, 2018c).



**Figure 3.8** Views from The Mark building. Retrieved from: <https://www.archdaily.com/905853/the-mark-zgf-architects> in March, 2019.

The Mark project addition disburden its mass by the glass and steel but is overshadowing the historical context by its scale. Since the new building does not have any common features compatible with the historical building, it could not adapt and is described as an extreme contrast approach.



The Victoria and Albert annex (Figure 3.9) was determined according to the result of the competition opened in 1996. The new structure is designed as a gateway that connects three proprietary structures. In the form, three planes interlock and connected upward spirally creating a fractal shape (Libeskind, 2002).



**Figure 3.9** A view from V&A Museum Extension. Retrieved from: <https://libeskind.com/work/va-museum-extension-competition/> in March, 2019.

The additional building differentiated itself from the historical context with its form, material, color, and texture and become an attraction point. The complexity of the form and texture of the new building caused the visual weight to be withdrawn from the historical buildings to the new building. However, directing the visual weight to the new building overshadows the historical buildings and caused that all the attention is given to the new building.

Extreme contrast designs are important approaches for many architects, including star architects, where they can put their signature next to historical buildings. However, this situation is dangerous for the historical building and its surroundings. Because historical buildings are overshadowed by extreme contrast designs thus cultural memory can be erased. When Abstraction, interpretation, contrast, and extreme contrast approaches were evaluated according to the form, scale, color, and material properties discussed in Chapter 2 on the examples (Table 4.1). As a result of the evaluation, it is observed that while the new buildings reflect historical forms in the abstract and interpretive approach, the new buildings differ from the historical form in the harmonious and extreme contrast approach. When approaches are evaluated based on scale and color, it is seen that approaches other than extreme contrast design can be designed in harmony with the scale and color of the historical building. In terms of material, new buildings reflect the use of modern materials in all of the approaches. Considering the approaches in terms of attractiveness, it is seen that harmonious and

extreme contrast designs are more suitable. However, when harmonious and extreme contrast designs are considered in terms of compatibility, it has been observed that harmonious contrast designs are more harmonious than extreme contrast designs.

**Table 4.1** Evaluation of Harmonious Contrast Designs with Other Approaches

				
<b>Form</b>				
Historical Forms	✓	✓		
Contemporary Forms			✓	✓
<b>Scale</b>				
Small Scale				
Compatible Scale	✓	✓	✓	
Large Scale				✓
<b>Color</b>				
Same Color	✓	✓		
Compatible Color				
Contrast Color			✓	✓
<b>Material</b>				
Traditional Materials	✓			
Contemporary Materials		✓	✓	✓

## **CHAPTER 4**

### **HARMONICAL CONTRAST DESIGN APPROACH**

Contrast is defined in the Cambridge dictionary as the comparison of objects, showing the differences between two objects, or emphasizing the interesting feature of an object. The concept is generally to direct the viewer and take their attention to the color, texture, material, shape, and form of an object (Cambridge, n.d).

The contrast in architecture brings the object and its environment together, creating a dual meaning and a tense environment. The contrast can be seen between form and structure system, material and texture in architecture, and contributes to the meaning and use of the building. The fact that Louis Kahn prefers polished granite with rough concrete in his buildings, and Villa Savoye's simple form from outside and complex structure from the inside, can be shown as an example of contrast in architecture (Venturi,1977).

Contrast is seen with the elements within the building itself in architecture. This type of contrast makes the structure complex by adding a double meaning, creating a tense environment. Thus the building attracts attention. Also, the unifying factor becomes building itself while the elements are contrast but compatible with each other.

In addition to contrast with buildings elements, the contrast of the buildings with their surroundings have been questioned and examined under the title of contextualism. Contextualism, in 1950, opposed the modernism doctrine's approach to rejecting the local and historical environment and adopted visual integrity, historical continuity, regionalism, and external factors. On the other hand, approaches that reject the context and adapt the internal factors of the building have been preferred in contemporary discourses. According to these approaches, a new building can be compatible, contrast, or reject its historical context (Pasin and Varınlıođlu, 2018).

Contrast can also be achieved in architecture in the dynamics of the buildings and the relationship that the buildings establish with their surroundings. As Pasin and Varınlıođlu stated, these relations can establish a relationship with the element of

visual integrity, and these features can be achieved with the scale, form, material, and color features mentioned in conservation theories.

#### **4.1. Scale**

According to Ching, scale is the evaluation of an object with another object with its size. For this reason, it is divided into two categories as general and human scale in architecture. The general scale is the evaluation of the building with its context, and the human scale is the ratio of people to space and building (Ching,1979).

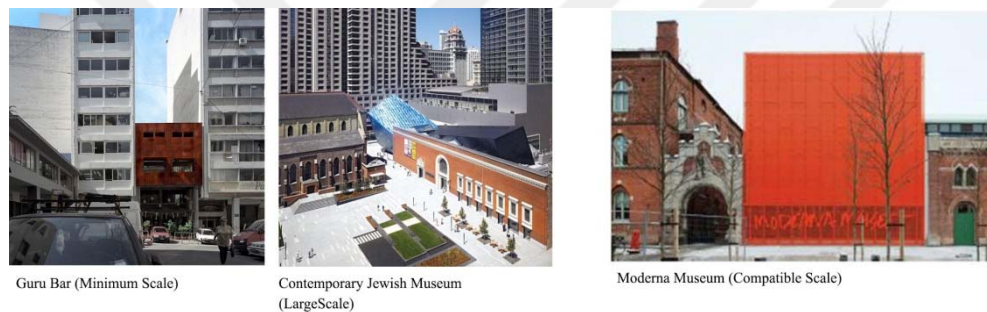
Also, according to Weber and Voskoetter, the concept of scale is divided into three as human, contextual, and internal dynamic scales. The human scale is the assessment of buildings based on human size, on the other hand, contextual scale is the comparison of the buildings to surrounding buildings. Next, the Internal Dynamics scale is the comparison of the architectural elements of the building with each other.

The concept called the internal dynamic scale of structures is also known as the proportion that creates the visual ratio of the dimensions of the windows, doors, floor spaces, and extensions of the buildings with the mass of the building (Weber and Voskoetter, 2008).

The concept called the internal dynamic scale of the buildings is also known as the proportion. The proportion creates the visual ratio of the dimensions of the windows, doors, floor spaces, and extensions of the buildings with the mass of the building. However, the proportional relationship between the contrast designs and the historical buildings is not observed because of technological difference. For example, in historical buildings, stone structures can pass through shorter spans, while in new structures, steel and reinforced concrete systems can pass wide spans. This situation causes the dimensions of many elements to change, from the floor heights of the buildings to the window and door openings.

Also, scales can be classified into three types according to the relationships between the historical and new buildings. These scales are classified as large, compatible and small (Figure 4.1) Koolhaas and Mau (1994) defined large scale in architecture as the last point of architecture and mentioned that the building surpassed the city and human scale and broke rules. They stated that buildings with large scale is rejected the context and is argued that the building came into existence without scale, architectural

composition, traditions, transparency and ethics, even the urban fabric. On the other hand, compatible scale in designing buildings according to the volumetric dimensions of the new buildings such as height, width, and length in the historical settings. From Van der Laan to Stamps (1999) , buildings with compatible scales are perceived as a whole. This situation is also valid for small-scale designed structures, and structures with a scale of 1 out of 7 of the referenced building are defined as minimum-scale buildings In another study arranged by Stamps (1994), it is seen that public preferred buildings which are designed in a different style on a compatible and small scale in the context. On the other hand, large-scale buildings are not embraced by the public. Another outcome of the research is that the public is preferred designs in a different style that are compatible, and designs in the same style with the context that is small and grand scale with the context.



**Figure 4.1** Example of Building Scale. Retrieved from:

<https://www.archdaily.com/215228/old-buildings-new-designs-charles-blosziere> in December, 2021

Another factor that determines the scale perception of the buildings is the scale relationship that the buildings establish with their context. This relationship is the evaluation of the new structure according to the volume of the building groups in the context. According to Clark and Pause (1985), this relationship established with the context is stated as the relationships established with the context in the third dimension. On the other hand, Groat (1988) stated that the building is the volumetric composition and characterized the elements that make up the composition with features such as height, form, and the degree of simplicity of the building.

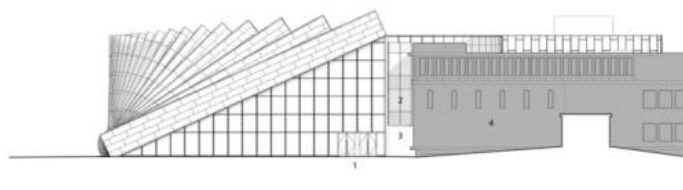
While the scale harmony relationship established by the historical building and the new building is taken at the building scale, the scale relationship established by the new building with the historical environment and the city is provided by the contextual scale.

Isenberg School of Economics (Figure 4.2) can be given as an example. The Isenberg School of Economics was built in 1964 and was designed as a circular additional building by BIG in 2015. Also, additional building was designed as a faculty of Economics in Isenberg, inspired by the cycle of the economy (Archdaily, 2019b).

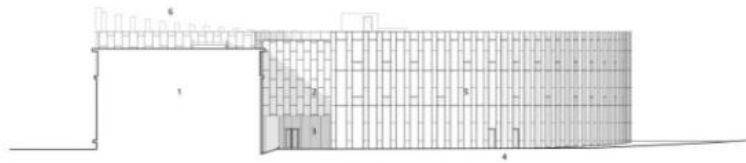


**Figure 4.2** Aerial view from Isenberg School of Economics. Retrieved from: <https://www.archdaily.com/915263/isenberg-school-of-management-business-innovation-hub-big> in March, 2021.

When the building is examined in the third dimension, it shows scale harmony with the urban context. But it is observed that it exceeds its scale when compared to the historical building. On the other hand, a historical building is perceived as a large building since it has more than one additional building over the years. Thus, the new building is compatible with the economy building. In addition, when observed on the west side of the historical building (Figure 4.3) where the entrance is, is compatible with the historical building. However, when it is viewed from the south facade (Figure 4.4) , it is observed that the new building exceeds the scale of the building. Scale is considered as contextual and building but building scale varies in different facades that can be compatible with certain views. For this reason, context can be correctly evaluated in the third dimension.



**Figure 4.3** West Elevation of Isenberg School of Economics. Retrieved from: <https://www.archdaily.com/915263/isenberg-school-of-management-business-innovation-hub-big> in March, 2021.



**Figure 4.4** South Elevation of Isenberg School of Management Business Innovation Hub. Retrieved from: <https://www.archdaily.com/915263/isenberg-school-of-management-business-innovation-hub-big> in March, 2021.

When the building is examined in the third dimension, it shows scale harmony with the urban context. But it is observed that it exceeds its scale when compared to the historical building. On the other hand, a historical building is perceived as a large building since it has more than one additional building over the years, so the new building is compatible with the economy building. In addition, when observed on the west side of the historical building where the entrance is, is compatible with the historical building. But when it is viewed from the south facade, it is observed that the new building exceeds the scale of the building. Scale is considered as contextual and building but building scale varies in different facades that can be compatible with certain views. For this reason, building scale is not reliable, and the relationship between the new building and context can be correctly evaluated in the third dimension.

## **4.2 Form**

The form is one of the features that distinguish one object from another and determines the identity of the building. According to copying, abstraction, and interpretation approaches, form is an element that distinguishes contrast designs from other approaches.

According to Pinna, people perceive three-dimensional objects according to the FACADE theory that is consists of the form (Silhouette), color, and depth features (Todd, 2004). According to Ching (2007), form is the first feature noticed in the appearance of the building and its purpose is to bring together the spaces that it contains. The features that made the form are the internal and external dynamics of the

building. Internal dynamics of the building constitute the concept, architectural program, and function, the external dynamics of the building constitute the context.

The form adapts according to two criteria according to the relationship that the contrast design establishes with the historical building and its surroundings. These criterias are Gestalt, simplicity and meaning. According to the Gestalt theory, harmony is mentioned with the harmony of composition and context (Article 13) in the Venice Charter, while it is mentioned as visual integrity in the Vienna Momerandum (2005) (Article 17) . Besides, simplicity (Article 5) is a concept that appears in the Athens charter (1964). In terms of meaning, it mentioned several conservation theories such as European Charter of Architectural Heritage (1975) (Article k), Nara Document of Authenticity (1994) (Article 11).

#### **4.2.1 Gestalt Principles in Form**

The word Gestalt means form, shape, and silhouette in Germany, and the theory emerged in the Berlin department of practical psychology at the beginning of the 20th century. According to Gestalt theory, problems will be solved as a whole by examining the relations of the structures with all parts (Ellis, 1950).

Gestalt principles create the relationship that the building establishes with its context, ensuring that the building is in harmony/contrast to its surroundings. Robert Venturi who is an architectural theorist and practitioner indicated harmonical problems between context and buildings in his master's thesis that is titled *Context in Architectural Composition*. He suggested that the use of Gestalt principles in buildings to overcome these problems. Also, he recommends that the meaning of the context should be transferred to the building (Theunissen, 2010).

The rules that enable the reading and perception of buildings are included in the Gestalt Principles. These principles are form-ground, continuity, closure, symmetry, similarity, and closeness. In later times, only the symmetry feature is out of date (Moore, 1993).



Figure-ground refers to distinguishing additional buildings from historical buildings and continuity is the perception of objects standing apart from each other as a whole depending on their distance. On the other hand, closure is the process of filling the gap between two different structures with the human mind. The similarity approach can be achieved by having similar properties between two objects.

The similarity in the basic design and building design provides distinguishability and harmony of creative designs in the historical settings depending on the number of common features. In abstraction, repetition of the lines in the silhouette of the historical building transferred in the new building with the use of modern materials. In the interpretation approach, the silhouette of the historic building is transferred to new buildings by making some changes. In harmonious contrast structures, this can be achieved by the use of certain parts of the silhouette of the historical building according to the random rhythm feature.

The features that provide harmony of the two buildings constitute the principle of closure (Figure 4.5), continuity (Figure 4.6), and similarity (Figure 4.7) in Gestalt principles. In continuity, the principle can be observed with the proximity of the structures that are articulated next to the historical building. On the other hand, the principle of closure can be achieved by the geometrical relations that the historical building has established with the new building. These features are the juxtaposition of two structures, their intertwining, etc. can be defined as closure.



**Figure 4.5** Example of Closureness. Retrieved from: [https://www.archdaily.com/955971/vysoke-myto-office-extension-proks-prikryl-architects/60133f3df91c8196090002d0-vysoke-myto-office-extension-proks-prikryl-architects-photo?next\\_project=no](https://www.archdaily.com/955971/vysoke-myto-office-extension-proks-prikryl-architects/60133f3df91c8196090002d0-vysoke-myto-office-extension-proks-prikryl-architects-photo?next_project=no) in December, 2021.



**Figure 4.6** Example of Continuity. Retrieved from: [https://www.archdaily.com/932524/house-v-tectone?ad\\_source=search&ad\\_medium=projects\\_tab](https://www.archdaily.com/932524/house-v-tectone?ad_source=search&ad_medium=projects_tab) in December, 2021

As an example of the principle of similarity, the slope of the hipped roof of the historical building and the vertical lines interpreted in Daniel's building (Figure 4.7). Unlike the interpretation approach, harmonical contrast designs harmonize with the historical building by quoting certain points of historical buildings by reminding historical buildings.



**Fig. 4.7** Daniel Buildings and historical Building. Retrieved from: <https://www.archdaily.com/916301/daniels-building-at-university-of-toronto-nadaaa> in March, 2019.

#### **4.2.2 Simplicity in Form**

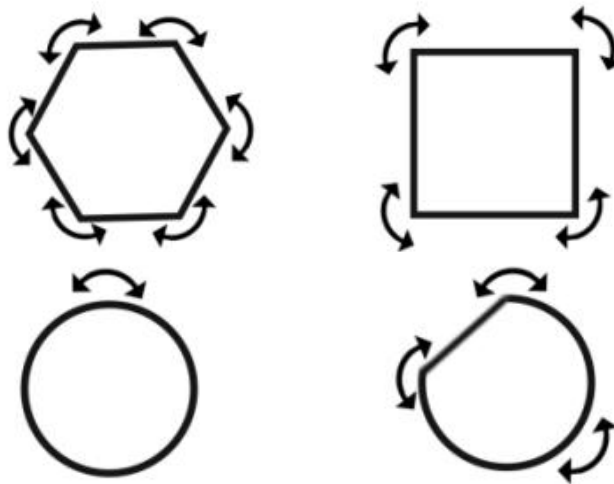
Another feature to be considered in the form of harmonious contrast designs in historical buildings is simplicity. While it is a remarkable feature with elements such as texture and material selection, these features are evaluated through the form. The designs in simple forms are in harmony with historical buildings and groups that create common features between historical buildings and new designs.

According to Havens, simplicity makes it easier to connect with nature and ancient structures and is compatible with the rules of nature and historical structures. The buildings designed in historical settings reflected the line of modernism by architects in 1960 (Dexter Havens, 1953). For this reason, buildings that were designed in simple geometric forms prevent misinformation and harmonize historical and new buildings (Brolin, 1980).

However, complexity of form can be determined by turning points in the silhouette of facade view and readability of form. In turning point, few turning points in the silhouette of the building are perceived as simply formed buildings. In terms of the readability of the form of buildings that it depends on the clear perception of contours,

facades, sections, and the observability of the formation phase of the form (Stamps, 1999).

In Stamps' work, simplicity in form is indicated by the turning points in the silhouette (Figure 4.8). The six side shape is an example of a complex perception of the contour compared to a square or rectangular contour. Because there are 6 turning points in a six side shape, while there are 4 turning points in a square shape. On the other hand, a circle shape has more than one segment number, since turning points cannot be determined precisely. So circle can be assumed to have a single turning point and described as simple compared to a circle cut with a beam. However, when the square and the circle cut are examined, the square shape is simpler than the circle cut despite the many turning points. Since cut circle turn differentiated and become complex with beam compared to the square which is simple geometry. Thus, besides the turning point of the shape, differentiation of shape should be considered to evaluate the simplicity of a form.



**Figure 4.8** Determining the degree of simplicity in the form over simple geometries

When the two structures are compared, the Tai O twin (Figure 4.9) structure is perceived to be simpler than the Metropol Parasol (Figure 4.10) structure since it has fewer segments. Tai o twin bridge is inspired by tree branches. The design is simplified by the abstraction of trees. Metropol parasol, on the other hand, has benefited from the tree metaphor-like Tai o twin but has more than one curve and segment.



**Figure 4.9** Evaluation of Simplicity in Form, Tai o Twin Bridge. Retrieved from: <https://l-e-a-d.pro/portfolio/taiobridges/> in December, 2021



**Figure 4.10** Evaluation of Simplicity in Form, Metropol Parasol. Retrieved from: <https://www.archdaily.com/201961/metropol-parasol-j-mayer-h-arup> in December, 2021

New structures designed as a single piece and consisting of simple geometric shapes can be described as simple and can adapt to historical structures when these structures are designed following Gestalt principles. Simply designed buildings can be easily distinguished from historical buildings and can adapt. However, simply designed structures are not suitable for the unusual feature of contrast design tools.

### 4.2.3 Meaning in Form

The form can be evaluated in terms of perception and simplicity, as well as meaning. When we consider the Doric and Ionic columns, the Ionic column is more ornamental than the Doric that is an evaluation of the form according to the rules of composition. However, the Ionic column represents the woman and the Doric column represents the man that indicates the relationship of form in terms of meaning.

According to Libeskind, architecture is not a drastic transformation of "place, type, and use" but rather a loud expression of a value that is about to be forgotten. For this reason, architecture is a form of self-questioning of the people. Even if the context has gained importance physically, the memory of context has an essential place in architecture. Thus, architecture takes attention of visitors by interpreting and transferring historical values to the visitors (Franck, 2001).

Also, according to values from historical context, new buildings can be formed with harmony or contrast with the context. Harmony with the context can be provided visually as well as with intangible values. A building can be designed visually contrast to the context, but a contrast building can be harmonized with the context in terms of locational, historical, social values. Associating context with intangible values in contrast or harmonious designs can make these structures meaningful and qualified (Mediwake, 1999).

Harmonical relationship with historical context can be achieved either meaning or visually in new buildings that can be achieved with harmonious contrast designs. To provide meaningful relationship with historical context, harmonious contrast designs can interpret intangible values of context. Also, these values which form of building created from can establish common ground between historical and new building.

New building in the port of Cannes (Figure 4.11) can be given as an example of meaning. The port of Cannes located between Squit Hill where is historical area of Cannes and Palais des Festivals where is modern area of Cannes. Port had been used as sheltered beach until 1838. Then, according to needs, port transformed and integrated new functions. The port building designed to store technical equipments and public needs. Also, building designed in one volume with simple parallelepipedic form that stretches along wharf and connected to historical settings (Achdaily, 2019d).



**Figure 4.11** A view from Port of Cannes. Retrieved from: <https://www.archdaily.com/929542/new-services-for-boaters-on-the-port-of-cannes-heams-et-michel> in June, 2021

When the port of Cannes are considered until 1838, port had shelters that new building resembles with memory of Cannes. To increase resemblance with historical building, architect preferred to use timber and simple details that used in harbor structures. This attitude provide connection between old and new in terms of historical and socio-cultural meanings.

### **4.3 Color and Material**

Colors are generally preferred to attract attention, group units in different forms, indicate meaning, and increase aesthetic pleasure (Lidwell and William, 2003). Also, colors can be associated with painters as well as certain geography, place, or a certain building typology. For example, the white color represents Bodrum houses, and the city of Bologna in Italy is called the red city due to red bricks.

In the theory of architecture and professional practice, the material came after the form, and now it is understood that the material is an inseparable element from the form (Thomas, 2007). It has been recognized that materials compatible with cities have importance for the memory of the city. According to Ahmer (2020), quoting from Riegl, the material can add historical and aesthetic value to buildings. Also, The material gives intangible properties to the structure apart from its physical properties.

Conservation theories stated that new material creates tension between the new and the old, but there should be a chronological difference between historical and new buildings. The preference of different materials in the buildings designed in the

historical environment increases the contrast between the historical and modern building that makes the chronological difference visible.

Relationship between context-color and context-material in new buildings shaped by similarity, differentiation, and texture size. In context relationship with color, similar and same color suggested by conservation theories. On the other hand, in creative approach contrast colors are preferred and color harmony became controversial. In context relationship with material, it can be evaluated in terms of similarity and texture size. Also, material harmony in the new building was discussed and has the conflict between conservation theories. While Venice charter (1964) and the Conclusions of the seminar on Integration of Modern Architecture in Old Surroundings (1974) suggested contemporary materials, other conservation theories recommended harmonical materials in the new designs.

In Step house (Figure 4.12), instead of using glass and steel in addition building's facade, the architect preferred brick to glorify the brick and to give a sculptural appearance. The preference of brick in the additional building gives the impression of harmony with historical context and distinguishability from context by its form (Archdaily, 2018a).



**Figure 4.12** Views of Step house. Retrieved from: <https://www.archdaily.com/894524/step-house-bureau-de-change-architects> in March, 2021.

The addition which is designed in historical texture draws attention with its form, but usage of the same brick in the facade of the historical buildings reduced the visibility of the new building. As a result, the difference which is provided with scale and form of the new building is reduced, and the chronological difference between historical building and the new building is decreased.



In the example of the Golden Nugget building (Figure 4.13), gold color is used new building because of represents the identity of the INNOCAD brand. In the company logo, seven squares transform into different forms that are used in the new building by dividing the facade of the new building into square forms and creating a texture . In addition, the use of gold in the building provides harmony with the historical buildings which are designed in the Wilhelmian style. Also, the new building connects different heights and volumes of the surrounding buildings that increase the harmony with the historical context (Miesarch, 2007).



**Figure 4.13** Views of Golden Nugget Building. Retrieved from: <https://miesarch.com/work/2828> in March, 2021.

With its form, Golden Nugget adapts to the Gestalt principles of closure and continuity and is in harmony with the scales of the buildings. By using similar colors to the environment in the new building has increased the compatibility of the historical buildings. On the other hand, the use of metal cladding in the building and the preference of different textures provide the distinction between historical and new buildings.

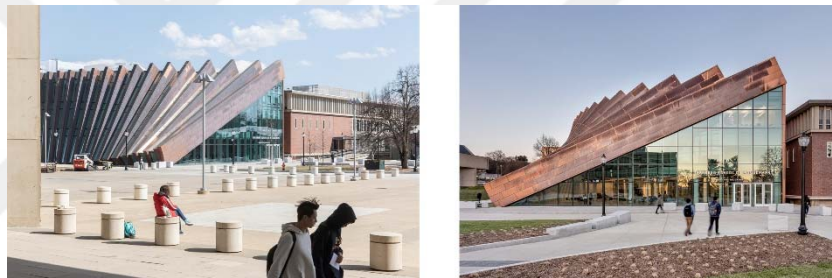
In addition, The Waihinga Martinborough cultural center building combines with the historical building and connects with Martinborough square (Fig.4.14). The new building is in harmony with its form and scale and highlights the surrounding structures with the use of steel, wood, and glass. Besides, the form of the new building was inspired by the patios in the rural area of Waithinga (Archdaily, 2019c).

The new building was designed with inspiration from the patios of the Waihinga rural area. Also, harmonize with the scale of the historic building. In the new building, the yellow and brown tones of the historical building were harmonized and differentiated from the historical building with the use of wood, steel, and glass on the facade.



**Figure 4.14** Views of Waithinga Martinborough cultural center. Retrieved from: [https://www.archdaily.com/923368/waihinga-martinborough-community-centre-warren-and-mahoney?ad\\_medium=gallery](https://www.archdaily.com/923368/waihinga-martinborough-community-centre-warren-and-mahoney?ad_medium=gallery) in March, 2020.

Besides, Isenberg Business School (Figure 4.15) was designed as a continuation of the building designed in 1964 and the new building aimed to provide integrity by continuing the original structure on the north and east facades. The preferred form in the additional building provided continuity in the mass of the building and upper floor of the original building. Besides, copper panels were preferred on the facade of the building (Archdaily, 2019b).



**Figure 4.15** Views of Isenberg Business School. Retrieved from: <https://www.archdaily.com/915263/isenberg-school-of-management-business-innovation-hub-big> in March, 2020.

In the new building, copper panels compatible with the historical building were used to ensure that the color of the new building is harmonious with the historical building. In the new building, the order of brick from the historical building is imitated in the copper panels. On the other hand, the use of large smooth copper panels in contrast to the brick texture in the new building provides the separation of the historical and new building. The new building is in harmony with the historical building in terms of the arrangement, color, and material features, but differed from the historical building with its material size and shiny surface.

The No name shop building (Figure 4.16) which was built in a historical context, is designed according to the height limit of the surrounding buildings. By choosing the red color in the building, the new building is aimed to revitalize the historical context

by distinguishing from the dark and ordinary colors of the historical context (Archdaily, 2012).








**Figure 4.16** Views of No name Shope. Retrieved from: <https://www.archdaily.com/287306/no-name-shop-iranian-architectural-atelier> in March, 2020.

In the No Name Shop building, red color was preferred to distinguish it from the surrounding historical buildings and to attract attention. While attracting attention and differentiation with its building form and color, it is compatible with scale and Gestalt principles in its context.

When the five contrast samples are examined according to their material and color properties (Table 4.1), it is seen that the new buildings with the same color and material properties as the historical building are compatible. However, new building do not distinguish from historical context and attract attention. On the other side, preferring similar colors with historical context cause new building to distinguish and harmonize with its context. It can be observed in Golden Nugget, Waithinga cultural center and Isenberg Business school. Nevertheless, using contrast color in new building cause new building to overshadow historical context. In addition, contemporary material usage in historical building enhance visibility of historical and new building and chronological difference between them. Thus, while step house has different form, it does not distinguish from historical context because of material choice.

**Table 4.1** Evaluation of five buildings that located in historical context in terms of material and color usage

					
	Step House	Golden Nugget	Waithinga Martinborough cultural center	Isenberg Business School	No Name Shop
<b>Color</b>					
Same Color					
Similar Color					
Contrast					
<b>Material</b>					
Traditional Material					
Contemporary Material					



## CHAPTER 5

### EVALUATION OF CANON CONTRAST DESIGN

In this study, nine harmonious contrast design examples built in the last 35 years were examined. Most of the information about the examples was obtained from the website of the architects who designed the buildings. The buildings were selected from among the examples discussed in architecture and academic platforms, any typology, location, etc. None of the features are adhered to. In the selection of the buildings, the structures built in the archaeological sites and designed in the rural areas were excluded from the selection. The selected examples were examined under the subheadings specified in the previous section, based on the 3 features discussed in the second section. While these subheadings are Gestalt principles and simplicity in form, historical structure and context scale, material and in color, it is divided into three as harmony, similarity, and contrasting features. Gestalt and simplicity in form and historical building scale are examined through sections. On the other hand, the harmony in material and color has been interpreted according to the data obtained from the bird's eye photographs taken within a 2km diameter of the building and the facade photographs of the building.

Firstly, the location of the structures, the year they were built and the designer was specified. Secondly, the compatibility of the form of the structures with the Gestalt principles was determined by interpreting the closure and continuity features on the section. Simplicity in the form was compared according to the turning points specified in Chapter 4 by choosing one of the historical buildings or buildings where the opposite design is located. The outer shell of the buildings was taken as a basis in the evaluation of the turning points. If the turning point of the historical building is less than the new building, it is evaluated as complex, if it is less, it is evaluated as plain. On the other hand, the harmony in materials and colors, the structures within 2km of the opposite design differ in the roof, exterior color, and materials. determined accordingly.

## 5.1. Lyon Opera House

**Original Building Name, Year and Location:** Lyon Opera House, 1985, Lyon, France

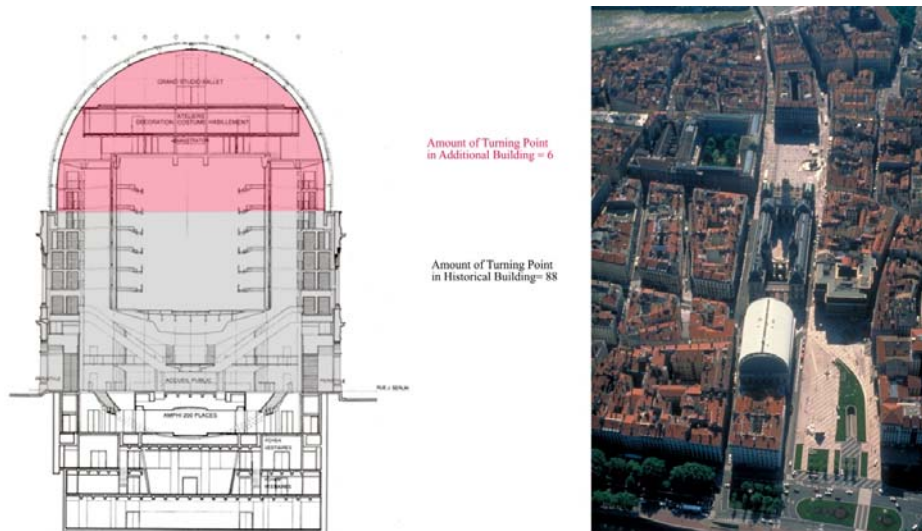
**Contrast Building Designer:** Jean Novel



**Figure 5.1** A view from Lyon Opera House. Retrieved from: <https://www.dreamstime.com/photos-images/opera-lyon.html> in December ,2021

The theater structure designed by J.G. Soufflot in 1780 became one of the interesting structures of the city with the additional building made by Jean Novel. The building, which formerly functioned as a theater was re-functionalized as an opera house that met the modern needs of the city. When viewed from near the Hotel de Ville, it is seen that it is at the same height as the 19th-century buildings. The semi-cylindrical structure is adapted to the historical structure with the column and joinery system following the column pillars of the historical building (Byard, 2004).

The additional structure has a simple and sculptural appearance with its semi-cylindrical shape. For this reason, the building attracts attention and has become the symbol of the city by strengthening its identity of the city. The historical environment has enlivened the city at night with the help of rhythmic animations reflected on the windows of the new building at night (Jeannotel, 1993).



**Figure 5.2** Form and Scale Analysis of Lyon Opera House Analyzed from: <https://www.miesarch.com/work/407> in October, 2021



**Materials and colors in Lyon Opera House (Exterior)**

- 1 Blue Colored Glasses
- 2 Stainless Steel
- 3 Stainless Steel

**Materials and colors in Context of Lyon Opera House (in 2km diameter)**

- 4 Blue Zinc Roof
- 6 Red Roof Tiles
- 8 Brown Paint
- 10 Yellow Stone Cladding
- 5 Stainless Steel
- 7 Brass Ornamentation
- 9 Blue Paint
- 11 White Stone Cladding

**Figure 5.3** Colors and Materials of Lyon Opera House and Its Context. Analyzed from: <https://www.dreamstime.com/photos-images/opera-lyon.html> in October, 2021

The Lyon Opera annex is in harmony with the historical structure with Gestalt principles, simplicity, building scale (Figure 5.2), and use of color (Figure 5.3). Since the additional building is located on the historical building, it is dependent on the Gestalt principles of closure and continuity and provides integrity with the form of the historical building. According to the degree of simplicity, the additional structure is plain, because the additional structure is in a single volume and a simple geometric form. Another factor is that the turning points (6 points) in the silhouette of the additional building are less than the turning points (88 points) in the silhouette of the historical building. When the new building is examined at the historical building scale, it is seen that the historical and the new building are compatible, but in the context

scale, it is compatible with the historical texture but not in the city environment. The use of metal and glass materials on the facade of the annex allows the building to distinguish itself from its historical context with its material and technology features. In the use of color, which is another element, natural material colors were preferred in the annex building, and these colors were chosen from the historical context. These colors were blue and white in the additional structure. The white and blue color is used on the facades of historical buildings and buildings in the context.

## 5.2. Falkenstrasse 6

**Original Building Name, Year and Location:** Falkenstrasse 6, 1987- 1988, Vienna, Austria

**Contrast Building Designer:** Cooper Himmelblau

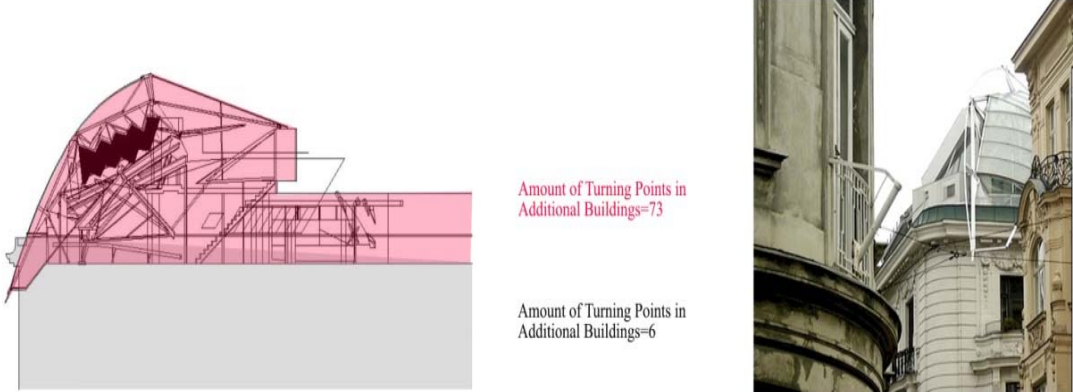


**Figure 5.4** A view from Falkenstrasse 6 Addition. Retrieved from: <http://www.coop-himmelblau.at/architecture/projects/rooftop-remodeling-falkestrasse/> in December, 2021

Falkenstrasse 6 project was created with the idea of expanding the Schuppich law firm and increasing the capacity of the building. In the additional building, it has a meeting room and multiple small offices. The architect chose a context-free design approach



by transferring the energy of the street to the roof level (Cooperhimmelblau). Also, the building, which was built on the historical baroque building of Cooper Himmelblau, disturbed the viewer and prevented the pleasure from historical buildings (Byard, 2005).



**Figure 5.5** Form and scale Analysis of Falkenstrasse 6. Analyzed from: <http://www.coop-himmelblau.at/architecture/projects/rooftop-remodeling-falkestrasse/> in October 2021



**Materials and colors in Falkenstrasse 6 (Exterior)**

- 1
 Green Colored Glasses
 - 2
 White colored metal
 - 3
 Metal
 

**Materials and colors in Context of Falkenstrasse 6 (in 2km diameter)**

- 4
 Concrete Building
 - 5
 White Metal Railings
 - 6
 Brown Paint
 - 7
 White Paint
 - 8
 Yellow Stone Cladding
 

**Figure 5.6** Materials and colors of Falkenstrasse 6. Analyzed from: <http://www.coop-himmelblau.at/architecture/projects/rooftop-remodeling-falkestrasse/> in October 2021

The additional building is integrated into the historical building, so it depends on the Gestalt principles of closure and continuity (Figure 5.5). In addition, the fact that the number of turning points in the section of the building is higher than the historical structure causes the building to be perceived as complex, and attention is gathered to the additional structure. In material preference (Figure 5.6), modern materials were preferred in the building, and the building was perceived as modern. The use of color tones similar to the historical texture in the annex building increased the harmony. The annex building harmonizes with the historical building with its scale, material, and color features, but it overshadows the historical building due to its complex form.

### 5.3. Louvre Museum

**Original Building Name, Year and Location:** Louvre Museum Pyramide Extention, 1989, Paris, France

**Kontrast Building Designer:** I.M. Pei



**Figure 5.7** A view from Louvre Museum Addition. Retrieved from: <https://www.khanacademy.org/humanities/approaches-to-art-history/understanding-museums/a/museums-politics-louvre> in December, 2021

Before the Louvre building became a museum, the building had referred to the palace of France and was used as a museum where works of art were exhibited. The building, which was closed to the public, was occasionally visited by nobles and aristocrats. With the French Revolution in 1789, the courtyard of the Louvre palace was used as the execution area. After the French Revolution, the building changed its function as

a museum. With Napoleon Bonaparte becoming the new emperor of France in 1804, France's military brought ruins from the Egyptian archaeological site, historical artifacts, and from countries that were invaded by France. After a certain period, the building that is known as the Napoleon Museum was abandoned (Rodini, 2018).

In 1981, the Louvre palace was thought to be restored and converted into a museum, and in 1983, restoration work began with a team including architect I.M Pei. The architect designed a glass pyramid for the Napoleon courtyard that glass pyramid became the new entrance of the museum and separated the gallery spaces from each other. With the help of additional building, the architect connected the underground gallery systems, storage areas, conservation laboratories, and wings. The annex strengthened the idea of the main entrance by providing a figurative and historical significance. I.M Pei building is differentiated from its surroundings and traditional buildings with its modern materials and structure system. Due to its structure, material, and form, it has become the focal point of the museum and has shown a respectful attitude to the Louvre structure with its scale and simple approaches. Glass pyramid was designed on the scale of the Giza pyramid which is the highest pyramid found in Egypt, referred to the history of the museum and did not overshadow the Louvre structure with its style. Besides, an additional building was not welcomed by the public as it differed from the Louvre in style. But over the years the additional building became an inseparable symbol from the Louvre palace (Britannica, n.d).

The new building established continuity with the historical building as the historical building interacted with the Bonaparte courtyard and referred to the history of Bonaparte and France. On the other hand, the additional building, with its pyramid form, displayed a simple form (Figure 5.8). In contrast to the large structure of the Louvre palace and the urban texture, the pyramid volume was designed on a small scale. When examined according to the color feature (Figure 5.9), the use of natural material colors in the building caused the building to be perceived as plain. In addition, the gray color tone, which is rarely used in the historical texture, made the new structure compatible with the historical structure.



**Figure 5.8** Form and Scale Analysis of Louvre Museum Analyzed from:  
<https://www.khanacademy.org/humanities/approaches-to-art-history/understanding-museums/a/museums-politics-louvre>



**Materials and colors in Addition of Louvre Museum (Exterior)**

- 1 Stainless Steel
- 2 Transparent Glass

**Materials and colors in Context of Louvre Museum (in 2km diameter)**

- 3 Green Zinc Roof
- 4 Brown Paint
- 5 Yellow Stone Cladding

**Figure 5.9** Color and Material Analysis of Louvre Museum. Analyzed from:  
<https://www.khanacademy.org/humanities/approaches-to-art-history/understanding-museums/a/museums-politics-louvre> in December, 2021

## 5.4. OCAD

**Original Building Name, Year and Location:** Ontario Collage of Art Sharp Centre Addition, 2004, Ontario, Canada

**Contrast Building Designer:** Will Alsop, Young/Young+Wright Arquitectos

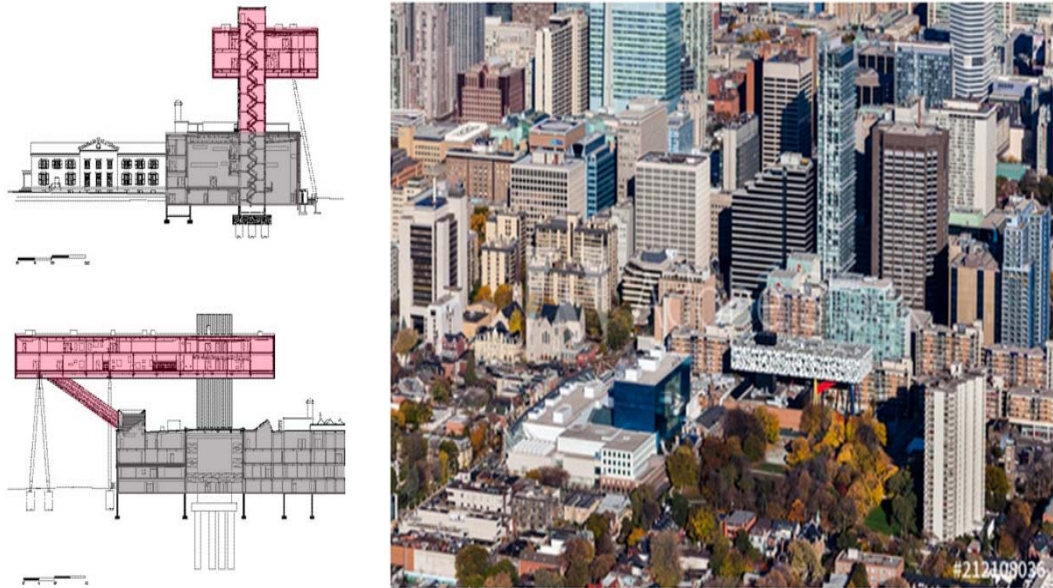


**Figure 5.10** A view from OCAD Building Addition. Retrieved from: <https://www.on-sitemag.com/construction/ontario-investing-27-million-ocad-university-expansion/1003953813/> in December, 2021

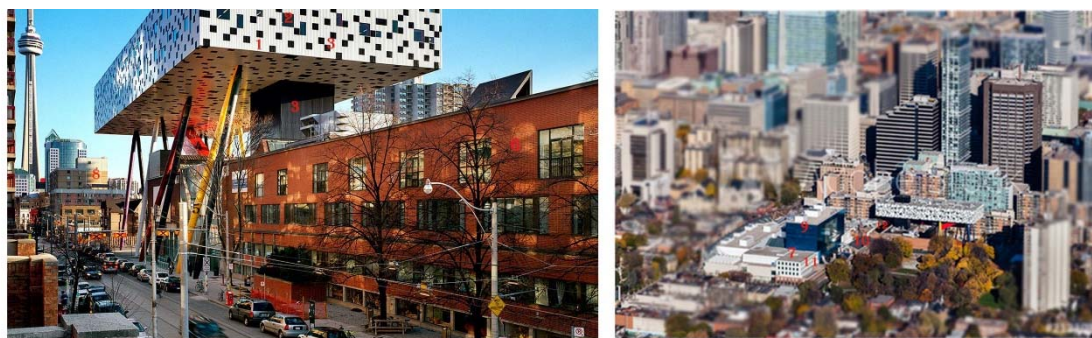
Ontario art and design university addition building covers an area of 5,109,6672 square meters, and campus area of 8825.788 square meters has been renovated. The building is located at a height of 9 floors and is supported by steel legs. The floating structure stands out from its surroundings with its bright and colorful exterior, shaping and enlivening Toronto's context (Arkitera, n.d).

The two structures show similarities with the preference of historical and new building cubic forms, and the preference of only one feature from the Gestalt principles (Figure 5.11) creates a tense environment. Since the additional building consists of two separate simple geometric masses, the building is described as simple. The new building is not in harmony with the historical structure, but it can adapt to the historical

context. When the new building is evaluated in terms of color (Figure 5.12), it is observed that the new building differs from the historical building with the black and white colors used throughout the building. However, the fact that a contrast color was not preferred in the building caused the building to be compatible with the urban context. The preference of colors that are not suitable for the historical context of the new building and the fact that the building exceeds the scale of the historical building caused the historical building to be shaded.



**Figure 5.11** Form and Scale Analysis of OCAD Analyzed from: <https://www.onsitemag.com/construction/ontario-investing-27-million-ocad-university-expansion/1003953813/> in December, 2021



**Materials and colors in Addition of Royal Ontario Museum (Exterior)**

1 Metal Facade 2 Transparent Glass 3 Black Paint 4 Red Paint 5 Yellow Paint

**Materials and colors in Context of Royal Ontario Museum (in 2km diameter)**

6 Brick 7 Brown Roof Paint 9 Blue Glasses 10 Grey Paint 11 White Paint 12 Dark Roof Paint  
8 Brown Paint

**Figure 5.12** Color and Material Analysis of OCAD Analyzed from: <https://www.onsitemag.com/construction/ontario-investing-27-million-ocad-university-expansion/1003953813/> in December, 2021

## 5.5. Royal Ontario Museum

**Original Building Name, Year and Location:** Royal Ontario Museum, 2007, Ontario, Canada

**Contrast Building Designer:** Daniel Libeskind Architecture

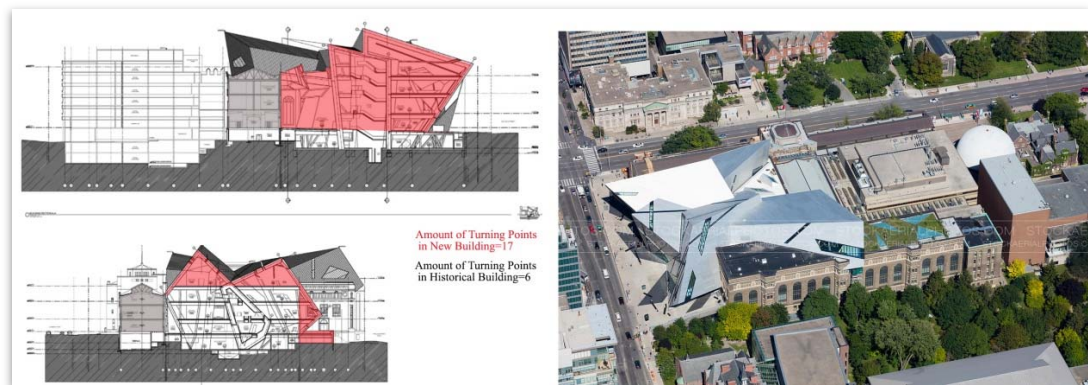


**Figure 5.13** A view from Royal Ontario Museum Addition. Retrieved from: <https://jingculturecommerce.com/royal-ontario-museum-chinese-painting/> in December, 2021

Another contrast building is the Royal Ontario Museum in Toronto, Canada. In the museum, an additional building was needed a museum to embrace contemporary life and new exhibition areas. The additional building consists of 5 steel-clad masses that form of the structure was inspired by the crystals found in the mineralogy section of the museum. And interlocking cubes have created the most effective corner structure of Toronto. The attractive appearance of the building directs the visitors from the street to the galleries that are inside the museum. The additional building separates the old building by forming the wide entrance atrium which is called the Gloria Hyacinth Chen courtyard where various activities are exhibited and integrated with the historical building on facade view (Libeskind, 2007).

When the new building is evaluated in terms of scale (Figure 5.14), it is seen that it dominates the historical building, but it shows respect for the context scale. The additional building is differentiated from the historical building with its material, form, and color features (Figure 5.15), but it has adapted to the historical context with the

visual integrity it has established with the historical building. The new building's silhouette has more turning points, the formal development of more than one volume is not read and the complex facades make the building more complex. For this reason, the new structure is more complex than the historical one and directs the visual interest to itself, and dampens the historical structure. In addition, the use of modern materials in the building caused the new building to separate from the historical one. While the separation of the new building from the historical structure with its form and material features makes the building interesting, the use of colors suitable for the historical structure in the building has made the historical structure compatible with the new structure.



**Figure 5.14** Form and Scale Analysis of Royal Ontario Museum Analyzed from: <https://libeskind.com/work/royal-ontario-museum/> in October, 2021



**Materials and colors in Addition of Royal Ontario Museum (Exterior)**

- 1 Transparent Glass      2 Gray Stainless Steel Facade

**Materials and colors in Context of Royal Ontario Museum (in 2km diameter)**

- 3 Brown Stone      5 Brown Paint      7 Grey Paint  
4 Brown Roof Paint      6 Blue Glasses      8 White Paint  
9 Dark Blue Roof Paint

**Figure 5.15** Color and Scale Analysis of Royal Ontario Museum Analyzed from: <https://libeskind.com/work/royal-ontario-museum/> in October, 2021



## 5.6. Dresden Military Museum

**Original Building Name, Year and Location:** Dresden Military Museum, 2011, Dresden, Germany

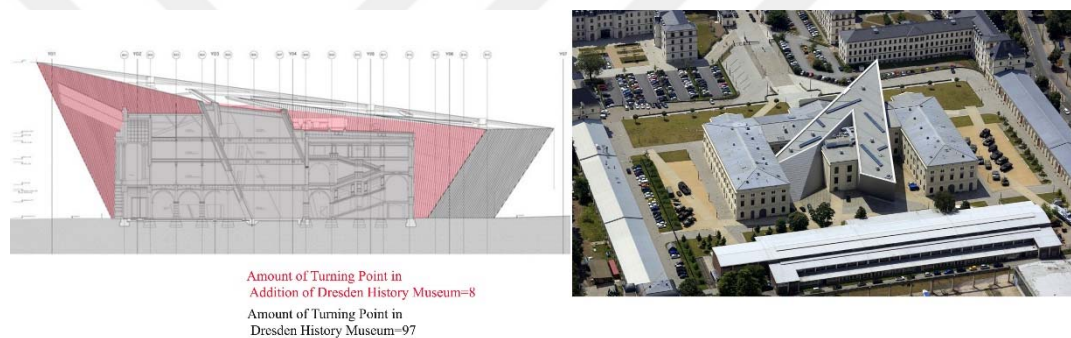
**Contrast Building Designer:** Daniel Libeskind Architecture



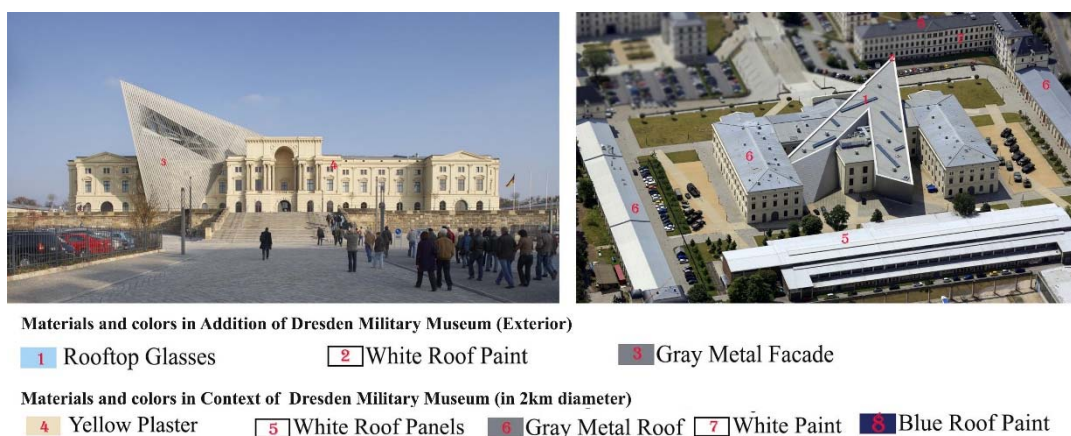
**Figure 5.16** A view from Dresden Military Museum. Retrieved from: <https://www.archdaily.com/172407/dresden%25e2%2580%2599s-military-history-museum-daniel-libeskind> in December, 2021

The building has undergone many changes throughout history. The building was used as an arsenal and later became a Nazi military museum, a Soviet and East German museum. The German government closed the museum and organized an international architectural competition for the museum to have a different identity. It was emphasized that the additional building which was going to be built according to the competition regulations should not separate the facade of the historical building. However, additional building that divides the symmetry of the facade and the window arrangement of the historical building with a bold design had been chosen. The highest part of the building points out the first bombing site in Dresden and the form of the building reflects the chaotic situation which was experienced during the invasion. The fact that the facade of the annex is open and transparent displays a contrasting attitude against the closed and stable structure of the historical building. While the building which consists of ordered parts symbolizes military seriousness, the facade of the new building indicates the transparency of the military to the public (Libeskind, 2012).

The closeness feature is provided by the intertwined geometry of the historical and new building (Figure 5.17), and the historical and the new building complement each other by forming integrity. The building is formed by dividing a single volume into two volumes, and since the new building has fewer turning points than the historical building, the building is described as simple. The point of the building's point showing the first bombing site in Dresden and the design of the annex building following the structure of the military building ensured that the annex is compatible with the historical context. While the modern annex gives the historical building a different identity, it displayed an attitude that does not exceed the scale of the building. Choosing the gray color (Figure 5.18) suitable for the historical military structure ensured that the new building was compatible with the historical structure and the environment.



**Figure 5.17** Form and Scale Analysis of Addition of Dresden Military Museum. Analyzed from: <https://libeskind.com/work/military-history-museum/> in October, 2021



**Figure 5.18** Color and Material Analysis of Addition of Dresden Military Museum. Analyzed from: <https://libeskind.com/work/military-history-museum/> in October, 2021

## 5.7. Elbphilharmonie

**Original Building Name, Year and Location:** Elbphilharmonie Opera House, 2016, Hamburg, Germany

**Contrast Building Designer:** Herzog De Meuron

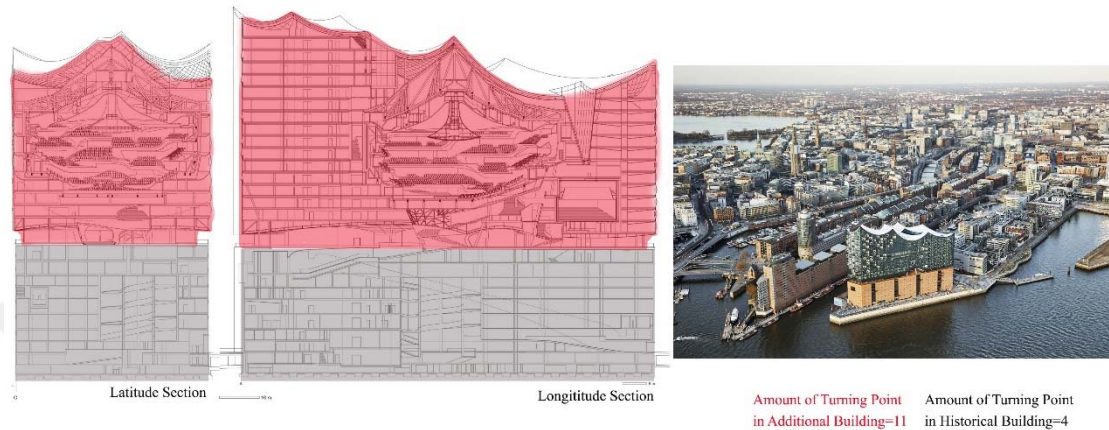


**Figure 5.19** A view from Elbphilharmonie. Retrieved from: <https://stringfixer.com/tr/Elbphilharmonie> in December, 2021

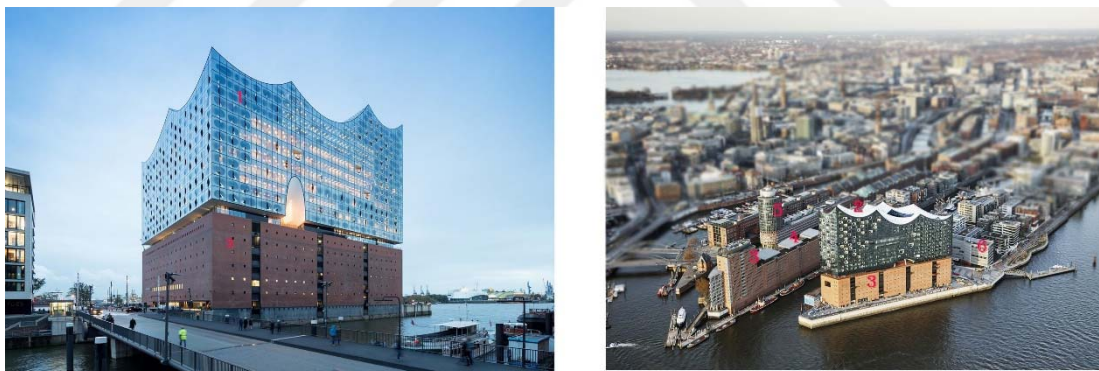
The harbor building which is known as the Kaispeicher in Hamburg was designed by Werner Kallmorgen and was built between 1963 and 1966. The harbor building was designed as a warehouse and was used as a warehouse until the 2000s. The Kaispeicher warehouse was reused as Elbphilharmonie with a contemporary addition built on top of the harbor building. The contemporary annex is designed with inspiration from the waves of the sea and consists of the Philharmonic Hall, chamber music hall, restaurants, bars, apartments, hotel, and observation terrace (Archdaily, 2016 b).

The building was designed on a compatible scale with the context (Figure 5.20), and a contrast approach was preferred in historical structure. The building, which is located on the historical building, has been adapted because it was designed based on the Gestalt principles of closure and continuity. Although the building is in a single volume, it is described as complex because it has more turning points in its silhouette

than the historical building. The history of the annex exceeds the scale of the building, but when the building is examined in context, it is seen that the building adapts to the scale of the historical context. When the building is evaluated in terms of material and color (Figure 5.21), while the building adapts to the urban context, it overshadows the historical building context.



**Figure 5.20** Form and Scale Analysis of Addition of Elbphilharmonie Analyzed from: <https://www.archdaily.com/802093/elbphilharmonie-hamburg-herzog-and-de-meuron> in October, 2021



Materials and colors in Addition of Elbphilharmonie (Exterior)

- 1 Blue Glasses                      2 White Roof Panels

Materials and colors in Context of Elbphilharmonie (in 2km diameter)

- 3 Brick    4 White Roof Panels    5 Blue Glasses    6 White Paint

**Figure 5.21** Color and Material Analysis of Addition of Elbphilharmonie Analyzed from: <https://www.archdaily.com/802093/elbphilharmonie-hamburg-herzog-and-de-meuron> in October, 2021

## 5.8. Bombay Sapphire Distillery

**Original Building Name, Year and Location:** Bombay Sapphire Distillery, 2014, Laverstroke, United Kingdom

**Kontrast Building Designer:** Heatwick Studio



**Figure 5.22** A view from Bombay Distillery. Retrieved from: <https://archello.com/project/bombay-sapphire-distillery-laverstoke-mill> in December, 2021

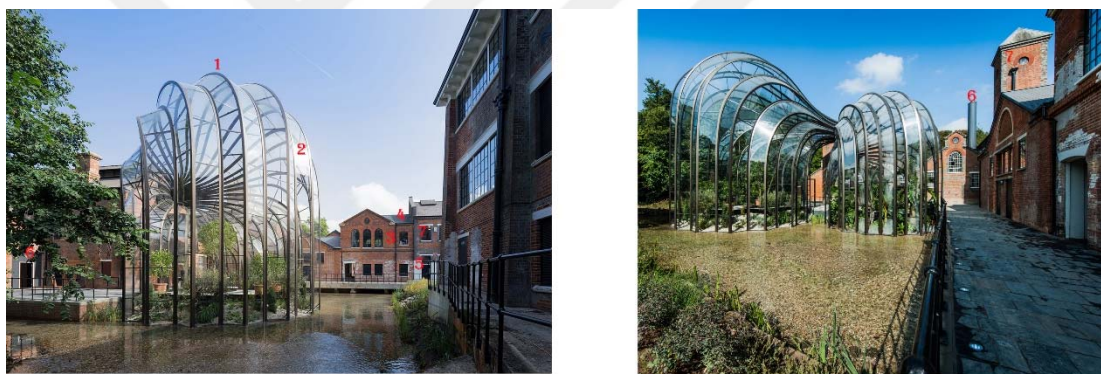
The Bombay Sapphire building was used as a paper mill before it became a gin production facility. For the paper mill, the river is an important element that ensures the operation of the factory. But with the newly made zoning plan, the river is in danger of being completely invisible. According to Architect Heatwick, in order to solve this problem and allow the public to open to the production facility, the plants which are used in making gin must be exhibited. To achieve this, Heatwick preferred forms that reflect the movement of the river. According to the architect, another reason to surround plants with glass structures is to guide the visitors to the courtyard surrounded by historical buildings, with the route that is created by the river (Archdaily, 2012).

Additional building of Bombay Sapphire provides continuity and harmony with their geometric relationship with the historical building (Fig.5.23). The additional structure consists of more than one geometric object and not to preferred simple geometric objects causes the building to be described as complex. Also, the new building, which extends from the historical building to the river, connects with the history of the factory and attracts attention with its complex structure. In terms of scale, new building is

compatible both historical building and its context. In color (Figure 5.24), new building is harmonious with its context because one of the color in historical color is used.



**Figure 5.23** Bombay Distillery Form and Scale Analysis. Analyzed from: <https://www.archdaily.com/554750/bombay-sapphire-distillery-heatherwick-studio/54259997c07a809a0e000150-bombay-sapphire-distillery-heatherwick-studio-photo> in October, 2021



Materials and colors in Addition of Bombay Distillery (Exterior)

1 Gray Metal Profile      2 Transparent Material

Materials and colors in Context of Addition of Bombay Distillery (in 2km diameter)

3 Brick    4 Gray Tiles    5 Plaster    6 Gray Paint    7 Gray Stone

**Figure 5.24** Bombay Distillery Material and Color Analysis. Analyzed from: <https://www.archdaily.com/554750/bombay-sapphire-distillery-heatherwick-studio/54259997c07a809a0e000150-bombay-sapphire-distillery-heatherwick-studio-photo> in October, 2021

## 5.9. Port House

**Original Building Name, Year and Location:** Antwerp Port House, 2016, Antwerp, Belgium

**Contrast Building Designer:** Zaha Hadid Architecture

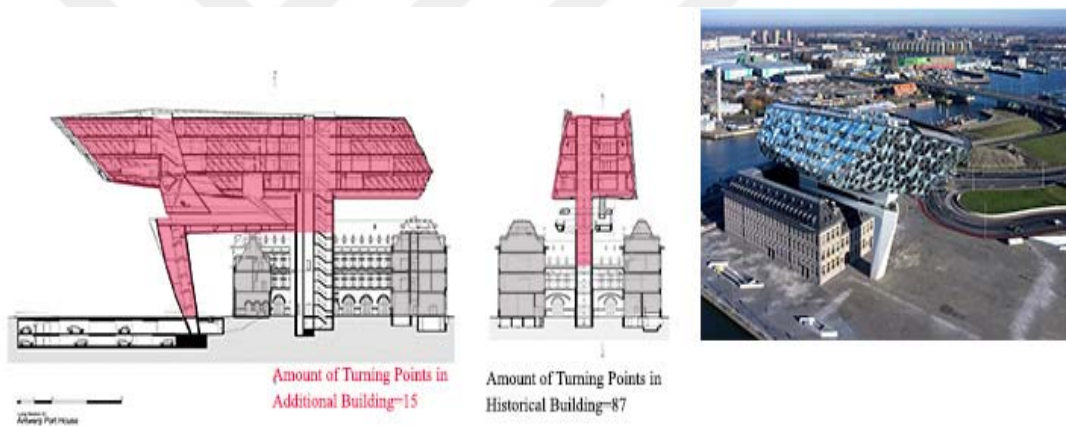


**Figure 5.25** A view from Port House. Retrieved from: <https://www.archdaily.com/795832/antwerp-port-house-zaha-hadid-architects> in December, 2021

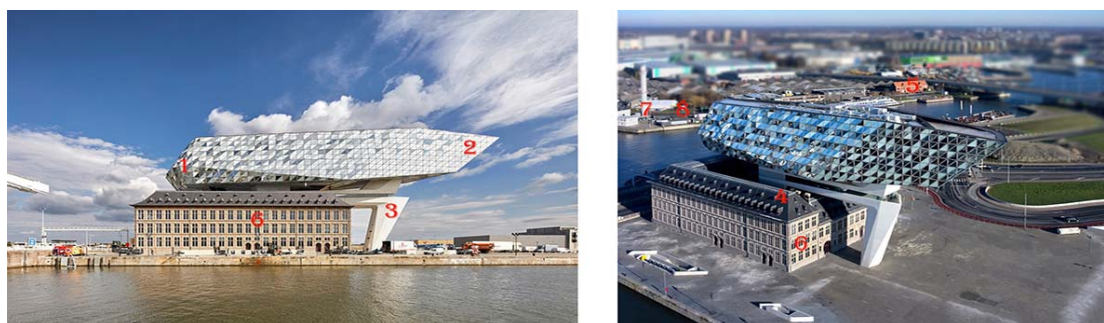
The historical building which was used as a fire station was repurposed as a working area for the port workers with the additional structure. The company wanted a design that reflects the sustainability of the port and the company's beliefs. The architecture department of the Flemish state opened a competition and organized the competition considering the condition of preserving the historical building and integrating new buildings in the project to be selected. The additional building was considered as the crown of the historical fire department by the Zaha Hadid architectural firm and separated from the historical building. The new building has been separated from the facade of the historical building and vertical integrity has been tried to be established (Archdaily, 2016a).

The new building could not provide continuity (Figure 5.26) in the vertical plane, but it was compatible with the closed feature of the historical building. The new and

historical building seems to be integrated due to the small distance between them, but it could not provide any integrity in the planes of the building. When the silhouette of the additional building is examined, it is seen that it consists of approximately 17 turning points and two volumes, 87 turning points, and a single volume in the historical building. In the annex building, the turning points are more than the historical building and the building, which is perceived as two separate volumes, is described as simple. The Annex Building had a common denominator with the historical building, as it was designed depending on the socio-economic structure of the region. On the other hand, the new structure is not compatible with the contextual scale but adapts at the building scale. When the addition is evaluated in terms of color and material properties (Figure 5.27), the new building differs from the historical building with its material feature, but similar colors are used in the new building to harmonizes with the historical building.



**Figure 5.26** Form and Scale Analysis of Antwerp Port House Addition. Analyzed from: [https://www.schueco.com/web2/port\\_house\\_antwerpen\\_en](https://www.schueco.com/web2/port_house_antwerpen_en) in October, 2021



**Materials and colors in Addition of Antwerp Port House (Exterior)**

- 1 Dark Blue Glass                      3 White Painted Structure
- 2 Light Blue Glass

**Materials and colors in Context of Addition of Antwerp Port House (in 2km diameter)**

- 4 Blue Zinc Metal    5 Orange Paint    6 Yellow Stone Cladding    7 White Paint    8 Corrugated Metal Roof

**Figure 5.27** Material and Scale Analysis of Antwerp Port House. Analyzed from: [https://www.schueco.com/web2/port\\_house\\_antwerpen\\_en](https://www.schueco.com/web2/port_house_antwerpen_en) in October 2021



When the buildings were examined according to the Gestalt principles (Table 5.1), it was determined that the Gestalt principles increased the harmony between the historical and the new building. Considering the Lyon Opera house and the Louvre museum, which have the same degree of simplicity, it is observed that the Gestalt principles increase the harmony between the historical and the new building. Closeness and continuity in the Louvre museum and only the continuity feature in the Lyon Opera house can be shown as an example.

When structures are examined according to Simplicity in Form, it is observed that they depend on the designer's point of view and the architectural trends of the time. While the preference for simple forms ensures that historical buildings are not overshadowed, additional structures may cause the audience to describe them as boring. On the other hand, complex forms caused the audience to be interested only in additional structures and overshadowed historical structures.

In terms of simplicity in form, it is observed that they depend on the designer's point of view and the architectural trends of the time. While the preference for simple forms ensures that historical buildings are not overshadowed, additional structures may cause the audience to describe them as boring. On the other hand, complex forms caused the audience to be interested only in additional structures but overshadowed historical structures.

When the buildings are evaluated on a scale, it becomes a factor that ensures that the new buildings are compatible with the historical structure. However, there are inconsistencies between the contextual scale and the scale of the historical building. While these inconsistencies are compatible with the historical context of the new building, they appear when they are not compatible with the historical context or vice versa. Lyon Opera House can be given as an example of buildings that are in harmony with the historical structure but not in terms of the scale of the historical context. The building volume is compatible with the scale of the historical building. On the other hand, when the scale of the new building is evaluated with the historical building, it is seen that the height of the building exceeds the historical context. For this reason, it seems that the building is not compatible with the historical context. OCAD, Royal Ontario Museum and Ebphilharmonie structures are the designs that are compatible with the context scale but not suitable for the historical building scale. On the other hand, it is seen that the structures designed in a minimum scale in the context and the

historical structure are in harmony with the new structures. An example of this structure is the Louvre museum.

When the buildings are considered with their color feature, it is seen that they attract attention with historical buildings but do not shade them that these colors in the historical context are preferred. While there is harmony in city context, it is seen that it does not comply with the historical context. Elbphilharmonie and OCAD can be given as example to the buildings that harmonizes with city context instead of historical context. On the other side, it is seen that contrast designs that used same colors with historical context is not distinguished by its context and not harmonized with city context. These buildings are Falkenstrasse 6, Dresden Military museum. However new buildings can be compatible with both historical and city contexts with the compatible color palette. Antwerp port house, Bombay distillery, and Royal Ontario Museum can be given as examples.

**Table 5.1** Evaluation of Harmonious Contrast Designs

									
<b>Form</b>	<b>Gestalt Principles</b>								
	Closure								
	Continuity								
	Similarity								
	<b>Simplicity</b>								
	Simple								
	Complex								
	<b>Meaning</b>								
	Contextual Meaning								
	Internal Meaning								
<b>Scale</b>	<b>Contextual Scale</b>								
	Uncompatible								
	Compatible								
	<b>Building Scale</b>								
	Minimum								
	Compatible								
	Extreme								
	<b>Material</b>								
	Contemporary Material								
	Historical Material								
<b>Color</b>	<b>Historical Context</b>								
	Compatible Colors								
	Same Colors								
	Contrast Colors								
	<b>City Context</b>								
	Compatible								
	Same Colors								
	Contrast Colors								

## **CHAPTER 6**

### **CONCLUSION AND FUTURE RESEARCH**

The harmonious design of new designs in historical buildings has been a subject discussed in conservation theories, and various opinions have been put forward on this subject. One of these views is that the new buildings should be designed exactly to all the features of the historical context, while the other view was that the new building should comply with the specific features of the historical context. These features shaped the form, scale, color, and materials of the historical building. New buildings, which are designed exactly according to the characteristics of historical buildings, are became copies of historical buildings, and designs that attract people's attention in the historical context are needed.

In order to response the need of attractiveness, creative approaches are emerged. These approaches are specified as abstraction, interpretation, contrast and extreme contrast design. In terms of harmonizing with historical context, new buildings imitate form and proportion features of historical building in interpretation and referenced approaches. However, these designs do not show chronological difference in terms of aesthetic understanding in form, scale, materials and colors. Thus, contrast design differs from other approaches in terms of reflecting technological development and aesthetic understanding of their era. But extreme examples of this approach also leave historical structures in danger of overshadowing. Approaches that attract people's attention in the historical texture at the maximum level but adapt to historical buildings create harmonious contrast designs. The features it provides, its relations with the context, and the features that distinguish it from other approaches are examined. As a result, it has been seen that harmonious contrast designs differ from the historical building and other approaches with their form and material features and attract attention, and harmonize with the historical context with their color and scale features.

Scale harmony is achieved by designing it one to one with the historical building in harmonious contrast designs or on a small scale. Large-scale buildings shade historical buildings, so they are characterized as extreme contrast. Small-scale designs attract attention with their scale, but are suppressed in the context of the city. Buildings that

attract attention in the context of the city are on a one-to-one scale with historical structures, and the exact scale increases the compatibility of the old and new structures. When scale compatibility is evaluated in context, additional buildings are evaluated together with historical buildings at city scale, it is seen that there is no connection between city scale and building scale in some examples. In the examples examined, it can be observed that the buildings designed in accordance with the context scale are not compatible with the historical context, and the buildings designed in accordance with the historical structure are not designed in accordance with the context.

The form creates the identity of the buildings by separating the historical buildings with the contrast designs. The identity of the building can indirectly refer to its context, as well as reflect the designer's views and architectural style. In the Louvre museum, Dresden Military museum, and Antwerp Port House examples, it is seen that the intangible features of the historical texture are reflected in the forms of the designs. When the forms are evaluated according to their simplicity, it is concluded that complex forms attract attention but overshadow the historical structure. Therefore, complex contrast designs designed in the historical texture endanger the historical texture. In order for complex designed structures to harmonize with the historical texture, these structures must be compatible with features such as color, material, and scale. In addition, there is no general information about how complexity can be balanced in the form.

When contrast designs are examined through color, it is seen that harmonious contrast designs use the colors of the historical context and monochromatic colors suitable for the colors of the historical context are preferred. Contrast buildings, in which contrast colors are preferred, are not compatible with the historical building context, according to the suggestions in conservation theories. For this reason, contrast designs designed with contrast colors cannot harmonize with the historical context.

When the contrast designs are evaluated over the material, it is seen that modern materials are used in these designs. The use of contemporary materials in these buildings distinguishes historical buildings from new ones and makes the chronological difference visible. However, criteria that can examine the compatibility of contemporary materials with historical context are unknown.

By taking this study as a reference in future studies, in-depth research by architectural theorists of form, scale, color, and material in contrast designs and by perceptual psychology experts will be able to determine the points which point contrast designs are compatible. The detailed relations that the contrast designs have established with the historical context and structure will be able to be examined beyond the city buildings with the all designs in the city. Besides these relations, the relations between form, scale, color, and material specified in conservation theories can be examined in detail.

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